



WINDSOR BRIDGE REPLACEMENT PROJECT

PROJECT NUMBER: 190508

Final Excavation Report: Historical Archaeology

AAJV

(an AUSTRAL & Extent Heritage Joint Venture)

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EXECUTIVE SUMMARY

Background and context

This report details the supplementary archaeological works that were undertaken following the main salvage excavation within the Windsor Bridge Project Area and should be read in conjunction with previous reports. Due to the nature of the area, the traffic demands and the need to keep roadways in operation, and the overall progress of the construction program, a series of smaller archaeological investigations, archaeological monitoring, and responses to unexpected finds was conducted over the period 2018–2021. This report summarises those collective findings undertaken in Areas 1 to 5 of the project area.

Key findings

In general, the works in these areas revealed a highly disturbed archaeological landscape. The construction of a brick oviform drain in 1816, more or less coinciding with the new bridge alignment, meant that a vast part of the central area of Thompson Square had been excavated for construction of the drain in 1816. This excavation, which was conducted down into the clay subsoils, removed virtually all archaeological evidence of the pre-1816 use and development of Thompson Square. At the north end of the project area, along the river, past inundation events and erosion had removed early settlement evidence in that location. The main findings of the archaeological works in these areas included:

- the 1816 brick oviform drain and associated surface drains that fed into it;
- a section of footing relating to a wall that may have formed part of the boundary around the Government Domain;
- extensive evidence of the reshaping of the landform for the construction of the first Windsor Bridge and associated roadworks in the late 19th century; and
- evidence of the construction and demolition of 20th century structures, including a Boat House that was once located within the project area.

Deposits containing artefacts were generally limited in extent and stratigraphical range, with no extensive evidence of the use or occupation of the project area. These findings all relate to the fact that, as a public space and key transport route since the early nineteenth century, the landscape of Thompson Square has been modified and re-modified repeatedly over its existence. These modifications, coupled with flooding and erosion, have significantly impacted the survival of historical archaeological materials, particularly for the earliest period of occupation and settlement of the area by colonists. No evidence of contact between Aboriginal people and colonists was found during this phase of the works. As the brick oviform drain was assessed as having State heritage significance, the design of the new bridge was modified to incorporate a significant length of the historic drain beneath the new

construction.¹ In other areas, *in situ* retention was not possible, although a large number of historic sandstock bricks were salvaged for potential future use, and a section of surface drain was removed by conservators for potential reconstruction in a new location in future.

Conclusions

The historical archaeological landscape of Windsor, while undoubtedly significant, has been significantly impacted in this area through the construction of historic infrastructure in the early and late nineteenth centuries, and the subsequent modification of that infrastructure in the twentieth and twenty-first centuries. It is likely that most significant intact archaeological remains of these early periods of settlement survive in the residential areas adjacent to Thompson Square, which were outside the project area. The archaeological works primarily provided a better understanding of the construction and extent of the 1816 drainage system, which was known from the historical record but not in any detail. The preservation of a section of the brick oviform drain beneath the new bridge and the implementation of interpretation within the public domain of Thompson Square will assist in the appreciation of this site into the future.

Recommendations

As the construction program is now complete, no further archaeological work is required. This report should be provided to the relevant authority (now the Department of Planning and Environment) as fulfillment of the archaeological conditions of consent for this project. The report should be made publicly available, with copies provided to Hawkesbury City Council and the Hawkesbury Regional Museum. Artefact collections should be lodged with the Hawkesbury Regional Museum (subject to agreement).

¹ The brick drain is referred to in earlier reports as a barrel drain.

CONTENTS

1	INTRODUCTION.....	1
1.1	Project background.....	1
1.2	Statutory context and heritage listings.....	2
1.3	Site location and identification	5
1.4	Previous reports and investigations.....	8
1.5	Limitations.....	15
1.6	Excavation team and author identification.....	15
2	BACKGROUND.....	16
2.1	Introduction	16
2.2	Landform and the Hawkesbury River Corridor	16
2.3	Historical Overview	17
3	SALVAGE EXCAVATION RATIONALE	63
3.1	Objectives and aims	63
3.2	Excavation areas and approach	63
4	EXCAVATION RESULTS.....	67
4.1	General	67
4.2	Historical phases of development.....	68
4.3	Area 1A.....	69
4.4	Area 2	82
4.5	Area 3	113
4.6	Area 4	136
4.7	Area 5	144
4.8	Northern side of the river	144
4.9	Southern side of the river.....	157
5	ARTEFACT ANALYSIS.....	180
5.1	Introduction	180
5.2	Assemblage overview.....	180
5.3	Ceramics.....	181
5.4	Glass.....	204

5.5	Bone.....	220
5.6	Shell	227
5.7	Metals, Miscellaneous & Architectural/Tools	228
5.8	Response to Research Design	240
5.9	Statement of significance	242
5.10	Recommendations	242
6	SOIL ANALYSIS.....	244
7	DISCUSSION OF RESULTS	246
8	RESPONSE TO RESEARCH QUESTIONS	252
8.1	Research questions	252
8.2	Response to Research Questions	254
9	REVISED SIGNIFICANCE ASSESSMENT	263
9.1	Existing Statement of Significance	263
9.2	Revised Statement of Significance	266
10	CONCLUSIONS AND RECOMMENDATIONS FOR FUTURE MANAGEMENT	268
10.1	Conclusions	268
10.2	Recommendations	268
10.3	Artefact Management Policy	269
11	REFERENCES.....	271
11.1	Artefact analysis resources.....	278

LIST OF TABLES

Table 1.	Compliance with MCoA.....	2
Table 2.	Summary of the historical archaeological phases of development.....	68
Table 3.	Overview of historical archaeological phases identified during salvage excavations.....	177
Table 4.	WBRP Collection, by class.	180
Table 5.	Ceramic Assemblage, Ware Types (WBRP Collection).	183
Table 6.	List of Transfer-printed Earthenware Patterns	187
Table 7.	Ceramic Assemblage, Functional Types (Stratified Deposits)	196

Table 8. Ceramic Assemblage, Functional Types (Context [1412])	198
Table 9. Ceramic Assemblage, Functional Types (Context [1488])	200
Table 10. Ceramic Assemblage, Functional Types (Unstratified Deposits)	201
Table 11. List of Known Pottery and Product Makers	203
Table 12. Glass Assemblage, Functional Types (WBRP Collection)	206
Table 13. Glass Assemblage, Functional Types (Stratified Deposits)	217
Table 14. Glass Assemblage, Functional Types (Unstratified Deposits)	218
Table 15. List of Known Manufacturers.	219
Table 16. List of Known Products.	220
Table 17. Faunal Assemblage, Species Type (WBRP Collection). Please Note: Genus category 'Ovis' may also contain fragments of 'Capra'	222
Table 18. Faunal Assemblage (Stratified Deposits)	224
Table 19. Faunal Assemblage (Unstratified Deposits).	226
Table 20. Fasteners Assemblage (Architectural/Structural)	236
Table 21. Nail assemblage, manufacturer type (based on Varman 1993)	238

LIST OF FIGURES

Figure 1-1	Location map of the WBRP area within local context.	6
Figure 1-2	Aerial image of the WBRP area.	7
Figure 1-3	Early-nineteenth century brick footing identified beneath George Street (test pit SA 25). 9	
Figure 1-4	Early-nineteenth century box drain identified beneath Old Bridge Street (test pit SA 26). 10	
Figure 1-5	Disturbed historical soil profile within test pit SA 9 in lower Thompson Square (dark undulating band halfway down the profile).....	10
Figure 1-6	View looking west showing the exposed section of the brick oviform drain where it had been previously cut to accommodate a later, twentieth century service.	13
Figure 1-7	View looking south-west showing the northernmost of three brick box drains (foreground) that emptied into the main oviform drain.	13
Figure 1-8	Lead-glazed shallow pan or basin recovered from feature 1339 (Phase 3), grid area 1. 14	
Figure 2-1	Detail of 'A map of the hitherto explored country contiguous to Port Jackson lain down from actual survey' showing Phillip's route through the Windsor district near the junction of the Hawkesbury River and South Creek (Source: Tench 1793).	19

Figure 2-2	Grants promised at Mulgrave Place by December 1796 (Source: Map compiled by Tom Sapienza – content sourced from Jan Barkley-Jack from Land Grant Registers 1 and 1A, and drawn by A Wilson, Archaeological Computing Laboratory, University of Sydney, 2009).	21
Figure 2-3	The Government Precinct at Green Hills in 1807, with a boat, the ‘Governor Bligh’, under construction just below the central log granary. (Source: George William Evans, watercolour, Hordern House, Colonial Paintings catalogue, 1994, item 4)	22
2-4	G.W. Evans, ‘The Settlement on the Green Hills’, watercolour, 1809, (Mitchell Library, State Library of NSW, PXD 388, vol.3 fo.7).	23
Figure 2-5	Detail of G.W. Evans’ 1809 view of the settlement, showing the informal cluster of government buildings within the western side of the Crown reserve during the early years of the 19 th century (Source: GW Evans, ‘The Settlement on the Green Hills’, watercolour, 1809, Mitchell Library, State Library of NSW, PXD 388, vol.3 fo.7).	23
Figure 2-6	Detail of GW Evans’ 1809 painting showing the eastern side of the government precinct. From left to right: the 1798 Government Cottage, 1803 Schoolhouse & Church, 1803 Government Granary, and Thompson’s buildings and garden are seen bordering the open ground of what would become Thompson Square to the right. Thompson’s small cottage (circled) that he occupied as constable is shown next to the obsolete 1798 granary and attached guardhouse. (Source. GW Evans, watercolour, 1809, ‘Settlement on the Green Hills’, State Library of NSW, Mitchell Library, PXD 388, vol. 3, fol. 7). 25	
Figure 2-7	‘A view of part of the town of Windsor in New South Wales, taken from the banks of the River Hawkesbury’, Philip Slaeger in Absalom West 1813 (Source: NLA PIC Drawer 2230 #U2028 NK2044/B) 26	
Figure 2-8	Detail of P Slaeger’s ‘A View of Part of the Town of Windsor’, showing the now bare ground of the newly-named Thompson Square, with Thompson’s cottage seen at left above the beaching facilities for small boats. In addition to the track beside Thompson’s former lease, a cart track is seen at right, winding down from the area of the military barracks, soon to be relocated.	27
Figure 2-9	Sketch of the Inundation in the Neighborhood of Windsor taken on Sunday the 2nd of June 1816. Panel 4 of 4, showing Beasley’s Wharf at left and Government House garden wall at right (Source: ML PX*D 264).	29
Figure 2-10	A View of Hawkesbury, and the Blue Mountains. New South Wales, 1817–1819. The view shows the destroyed wharfage following the flood of 1816. (Source: Plates for James Wallis Australian Views - Historical Account of the colony of New South Wales, 1817–1819, Folio 1, SLNSW PXD 373). 29	
Figure 2-11	Thompson’s store, at the top of Thompson Square, facing south-west across the Square, drawn in 1820. (Source: State Library of NSW, Mitchell Library, Bonwick Transcripts, box 10 p.4259.) 30	
Figure 2-12	Government buildings surrounding Thompson Square in 1811–1812. Private buildings, including those of the late Andrew Thompson are not shown. (Source: J. Meehan, plan of Windsor, 1812, SRNSW, Map SZ 529).	32
2-13	‘Map of the Town of Windsor’ (Source: Thompson 1827, NSW SRNSW. Map SZ526).	33
Figure 2-14	The development of the Government Domain and Thompson Square at Windsor by 1831 (Source: Detail of plan of school land by surveyor John Abbott, 1831, SRNSW, Map 1816).	34

Figure 2-15	Detail of an 1835 plan showing the changed configuration of buildings surrounding the Government stables on Thompson's former lease, close to the later, north-eastern corner of Bridge Street and George Street. The remaining section of the Prisoners' Barracks (Thompson's Store) has been incorporated into the stable enclosure. (Source: GB White, plan of Windsor, 1835, SRNSW, Map 5968).....	35
Figure 2-16	The Punt House in 1827 (circled in red). Thompson Square is indicated by the number 10 (Source: Thompson 1827, NSW SRNSW. Map SZ526).	37
Figure 2-17	The Punt House after its apparent extension (Source: GB White, plan of Windsor, 1835, SRNSW, Map 5968).....	38
Figure 2-18	The disused Squatters Arms on Whitton's Farm, shown, as 'house' in this 1878 plan, in the right-angle between Wilberforce Road and Freemans Reach Road (Source: G Matcham Pitt, 1878, LPI, Crown Plan R 1533.1603).	39
Figure 2-19	The Commandant's Barracks and later the Government Cottage, c. 1880 (Source: Ian Jack (2010), Macquarie Towns, Heritage Council of New South Wales: 42).	40
Figure 2-20	Detail of J Armstrong, 'CXXIII Building & Cultivation Allotments comprising the Peninsular Farm adjoining the town of Windsor, to be sold at Auction on 5th Feb 1842 by Mr Laban White at Windsor'. (Source: SLNSW Z/M2 811.11222/1842/1, M2 811.11222/1842/1).....	41
Figure 2-21	R. Handcock, 'Plan of the Town of Windsor', 1871 (Source: NSW LPI 1.1039).....	42
Figure 2-22	'On the Hawkesbury, Windsor, NSW', 3 December 1863. View from the Government Cottage showing the doctor's house, punt house, punt, and wharf. (Source: SLNSW DL PX 43 Volume 2: Sketches of N. S. Wales, 1857-1888 by H. Grant Lloyd f.155).	43
Figure 2-23	Opening of Windsor Bridge, 20 August 1874 (Source: Bowd 1979 p.15).	44
Figure 2-24	Plan showing the footprint of the new road and bridge construction in 1874. (Source: C Scrivener, plan of Thompson Square, 1894, LPI, Road Plan R 1009.3000).	45
Figure 2-25	Portion of Windsor, showing bridge, 1900 (sic) c.1879. View shows the bridge in its pre-1897 form. (Source: NRS-4481-3-[7/16220]-Sh1652 - Government Printing Office 1 – 06257)....	46
Figure 2-26	Windsor Bridge, Windsor, 1900 (sic), c.1879. View shows the bridge in its pre-1897 form. (Source: NRS-4481-3-[7/16220]-Sh1652 - Government Printing Office 1 – 06263).	47
Figure 2-27	Thompson Square and surrounds in 1888, showing the new extension of Bridge Street at top left and fencing within the square. By this time Thompson Square (current roadway) has been re-graded and trees have been planted in the square. (Source: State Library of NSW, digital order number d1_06274).	47
Figure 2-28	Thompson Square, the wharf and Windsor Bridge after 1904. The view shows the elevated bridge deck and the cutting for Terrace Road at right. (Source: State Library of NSW, Mitchell Library, Small Picture File).....	48
Figure 2-29	Windsor Bridge, 28 November 1921. Beam replacement, looking east (Source: SRNSW NRS-4481-4-88-[AF00184635] Department of Public Works).	49
Figure 2-30	Windsor Bridge, 28 November 1921. Looking east showing new concrete piers on north bank. (Source: SRNSW NRS-4481-4-88-[AF00195496] Department of Public Works).	49
Figure 2-31	Windsor Bridge, 28 November 1921. Beam casting area (Source: SRNSW NRS-4481-4-88-[AF00196955] Department of Public Works).....	50

Figure 2-32	Windsor Bridge, 28 November 1921. Works area, south bank (Source: SRNSW NRS-4481-4-88-[AF00184629] Department of Public Works).....	50
Figure 2-33	Thompson Square in 1929, during the October flood, from the north, showing some plantings in the two reserves, 29900 (upper) and 29901 (lower). It also shows part of the wharf reserve, along the riverbank (Source: Aerial photograph, courtesy of Carol Roberts, from the collection of her mother, the late Iris Cammack. Photographer, Frederick Halpin Wilson, RAAF, 1929). 51	
Figure 2-34	Thompson Square, Windsor. M J McNally, May 1931. (Source: ML VIB.Wind.2 a1528241r). 51	
Figure 2-35	Windsor Bridge approach looking west, Hawkesbury River, 25 May 1934 (SRNSW NRS-4481-3-[7/16032]-St16517 - NSW Government Printer series: Main Roads: Main Road 165)]..	52
Figure 2-36	Windsor Bridge approach looking east, Hawkesbury River, 25 May 1934 (SRNSW NRS-4481-3-[7/16032]-St16516 - NSW Government Printer series: Main Roads: Main Road 165)]..	53
Figure 2-37	The present road alignment within Thompson Square, showing in blue the previous diagonal going south-west to north-east (Source: C. Seccombe, plan of Main Road 182, 1946, LPI, road plan, R.23477.1603).	54
Figure 2-38	Windsor Bridge, 1947 (Source: SLNSW, Mitchell Library. GPO 1-40931, 1_40931r). 55	
Figure 2-39	The club room of the Upper Hawkesbury Motor Boat Club (centre), c.1978 (Source: SCMP Figure 52).	55
Figure 2-40	1956 Aerial image of Thompson Square and Windsor Bridge, Windsor. The current cadastre is shown in blue (Source: LPI, Overlay by Tom Sapienza, 2016).....	56
Figure 2-41	1961 Aerial image of Thompson Square and Windsor Bridge, Windsor. The current cadastre is shown in blue (Source: LPI, Overlay by Tom Sapienza, 2016).....	57
Figure 2-42	1970 Aerial image of Thompson Square and Windsor Bridge, Windsor. The current cadastre is shown in blue (Source: LPI, Overlay by Tom Sapienza, 2016).....	58
Figure 2-43	1982 Aerial image of Thompson Square and Windsor Bridge, Windsor. The current cadastre is shown in blue (Source: LPI, Overlay by Tom Sapienza, 2016).....	59
Figure 2-44	1991 Aerial image of Thompson Square and Windsor Bridge, Windsor. The current cadastre is shown in blue (Source: LPI, Overlay by Tom Sapienza, 2016).....	60
Figure 2-45	2013 aerial image of Thompson Square and Windsor Bridge, Windsor. The current cadastre is shown in blue (Source: LPI, Overlay by Tom Sapienza, 2016).....	61
Figure 2-46	2016 aerial image of the study area. The current cadastre is shown in blue (Source: LPI, Overlay by Tom Sapienza, 2016).	62
Figure 3-1	Historical archaeological excavation areas in the south portion of the WBRP area.	65
Figure 3-2	Historical archaeological management zones.....	66
Figure 4-1	Location of Area 1A.	69
Figure 4-2	Box Drain 2 during excavation, looking west.	72
Figure 4-3	View along Box Drain 3, showing remnants of timber cover, looking west.....	73

Figure 4-4	View showing interior of oviform drain within Area 1A, looking northeast.....	74
Figure 4-5	View within the oviform drain following removal of internal fill.	75
Figure 4-6	Sandstone road marker during excavation, looking northeast.	76
Figure 4-7	Timber logs [1546] and [1547] and additional two logs (arrowed) at the base in of the cut in the former car park. Looking south.	77
Figure 4-8	Exposure of log [1546] and [1547] in section (dwg 27/section 4 Timber Section west of the oviform drain). They are contained in the construction trench of the oviform drain.	78
Figure 4-9	Detail of timber log in section [1546].	79
Figure 4-10	Detail of timber remnant [1547].	79
Figure 4-11	Detail of timber log [1546] after sectioning showing well preserved outer skin.	80
Figure 4-12	Concrete rails [1510] on west side of drain exclusion zone following exposure.	81
Figure 4-13	Timber log [1545] exposed between concrete rails.	82
Figure 4-14	Location of Area 2i and Area 2ii.	83
Figure 4-15	East section with thin occupational deposits between topsoil [2218] and natural clay [2207] (outside 10 Bridge Street, looking east).	85
Figure 4-16	East section in vicinity of construction cut [2241] for Box Drain A, showing downward slope of natural clay [2207] and additional soil accumulation (outside 10 Bridge Street north of previous image, looking east).	86
Figure 4-17	View of area below driveway in Area 2i, showing various service cuts as well as shell mortar capping of tree bole [2502] in upper right corner (arrowed), looking north.	87
Figure 4-18	North section of pit [2502], location of a possible tree bole, after excavation (outside 4 Bridge Street, looking north).	88
Figure 4-19	Box Drain 1 [2234] during excavation within alignment of Telstra trench, looking south.	89
Figure 4-20	Box Drain 1 [2240] following exposure, showing compacted clay [2235] capping interior of drain and continuing either side, looking northeast.	89
Figure 4-21	West facing view post-excavation of Box Drain 1. Note end of brick-lined base, level with scale.	91
Figure 4-22	View of Box Drain 1 showing abrupt transition from brick-lined drain to clay lined base, looking north.	92
Figure 4-23	View showing interior of Box Drain 1 and damage caused by tree roots on either side, looking south.	93
Figure 4-24	View showing clay base forming interior of Box Drain 1, looking northwest. Note brick fragments in section.	94
Figure 4-25	View showing base and fill within Box Drain 1, looking southeast.	95

Figure 4-26	View showing base of Box Drain A and truncation by former road alignment, looking southeast.	96
Figure 4-27	Western portion of Box Drain A showing box drain immediately underlying road bedding gravel [2206], looking west.	97
Figure 4-28	Western portion of Box Drain A cut by modern drainage service, looking northeast.	98
Figure 4-29	North section through modern drainage cut showing gravel fill [2211] and PVC pipe installed to drain excess water, with eastern portion of Box Drain A on both sides of the modern cut, looking north.	99
Figure 4-30	Post-excavation view looking northwest of junction between higher western and lower eastern box drain.	100
Figure 4-31	Brickwork in the western portion of Box Drain A, looking southwest.	101
Figure 4-32	View showing section of Box Drain A probably damaged by grading works, looking northwest.	101
Figure 4-33	View showing cross section of Box Drain A following removal of gravel [2211], looking northwest.	102
Figure 4-34	View showing the eastern remnant of the Box Drain A and back-filled robber trench (lower left), looking east	102
Figure 4-35	Elevation of drain following removal of bricks, looking northwest.	103
Figure 4-36	View from above of sondage excavated through drain. Note construction cut to right (north).	103
Figure 4-37	Remnants of Phase 4 deposits to left of scale bars within road alignment, looking north.	105
Figure 4-38	Eastern section along ridgeline, with topsoil [2218] overlying natural clay [2207], looking east.	105
Figure 4-39	Levelling fills [2224] and [2225] within the road alignment, looking east.	106
Figure 4-40	Gutter-blocks [2228] and overburden [2229] associated with Phase 5 of historical development, looking east.	107
Figure 4-41	North facing view showing the location of wall [5030] at right in relation to prior excavation works.	108
Figure 4-42	East facing view showing wall [5030] and adjacent stratigraphy.	109
Figure 4-43	East facing view post-excavation showing lower course step-out.	109
Figure 4-44	View during excavation showing location of cobble deposit [2102] in foreground and cobble deposit [2103] in background, looking southwest.	110
Figure 4-45	View during excavation showing cobble deposit [2103], with possible brick edging, looking west.	111
Figure 4-46	East facing view of cobble deposit [2102], mid-excavation.	112

Figure 4-47	East facing view of sondage excavated into sand [2104] showing cobbles [2102] filling depression (top left).	113
Figure 4-48	Location of Area 3i, Area 3ii and Area 3iii.	114
Figure 4-49	South-facing view of wall footing [310].	116
Figure 4-50	East-facing view of entry gap in garden wall [310].	117
Figure 4-51	East-facing view showing brick rubble backfill in construction trench.	117
Figure 4-52	East-facing view showing damage to wall.	118
Figure 4-53	Ortho-rectified image of the wall showing location of postholes in relation to brickwork [310].	119
Figure 4-54	East facing view showing compacted road surface [306] and later repair [307].	120
Figure 4-55	North facing view showing metal pipes [362] laid under the road surface, with trench [383] cutting diagonally.	121
Figure 4-56	West facing view showing modern service trench [365] cutting earlier service trenches.	121
Figure 4-57	North facing view showing profile of deposits between pavers [386] and natural sand [389].	122
Figure 4-58	East facing view at limit of excavation in footpath area.	123
Figure 4-59	East facing view showing parallel fills in service trenches.	124
Figure 4-60	East facing view on completion of the service trench.	125
Figure 4-61	East section outside 10 Bridge Street during excavation showing the relationship between posthole cuts [5004] and [5006], looking east.	126
Figure 4-62	East facing view following excavation of posthole [5004].	127
Figure 4-63	East facing view following excavation of posthole [5006].	127
Figure 4-64	Northeast facing view along surviving length of wall [409].	129
Figure 4-65	Northwest facing view showing northern portion of wall [409].	130
Figure 4-66	Northwest facing view of southern portion of wall [409].	130
Figure 4-67 (removed).	Northwest facing view showing cut of posthole [416] beneath the line of wall [409]	131
Figure 4-68	West facing view showing cross-section through deposit [413].	132
Figure 4-69	East facing section through road repair deposit [414] showing underlying natural sand.	132
Figure 4-70	West facing view showing service cuts [403] on the right and [405] on the left, with service cut [403] cutting the wall [409] in the distance.	133
Figure 4-71	North facing view showing service cut [405] in foreground cutting rectangular feature [407]. Note milling lines from modern grading.	133

Figure 4-72	Post-excavation, north facing view showing section through trench [405], and thin deposit [407].	134
Figure 4-73	North facing view, showing brick footings [409] (at left) present immediately beneath bitumen road surface [400] and blue metal deposit [401].	134
Figure 4-74	Northwest facing view across the Bridge Street/George Street intersection showing depth of excavation at completion of works in Area 3iii. Note the limit of the Macadam roadbed (right) along Bridge Street (foreground), discussed further below.	135
Figure 4-75	View showing completion of works on south-bound lane, looking north.	136
Figure 4-76	Location of Area 4.	137
Figure 4-77	West facing view showing condition of trench upon arrival at site following activation of the UFP. Note brick fragments circled in red.	138
Figure 4-78	West facing view showing exposed length of oviform drain [404].	138
Figure 4-79	Northeast facing view showing the north section with arch of the drain truncated by the Bridge Street cutting.	139
Figure 4-80	Northwest facing view showing vertical (external) section of drain and keyed-in brick feature.	140
Figure 4-81	Vertical view showing brick side-wall and keyed-in brick feature.	140
Figure 4-82	South facing view of section showing mottled clay [405] overlying natural sand.	141
Figure 4-83	Southwest facing view showing south section. Note rubble filling the drain below layers associated with construction of the Bridge Street roadbed.	142
Figure 4-84	Southwest facing view looking along the length of exposed drain.	143
Figure 4-85	North facing view showing the length of exposed drain. Note the remnant section of arch forming the upper part of the eastern wall at right.	143
Figure 4-86	Location of Area 5.	144
Figure 4-87	Overview of three features (back to front, [604], [603] and [601]) likely associated with the Squatters Arms.	145
Figure 4-88	Location of west sandstock brick footing within Freemans Reach Road reserve.	146
Figure 4-89	West sandstock brick footing [604], looking north.	146
Figure 4-90	Eastern sandstock brick footings [603], view to north.	147
Figure 4-91	Eastern sandstock brick footings [603], view to northwest.	147
Figure 4-92	View to southeast of formed concrete feature [601].	148
Figure 4-93	View to northeast of concrete feature [601].	148
Figure 4-94	Interior elevation of concrete feature [601] showing evidence of timber formwork.	149
Figure 4-95	External elevation of concrete feature [601] showing coarser forming techniques.	149
Figure 4-96	Interior view of concrete feature [601] showing evidence of timber formwork.	150

Figure 4-97	View west showing the remains of a former pump house located on the north river bank.	151
Figure 4-98	A 1956 aerial image showing the location of the pumphouse (NSW Spatial Services).	151
Figure 4-99	View looking west showing remnant timber frame of the former jetty.	152
Figure 4-100	Remains of former jetty – detail.	153
Figure 4-101	View looking southwest showing the fenced off location of the rubbish dump post excavation.	154
Figure 4-102	Artefacts at the location of discovery (<i>Source: Georgiou 2021</i>).	154
Figure 4-103	Wilberforce Road artefact assemblage after washing.	155
Figure 4-104	Indicative location of features identified on the north river side. The President Turf Supplies building is marked with a blue arrow (<i>Source: Google Earth with Extent additions</i>).	156
Figure 4-105	Bridge Street upgrade showing extent of exposed long gutter blocks, looking south.	157
Figure 4-106	Detail of short gutter blocks.	158
Figure 4-107	Detail of Macadam roadbed beneath the current asphalt surface mixed with later concrete bedding.....	158
Figure 4-108	South facing view of Macadam roadbed identified during nightworks on the northbound shoulder land of Bridge Street.	159
Figure 4-109	Vitreous ceramic pipe and part of the sandstone retaining wall in The Terrace.....	160
Figure 4-110	Location of the terracotta pipe and sandstone retaining wall.	161
Figure 4-111	Northeast facing view of wall.	162
Figure 4-112	East facing view along wall.	162
Figure 4-113	Detail of north face of wall.....	163
Figure 4-114	Detail of metal bolt inserted into the upper face of the wall.	164
Figure 4-115	North facing view showing abrupt western end of wall, with additional stones laid on underlying silt to the west.....	165
Figure 4-116	View showing sondage excavated against northern face of the wall, looking east.	166
Figure 4-117	View south along Windsor Bridge facing Thompson Square. No date, but c.1920 (<i>Source: Kurrajong-Comleroy Historical Society Photo Collection, Item #120118</i>).	167
Figure 4-118	Tree stump during preparation for removal, looking southeast.	168
Figure 4-119	Tree stump during removal, looking southeast.	168
Figure 4-120	Soil profile beneath the tree stump.	169
Figure 4-121	Site following removal of stump and roots, looking north.	170

Figure 4-122	View of archaeological remains identified during service installation on the lower Terrace, looking west.	171
Figure 4-123	Features associated with yard area of the former Punt House.	171
Figure 4-124	Remnant washing blue.	172
Figure 4-125	Trench excavated for a power cable and pit for new light pole, looking northeast. ...	172
Figure 4-126	Timber post identified in the power cable trench.	173
Figure 4-127	Timber boards <i>in situ</i> , looking north.	174
Figure 4-128	Timber boards following removal and scrape across site, looking southwest.	175
Figure 4-129	Detail of surviving patch of gravel roadbed.	176
Figure 4-130	Detail of image Windsor Bridge, 28 November 1921. Works area, south bank, showing timber planking in use (<i>Source</i> : SRNSW NRS-4481-4-88-[AF00184629] Department of Public Works). 176	
Figure 5-1	“Chinese Raftman & Ruins” Left: 3x small bowl (WBRHS181665) Right: 3x large bowl (WBRHS181637)	186
Figure 5-2	“Sheepshearer” Left: 3x Exterior, Upper right: 2x Interior rim, Lower right: 2x Interior base (WBRHS181574).....	186
Figure 5-3	Upper: ‘Gothic Revival’ Pattern (WBRHS181749), Lower: ‘Child Ware’ Pattern (WBRHS181669)	187
Figure 5-4	Left: Patent Medicine Jar Lid (WBRHS181559), Right: 2x Ointment Jar Lids (WBRHS181578 & 181738)	189
Figure 5-5	“Bentley, Wear & Bourne” Jug with Engraved Naval Scene (WBRHS181657)	190
Figure 5-6	Jug Pedestal Base, Inset Detail of ‘Counterfeit Mark’ (WBRHS181751).....	190
Figure 5-7	Edgewares, Left: Blue ‘bud style’ (WBRHS181984), Centre: Green ‘straight lines’ (WBRHS181966), Right: Blue ‘bud style’ (WBRHS181993).....	191
Figure 5-8	Architectural Ceramics, Left: Stoneware insulator (WBRHS181428), Right: Earthenware knob (WBRHS181745).....	192
Figure 5-9	Gilt Tableware Set, Left: 2x Platter (WBRHS181264), Upper right: Plate (WBRHS181231), Lower right: 2x Tureen (WBRHS181097)	193
Figure 5-10	Left: ‘Chinese Dragon’ Teaware (WBRHS181762), Right: ‘Frozen Charlotte’ Doll (WBRHS181950)	193
Figure 5-11	Stoneware Bottles. Left & Inset: 2x ‘Day & Martin’ Blacking (WBRHS181201), Centre left: Stout (WBRHS181694), Centre right: ‘T. Field’ Ginger Beer (WBRHS181596), Right: ‘Conlon’ Ginger Beer (WBRHS181480), Front: 2x ‘Penny Ink’ Wells (WBRHS181632).	194
Figure 5-12	Chinese Export Wares. Upper left: ‘Well & Tree’ (WBRHS181397), Bottom left: ‘Lotus, Lingzhi & Spiral’ (WBRHS181391), Lower centre: ‘Imari’ (WBRHS181333), Right: 4x ‘Fitzhugh’ (WBRHS181415)	195

Figure 5-13	Left: 'Tooth & Co. Ltd.' Beer Bottle (WBRHS181364), Right: Apéritifs/Liquor Bottle (WBRHS181249)	207
Figure 5-14	Early Wine / Champagne Bottles. Left: (WBRHS181320), Right: (WBRHS181301)	207
Figure 5-15	Cordial Bottle with Polychrome Label, Unknown Maker (WBRHS181110)	209
Figure 5-16	Cordial & Soda/Mineral Bottles. Upper row: 'Noon's' (WBRHS181387), 'Coca-Cola' (WBRHS181232), 'Noon's' (WBRHS181290), Left: 'Newling & Walker' (WBRHS181283), Right: 'Summons & Co', cobalt variant (WBRHS181186)	210
Figure 5-17	Left: Medicine bottle, AGM (WBRHS181346), Centre left: Medicine Dropper (WBRHS181312), Centre right: Graduated Medicine Dispenser (WBRHS181210), Right: Pill Bottle, cobalt (WBRHS181217)	212
Figure 5-18	Upper: 'Molineaux, Webb & Co' bottle, inset diamond registration mark (WBRHS181147), Lower: Oil / Vinegar bottle (WBRHS181307)	213
Figure 5-19	Commercially Branded Bottles. Upper left: 'J. Pottie' Bottle (WBRHS181405), Upper right: 'Barry's Tricopherous' Bottle (WBRHS181214), Lower left: 'Hauthways' Bottle (WBRHS181419), Lower right: 'A.J. White Bottle' (WBRHS181130)	214
Figure 5-20	Stemwares. Left: 3x Ball Knops, Right: 2x Annular Knops (WBRHS181357)	216
Figure 5-21	Tumblers (WBRHS181375)	216
Figure 5-22	Clay tobacco pipe, William White (WBRHS181193)	229
Figure 5-23	Circular Box Lid, facing and reverse. Inset, Newton Wilson trademark (WBRHS181435)	230
Figure 5-24	Buttons & Closures. Left: loop shank button (WBRHS181194), Centre left: 2 x 4-hole 'sinkies' (WBRHS181709), Upper centre right: 4-hole 'sinkie' (WBRHS181754), Lower centre right: 4-hole 'sinkie' (WBRHS181361), Right: clasp fastener (WBRHS181367)	231
Figure 5-25	Coins, Obverse & Reverse. Left: (WBRHS181355, WBRHS181108), Centre left: (WBRHS181109, WBRHS181380, WBRHS181116), Centre right: (WBRHS181117, WBRHS181374), Right: (WBRHS181368, WBRHS181118)	233
Figure 5-26	Horseshoes, Left: (WBRHS181340), Right: (WBRHS181140)	233
Figure 5-27	Pelham Bit (WBRHS181266)	234
Figure 5-28	Hammer Head (WBRHS181125)	239
Figure 6-1.	Graph showing the results of botanical species.	245
Figure 6-2.	Pollen images	245
Figure 7-1	Pre-construction topographic map with contours showing location of drains and drain shafts.	247

1 INTRODUCTION

1.1 Project background

AAJV has been commissioned by Transport for NSW (TfNSW) to prepare a final archaeological report on the program of historical archaeological investigations undertaken at Windsor NSW as part of the Windsor Bridge Replacement Project (WBRP) between 2016 and 2020. The WBRP involves replacement of the existing Windsor Bridge (Windsor, NSW) with a new crossing and associated infrastructure.

The project was approved as State Significant Infrastructure (SSI_4951) under Part 5.1 of the *Environmental Planning and Assessment Act 1979* (EPA Act). The Minister's Conditions of Approval (MCoA) for the WBRP require a range of historical, maritime, and Aboriginal archaeological investigations for the southern (Condition B3) and northern (Condition B4) banks of the Hawkesbury River. Initial investigations involving combined Aboriginal and historical archaeological test excavation were undertaken in 2016.² Following these investigations, a component of Condition B3 required the development of a Detailed Salvage Strategy (DSS) to outline further archaeological works required to avoid, minimise, and/or mitigate impacts to the cultural resource.³ This document, developed in August 2017, recommended the need for Aboriginal and historical archaeological (salvage) excavations within the lower Thompson Square park in five separate areas (Areas 1–5), with the remainder of the project's construction footprint being subject to archaeological monitoring and management under the unexpected find procedure.

In response to the 2017 DSS's recommendations, AAJV has been engaged by former Roads and Maritime Services (RMS now TfNSW) to undertake further historical archaeological investigations prior to and during construction works. The archaeological salvage and investigations works were carried out in two stages:

- Stage 1, 30 October 2017 to 28 March 2018—Area 1 of Thompson Square on the south bank of the project; and
- Stage 2, early 2019 to end 2020—Areas 1-5 of Thompson Square on the southern bank and the footprint areas on the northern bank of the project.

The results of the Stage 1 salvage excavations were presented in a salvage excavation report prepared by AAJV in January 2020.⁴

This report presents the results of Stage 2 archaeological salvage and investigations works. As the final excavation report for the project, it also synthesises the findings of all historical archaeological excavations across the entire WBRP.

² Austral Archaeology/Extent Heritage (AAJV) (2017a) 'Windsor Bridge Replacement Project – Test Excavation Report – Aboriginal Heritage.' *Unpublished Report for NSW Roads and Maritime Services*; Austral Archaeology/Extent Heritage (AAJV) (2017b) 'Windsor Bridge Replacement Project – Test Excavation Report – Historical Archaeology.' *Unpublished Report for NSW Roads and Maritime Services*, and Cosmos Archaeology Pty Ltd (2017) 'Windsor Bridge Replacement Project – Underwater Test Excavation and Surveys.' *Unpublished Report for NSW Roads and Maritime Services*.

³ AAJV (2017c) 'Windsor Bridge Replacement Project – Detailed Salvage Strategy for Aboriginal and Historical Archaeological Heritage.' *Unpublished Report for NSW Roads and Maritime Services*.

⁴ AAJV (2020) 'Windsor Bridge Replacement Project – Salvage Excavation Report – Area 1 – Historical Archaeology.' *Unpublished Report for NSW Roads and Maritime Services*.

1.2 Statutory context and heritage listings

1.2.1 MINISTER'S CONDITIONS OF APPROVAL

The MCoA pertinent to historical archaeology and compliance are included in the tables below.

For compliance information regarding Aboriginal heritage, Maritime archaeology or Built heritage, please refer to the relevant individual reports for those disciplines.

Table 1. Compliance with MCoA

MCoA B3		
Condition	Compliance	Description
B3. The results of the Archaeological Investigation Program are to be detailed in a Historic Archaeological Report and a Detailed Salvage Strategy comprising the non-Aboriginal and Aboriginal heritage findings. These are to be prepared in consultation with the OEH (Heritage Branch and Aboriginal heritage) and to the satisfaction of the Director-General, and shall include, but not necessarily be limited to:	Yes	This report provides the findings of the work stemming from the Detailed Salvage Strategy for historical archaeological heritage. Aboriginal heritage is located in Archaeological Salvage Report – Aboriginal Heritage, dated 22 Jan 2020. Maritime Heritage is dealt with within Report on Maritime Archaeological Excavation dated Sept 2021.
a) detailed recommendations for further archaeological work	Yes	No further works required.
b) consideration of measures to avoid or minimise disturbance to archaeology sites, where archaeology of historical and Aboriginal heritage archaeological significance is found to be present	Yes	Undertaken in accordance with procedures outlined in Detailed Salvage Strategy.
c) where impacts cannot be avoided by construction of the SSI, recommend actions to salvage and interpret salvaged sites, conduct further research and archival recording of the historic heritage and Aboriginal heritage value of each site, and to enhance and preserve the archaeology of historical non-Aboriginal and Aboriginal heritage significance	Yes	Undertaken in accordance with procedures outlined in Detailed Salvage Strategy and outcomes presented in this report. This has also been addressed in the Thompson Square Heritage Interpretation Plan - Stage 1 - Concept Plan Supplementary Document (WolfPeak, 2020). The interpretation methods identified and implemented by the project include the following: - Thompson Square Heritage Interpretation Plan Stage 2 - Implementation Plan (WolfPeak, 2020) - Thompson Square: The Archaeology of Thompson Square, Windsor NSW website (www.thompsonsquare.com.au/) - UNCOVERED Exhibition at the Hawkesbury Regional Museum

d) consideration of providing visual evidence of heritage sites within the final landscape design of the SSI to preserve and acknowledge the heritage value of the Thompson Square Conservation Area and the site	Yes	Recommendations for the interpretation of the results from the archaeological program and display at the local Hawksbury Museum. This has also been addressed in the following documents. - Thompson Square Heritage Interpretation Plan Stage 2 - Implementation Plan (WolfPeak, 2020) - Thompson Square Heritage Interpretation Plan - Stage 1 - Concept Plan Supplementary Document (WolfPeak, 2020).
e) management and mitigation measures to minimise impacts due to preconstruction and construction activities	Yes	Undertaken in accordance with procedures outlined in Detailed Salvage Strategy and outcomes presented in this report.
C5. Within 12 months of completing the work required under conditions B3 and B4, the Applicant shall, in consultation with the NSW Heritage Council, the OEH (Aboriginal heritage) and to the satisfaction of the Director-General, prepare and submit a further report containing:	Yes	This report addresses the historical archaeological components of this condition. Following the discovery of the brick barrel drain (which was the subject of a separate reporting and consultation), nothing of State significance, which warranted consultation with Heritage NSW, was exposed during the remaining excavation works. Now that the works and report are complete, Heritage NSW has the opportunity to comment on the findings.
a) an executive summary of the archaeological program	Yes	Executive summary
b) the findings of the excavations, including detailed artefact analysis for non-Aboriginal and Aboriginal heritage	Yes	Sections 6, 7, 8 and Appendices
c) the identification of a final repository for finds of non-Aboriginal heritage significance	Yes	The final repository for the non-Aboriginal artefact assemblage will be at the Hawkesbury Regional Museum, who also possess previously loaned artefacts as part of the UNCOVERED Exhibition commissioned by TfNSW. The Hawkesbury Regional Museum are responsible for the collection's long term storage and management.
(d) artefact analysis and Aboriginal Site Impacts Recording Forms (ASIR), and the identification of final storage location for all Aboriginal objects recovered (testing and salvage), prepared in consultation with the Aboriginal stakeholders, the OEH (Aboriginal heritage) and to the satisfaction of the Planning Secretary.	Yes	This condition has been addressed in Section 7 and Appendix 13 of the Salvage Excavation Report - Aboriginal Heritage, dated 22 Jan 2020.

e) detailed information on the excavation including the aim, the context for the excavation, procedures, treatment of artefacts (cleaning, conserving, sorting, cataloguing, labelling, scale photographs and/or drawings, location of repository) and analysis of the information retrieved	Yes	See Sections 3, 4, 5, 7 and Appendices
f) nominated repository for the items, which has agreed to take the items	Yes	The final repository for the non-Aboriginal artefact assemblage will be at the Hawkesbury Regional Museum,
(g) conclusions from the archaeological programme. This information must include a reassessment of the site's heritage significance comprising non-Aboriginal and Aboriginal heritage, statement(s) on how archaeological investigations at this site have contributed to the community's understanding of the Site and other Comparative Site Types and recommendations for the future management of the site/s;	Yes	See Section 6 and 7 of the Salvage Excavation Report - Aboriginal Heritage, dated 22 Jan 2020. See Section 9 for the revised statement of significance assessment. Management recommendations are contained within the SCMP for Thompson Square. The WBRP areas are now archaeologically sterile, with the exception of the preserved section of barrel drain beneath the new bridge. As it is fully encased within the new structure, which has a 100+ year design life, there are no management requirements for the foreseeable future.
(h) details of how this information about the excavations have been publicly disseminated (for example, include copies of press releases, public brochures and information signs produced to explain the archaeological significance of the sites).	Yes	See Section 7.3 of the Salvage Excavation Report - Aboriginal Heritage, dated 22 Jan 2020. This has also been addressed in the Thompson Square Heritage Interpretation Plan - Stage 1 - Concept Plan Supplementary Document (WolfPeak, 2020). The interpretation methods identified and implemented by the project include the following: - Thompson Square Heritage Interpretation Plan Stage 2 - Implementation Plan (WolfPeak, 2020) - Thompson Square: The Archaeology of Thompson Square, Windsor NSW website (www.thompsonsquare.com.au/) - UNCOVERED Exhibition at the Hawkesbury Regional Museum

1.2.2 HERITAGE LISTINGS

The WBRP area consists of two main heritage items, listed on the following statutory registers:

- NSW State Heritage Register (SHR), item #00126 as *Thompson Square Conservation Area*;
- RMS Section 170 Heritage and Conservation Register (S170), item #4309589 as *Hawkesbury River Bridge, Windsor*; and
- Hawkesbury Local Environmental Plan (LEP) 2012, item #I00126 as Thompson Square and item #I276 as Windsor Bridge.

The WBRP area includes the following non-statutory heritage listings:

- National Trust of Australia (NSW) Register under ID's *S10510* and *S11456* as *Thompson Square Precinct*.

There are also numerous buildings adjacent to the WBRP area listed on the SHR and Hawkesbury LEP 2012.

1.3 Site location and identification

The subject area is located at Windsor, within the Hawkesbury City Council Local Government Area (LGA), approximately 57 km north-west of Sydney. The town is situated on the southern bank of the Hawkesbury River, close to the foothills of the Blue Mountains (Figure 1-1).

As outlined in the DSS, the WBRP salvage excavation area incorporates an area of some 4,024.71 m². (Figure 1-2).



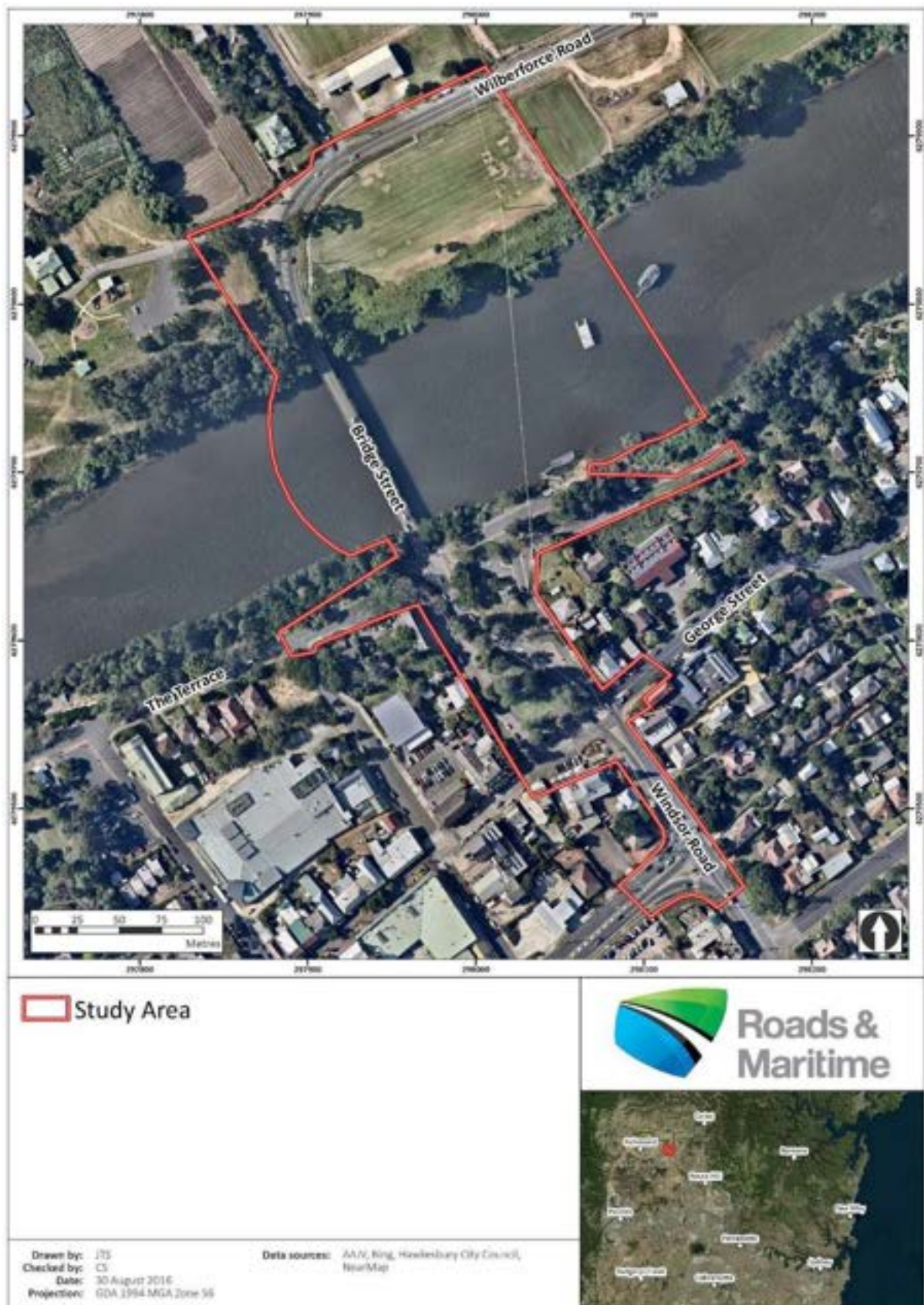


Figure 1-2 Aerial image of the WBRP area.

1.4 Previous reports and investigations

1.4.1 REPORTS

This report was prepared taking into consideration the following heritage reports and investigations:

- *Windsor Bridge Replacement Project – Salvage Excavation Report – Area 1 – Historical Archaeology* (AAJV 2020);
- *Thompson Square Brick Barrel Drain, Windsor, NSW Heritage Mitigation and Options Report* (AAJV 2018);
- *Windsor Bridge Replacement Project Construction Heritage Management Sub Plan, Appendix B5* (Georgiou and RMS July 2018).
- *Strategic Conservation Management Plan – Thompson Square and Windsor Bridge Replacement Program Project Area, Windsor NSW* (AAJV 2018);
- *Windsor Bridge Replacement Project, Detailed Salvage Strategy for Aboriginal and Historical Archaeological Heritage* (AAJV 2017);
- *Windsor Bridge Replacement Project, Maritime Archaeological Report* (Cosmos Archaeology 2017);
- *Windsor Bridge Replacement Project Test Excavation Report – Historical Archaeology* (AAJV 2017);
- *Windsor Bridge Replacement Project Historical and Maritime Archaeological Research Design* (AAJV 2016);
- *Windsor Bridge Replacement, Windsor: Integrated Archaeological Research Design* (AAJV 2013);
- *Windsor Bridge Replacement Project: Independent Heritage Review* (Casey et al 2013);
- *Evaluation of Historical Images for Additional Archaeological Potential, Windsor Bridge Proposal* (AHMS 2013);
- *Windsor Bridge Replacement Project: Historical Heritage Assessment & Statement of Heritage Impact* (Biosis & CRM 2012).
- *Windsor Bridge Replacement Project: Aboriginal Cultural Heritage-Cultural Heritage Assessment Report* (KNC 2012).

These reports are also listed in the References in Part 11 of this report.

1.4.2 PREVIOUS INVESTIGATIONS

1.4.2.1 THE 2016 TEST EXCAVATIONS

During the testing phase of the project in 2016, sixty machine-dug and manually-dug test and trenches (investigating both historical and Aboriginal archaeology) were carried out within the WBRP areas north and south of the Hawkesbury River. Test pits were excavated in discrete 50 mm, 100 mm, and 200 mm spits or by historical archaeological context. The aim of the investigative phase was to identify any evidence of past historical activity, recover cultural materials necessary to date each stratigraphic unit and inform interpretation of the archaeological profile. twentieth century activity and disturbance to the archaeological profiles. Despite this, state-significant

Test excavations south of the Hawkesbury River were characterized by substantial later nineteenth and relics dating from the early formation of Windsor were identified and recorded. These included remains associated with early nineteenth century structures: a brick footing likely to be associated with either the entry gate or stables of the government compound (SA 25, Figure 1-3-3); a brick and stone surface associated with the former Government Stables (SH 6); and a brick box drain possibly connecting the former Government Stables building complex with the main vaulted drain running through Thompson Square (SA 26, Figure 1-4).

The stratigraphic evidence recorded within a number of test pits, particularly SA 9, indicated that limited areas of historical soil profile dating to the early-nineteenth century remained beneath later fill deposits of between 1 m and 2 m depth (Figure 1-5). This suggested that early occupation levels within the park had not been entirely removed by later activity, and that significant historical archaeological evidence, including the vaulted drain, could be present within lower Thompson Square.

Elsewhere within the broader southern project area, a number of archaeological strata informing the history of Windsor were recorded, including a yard deposit associated with the post-1820s punt house (SA 3), nineteenth century artefacts and modified historical soils within the north portion of Thompson Square, and early-twentieth century macadam road surfacing beneath Bridge and George Streets.

Test excavations conducted north of the river on an alluvial terrace originally occupied as farmland contained sporadic historical archaeological evidence, consisting of unstratified artefacts and a posthole identified in the vicinity of the Squatter's Arms Inn, which operated from the 1830s until 1913.

In addition to the structural remains, the test excavation yielded a historical archaeological artefact assemblage comprising 3,147 artefacts. These were predominantly associated with archaeological contexts of local significance; however, a number of archaeological deposits were identified within SA 3, SA 9, SA 10, and SA 29, with artefact assemblages predating c.1830, and typical of the earliest phases of colonial sites within Australia.



Figure 1-3 Early-nineteenth century brick footing identified beneath George Street (test pit SA 25).



Figure 1-4 Early-nineteenth century box drain identified beneath Old Bridge Street (test pit SA 26).



Figure 1-5 Disturbed historical soil profile within test pit SA 9 in lower Thompson Square (dark undulating band halfway down the profile).

1.4.2.2 THE 2017 AREA 1 SALVAGE EXCAVATIONS

An area of approximately 1,300 m² of lower Thompson Square was investigated to depths of between 1 m and 5 m below ground levels during Stage 1 of historical salvage excavations. Open area excavation confirmed a high level of past disturbance to the archaeological stratigraphy of the site.

Large-scale landform modifications have been a repeated feature of the site, commencing as early as 1814–1816 with works carried out at the request of Governor Macquarie during the restructuring of the 'Green Hills' settlement into the township of Windsor. Key to these works was the construction of an extensive brick drainage system providing sub-surface drainage for the settlement centred on Thompson Square. This is an early example of the numerous drainage works commissioned and constructed during Macquarie's administration, and a major undertaking for early Windsor.

As a result of the salvage excavations, extensive sections of this drainage system were confirmed to remain *in situ* beneath lower Thompson Square (archaeological Phase 2: 1794–1814). The system comprised a central oviform drain on a north-south alignment running down to the river, fed by three bilateral lines of box drain constructed at a higher level and connected to the oviform drain by shafts (Figure 1-6 and Figure 1-7). In total, 48 m of the oviform drain and 130 m of three box drains were identified within the excavation zone. The three box drains were additional to the box drain that was identified beneath Old Bridge Street during test excavations in 2016. All formed part of the one drainage system created in Phase 3.

In addition to the drainage system, an area of undisturbed soil profile that formed the pre-1814 ground surface was identified and recorded (archaeological Phase 2: 1794–1814). The surviving extent of this historical soil profile was very limited (approximately 18 m²), largely as a result of damage from the Phase 3: 1814–1816 drain construction and associated earthworks.

From the combined Phase 2: 1794–1814 and Phase 3: 1814–1816 archaeological deposits, a total of 1,784 early historical artefacts were salvaged, representing an estimated 650 individual items in use prior to 1816.

Ceramics formed the largest material class of the late-eighteenth to early-nineteenth century artefact assemblage including high proportions of fragmented lead-glazed earthenware produced locally in the colony (Figure 1-8), and Chinese-export porcelain wares. Materials that are found on most historical archaeological sites of the nineteenth century such as whiteware ceramics and bottle glass are infrequent, a reflection of this site's early date.

In addition to domestic refuse, a quantity of construction-related materials was recovered that reflect the scattered structures present during the Green Hills period and the removal of these buildings at the request of Macquarie in 1814. These building materials provide a broad indication of the fabric in use during the earliest period of British occupation of the site. Information on the diets and personal lives of the early colonists were also recovered. Items retrieved included 1799 'proclamation' coins, tobacco pipes, buttons, a pocket watch, and firearms flints.

The Phase 2 (1794–1814) and Phase 3 (1814–1816) assemblages provide a substantial collection of objects in use during the 'Green Hills' era of Windsor (1794–1814) that can inform future studies of the material culture in use locally and within the wider colony prior to 1820. Several of the Thompson Square assemblages provide securely dated material indicators for the identification of early colonial sites in Australia.

A significant record of Aboriginal occupation of the site from the late Pleistocene was also investigated during the concurrent Aboriginal salvage excavation program that is the subject of a separate report (AAJV (2019) Salvage Excavation Report – Aboriginal Archaeology. *Unpublished Report for NSW Roads and Maritime Services*). Similarly, separate reporting for the projects management of maritime heritage is presented in Cosmos Archaeology Pty Ltd (2017) Windsor Bridge Replacement Project –

Underwater Test Excavation and Surveys. *Unpublished Report for NSW Roads and Maritime Services*. All project reports are now public and available on the project website.⁵

The construction of the Phase 3 (1814–1816) drainage system marks the end of unregulated private occupation of Thompson Square and commencement of its history as a public space. The archaeological record reflects this, as no evidence of further activity relating to the mid-nineteenth century history of Windsor (Phase 4, 1816–1874) was identified during salvage.

Evidence of extensive attempts to lower Thompson Square during the later-nineteenth century and into the twentieth (Phase 5, 1874–1934, and Phase 6, 1934–2018) was also carefully documented in order to confirm this, and to determine the sequence and contexts of these various disturbance events and their influences on the early historical archaeological resource. Archaeological evidence dating from these later phases reflects the major events in the subsequent historical record of Thompson Square:

- the construction of Windsor Bridge,
- development of associated roads and demarcation and formalisation of reserves,
- tunnelling of a sewer main beneath the square in 1937,
- the construction of the Upper Hawkesbury Motor Boat Club across much of the salvage area in 1949, and
- removal of this building in c.1990.

As a result of these successive impacts, the fill stratigraphy across much of the site was found to be extensive (1–4 m in depth), and to contain introduced and reworked material including a further 1,947 artefacts salvaged in the process of dating the stratigraphy. The various disturbance events and fills were found to have further contributed to the almost total removal of the early historical landform and to directly overlie the disturbed Phase 3 (1814–1816) drainage system and truncated natural sands that pre-date European occupation (Phase 1, pre-1794).

The total count of historical archaeological artefacts retrieved during the Stage 1 salvage excavation was 3,731.

⁵ <https://www.transport.nsw.gov.au/projects/current-projects/project-documents-windsor-bridge-replacement>



Figure 1-6 View looking west showing the exposed section of the brick oviform drain where it had been previously cut to accommodate a later, twentieth century service.



Figure 1-7 View looking south-west showing the northernmost of three brick box drains (foreground) that emptied into the main oviform drain.



Figure 1-8 **Lead-glazed shallow pan or basin recovered from feature 1339 (Phase 3), grid area 1.**

1.5 Limitations

This report uses historical documentation and previously established significance assessments prepared by third-party heritage consultants to describe and assess the heritage significance of land that would be affected by the proposal.

This report does not present the results of Aboriginal or maritime components of the archaeological program.

1.6 Excavation team and author identification

The 2019–2020 excavation team included:

- Excavation Directors: David Marcus, Anita Yousif, Dr Matthew Kelly and Graham Wilson
- Artefact Specialist: Eleanor Casella
- Assistant Archaeologists: Dr Jennifer Jones-Travers, Ngaire Richards, Lorna Cooper, Ricardo Servin, Madeleine Rodwell, Cameron Neal, Ben Calvert, Nestor Nicola, Francesca McMaster and Catherine Fenech.

This report was prepared by David Marcus, Anita Yousif, and Eleanor Casella. The site plan and section drawings were digitised by Alex Murphy, Mariska Marnane, and Elizabeth Hawksley. Additional graphics were prepared by Brian Shanahan. The artefact collection was analysed by Eleanor Casella. Artefact washing and sorting was carried out by Gloria Yousif and Niamh Formosa. Artefact cataloguing was carried out by Rebekah Hawkins, Coral Hardwick, and Tse Siang Lim. Dr Patrick Moss (University of Queensland) undertook soil analysis and reporting. Graham Wilson amended the initial drafts.

The report was reviewed by Dr Maclaren North, managing director of Extent Heritage.

2 BACKGROUND

2.1 Introduction

This section is adapted in part from the *Thompson Square Strategic Conservation Management Plan* (SCMP) (AAJV 2017), that is the principal guiding document for the management of the archaeological program. The historical information contained within the SCMP has been expanded as further documentary information was gathered during the course of the excavation program. The following section provides an overview of the environmental setting, occupation history, and summary of previous archaeological investigations of the WBRP test excavation project area. Where most relevant, elements of the wider Thompson Square Conservation Area (SHR item #00126), the cultural landscape that informed the WBRP project area, have been included within the historical overview.

The SCMP (AAJV 2017) also provides a detailed description of flood events that have influenced the development of the study area and the Windsor district in general, as well as a detailed description of the history of the Aboriginal occupation of the study area before 1788 and during the early colonial period (refer to Section 2.1.4 of that report).

2.2 Landform and the Hawkesbury River Corridor

The Hawkesbury River (*Dyarubbin*), upon which the subject area is situated, is one of the most significant fluvial systems on the eastern coast of Australia. The area has a complex geomorphological history of fluvial and aeolian processes, resulting in the landscape evident today. Studies to the south at Cranebrook Terrace suggest that the banks and surrounds of the river are situated on Tertiary clays and gravels (>2.6 million years old), and have formed over the last 100,000 years.⁶ Archaeological investigations at Pitt Town and the site of the Windsor Museum indicate that initial deposition of the extensive alluvial sand deposits within the soil profile at these sites began about 150,000 years ago.⁷

Within the study area, the northern portion (i.e., the left bank) is based on Quaternary alluvium, demonstrated elsewhere to be between 4m and 8m thick.⁸ These deposits may also extend to the immediate area of the banks on the south side of the river. Recent archaeological work suggests that these deposits formed rapidly and may be less than 15,000 years in age.⁹ To the south of the study area, the geological landscape is characterised by a ridge of Tertiary clay. Archaeological excavations in 2012 indicated that this ridge is overlain by yellow-brown loamy sand up to 800 mm deep.¹⁰ This sand is similar to the surface deposits investigated at Pitt Town and the Windsor Museum, and it was probably formed by a combination of low-energy flooding and aeolian re-working. The thickness and distribution

⁶ Groundtruth Consulting Pty Ltd., *Geomorphology and soils in relation to archaeological investigations on the Cranebrook Terrace, Penrith Lakes, NSW*. Unpublished Report to Comber Consultants Pty Ltd., 2010

⁷ Austral Archaeology Pty Ltd. *Windsor Museum, NSW: Aboriginal archaeological and cultural salvage excavation*. AHIP #2119. Report to Hawkesbury City Council, 2011; Williams, AN, Mitchell, P, Wright, RVS, Toms, 'A Terminal Pleistocene open site on the Hawkesbury River, Pitt Town, NSW'. *Australian Archaeology* 74, 2012, 85–97.

⁸ Groundtruth Consulting Pty Ltd., 2010.

⁹ AHMS Pty Ltd (2014) *Aboriginal Cultural Heritage Assessment: Peach Tree Creek Stabilisation Works, Penrith, NSW* (Penrith LGA). Unpublished Report to Penrith City Council.

¹⁰ KNC (2012) *Windsor Bridge Replacement Project-Aboriginal Cultural Heritage-Cultural Heritage Assessment Report*. Unpublished Report to NSW Roads and Maritime Services.

of these deposits within the study area are likely to have been affected by subsequent historical development episodes.

Low-lying parts of the study area are regularly inundated by river flooding; the erosive and depositional characteristics of which are the principal factors that shaped local topography over a very long period of time. The recorded flood history extends from 1799 through to the present day.¹¹ Flooding and the impacts of flooding not only shaped Windsor's environmental history; the deposition of fertile flood-borne sediments and their agricultural potential was a major factor that influenced the choice of the place as an auxiliary settlement during the early historical period.

2.3 Historical Overview

2.3.1 BEFORE 1794

Aboriginal people owned and occupied the study area beside the Hawkesbury River for millennia prior to European colonisation.¹² They fished from their canoes and hunted on both sides of the river and, on the lowlands, they set traps for birds and small animals and hunted larger prey like kangaroos, as well as gathering grubs, berries. Particularly in the vicinity of what we today call Thompson Square, wild yams that were harvested annually. The study area was part of the territory of the Boorooberongal people of the Darug language group.

The Hawkesbury-Nepean River corridor contains some of the earliest evidence of Aboriginal occupation in Australia. The recovery of five flaked pebbles from the base of the Cranebrook Terrace, dated to about 40,000 years Before Present (BP), represents the earliest evidence of past human activity in the locality.¹³ More compelling evidence of Aboriginal use of the river is provided by excavations undertaken in advance of residential development at Pitt Town. These excavations, of a total area of 250 m² located across a kilometre section of the ridgeline (PT-12) overlooking the Hawkesbury River, recovered over 10,000 stone artefacts from depths of up to 1.3 m below the ground surface. They were dated to between 36,000 and 8,000 years ago.¹⁴ Similar findings were made in advance of development at the Windsor Museum, where a 1.8 m deep sand body recovered 12,000 stone artefacts dating to between 34,000 and 8,500 years ago.¹⁵ Recent excavations on the banks of Peach Tree Creek (near Penrith CBD) recovered a handful of stone artefacts at a depth of 4 m below the surface, dating to about 15,000 years ago.¹⁶ These assemblages were all dominated by indurated mudstone, tuff and/or volcanic raw materials, and suggest that Aboriginal populations were small and highly mobile, and exploited the river corridor during periods of climatic aridity and generally poorer resources.¹⁷ More practically, they also demonstrate that cultural materials along the river corridor can be found at significant depths below the present-day land surface.

¹¹ Hawkesbury City Council (2012) *Hawkesbury Flood Levels, 1799-1992*.

¹² Thompson Square, Windsor, N.S.W. *Unpublished report to Hawkesbury City Council*; W Thorp (2002) *Hawkesbury Museum, Site of Proposed Extensions, Baker Street, Windsor: Archaeological Assessment*. Cultural Resources Management Plan for Hawkesbury City Council.

¹³ Nanson, GC, Young, R.W., Stockton, E.D. (1987) Chronology and palaeo-environment of the Cranebrook Terrace, near Sydney, containing artefacts more than 40,000 years old. *Archaeology in Oceania* 22:72-78; Stockton, E.D., Holland, W (1974) Cultural sites and their environment in the Blue Mountains. *Archaeology and Physical Anthropology in Oceania* 9(1):36-65.

¹⁴ Williams et. al., *Australian Archaeology*.

¹⁵ Austral Archaeology Pty Ltd. 2011.

¹⁶ AHMS Pty Ltd., 2014.

¹⁷ Williams et al., 2015

While the early Holocene (~8-5,000 years BP) is poorly understood, with some evidence of abandonment of the region, a strong record of occupation and activity is present in the last 5,000 years.¹⁸ This is most evident through the extensive 'surface workshops' of stone artefacts and grinding groove patches documented by McCarthy (1978) between Castlereagh and Emu Plains. Excavations at Lapstone Creek rock shelter and KII rock shelter immediately west of the river also contain dense records of occupation over the last 4,000 years, as does the upper 50 cm of PT-12.¹⁹ These assemblages are dominated by silcrete and quartz raw materials, and typically more complex, indicative of increasingly sedentary and technologically invested societies driven by regional demographic pressure hindering mobility across the landscape.²⁰

Excavations undertaken within the project area in 2012 contain several elements of the archaeological story presented above. To the north, excavations were too shallow to determine the past use of the area, but the deposits appear similar to those at Peach Tree Creek. To the south, the sand deposits investigated are very similar, albeit much shallower, to those observed at the Windsor Museum and PT-12, both of which contained extensive and significant cultural materials of great antiquity. The assemblage recovered in 2012 was small, and contained a mixture of tuff, indurated mudstone, and silcrete raw materials. Interpretations by KNC (2012) suggest that the assemblage was likely only dated to the last few thousand years, but based on the evidence, the potential for older cultural materials (possibly inter-mixed with later activity) cannot be entirely ruled out. Both the river and the quaternary alluvium down by the south bank of the river and over all the study area on the north side of the Hawkesbury constituted a useful source of indigenous food supply.

2.3.2 GREEN HILLS (1794–1809)

Soon after the establishment of the British settlement at Sydney Cove in 1788, Governor Arthur Phillip commenced exploring the surrounding countryside. Westward of the settlement views of the Blue Mountains were as well as the intervening hills, one of these he named Richmond Hill. Phillip also concluded that a large river was located in this region.²¹ The presence of a large river, the Hawkesbury, was confirmed during the following year during an exploration by boat in which the course of the river was investigated from Broken Bay reaching Richmond Hill on 6 July 1789. Phillip noted the good quality of the soils and suggested that it would be a favourable location for agricultural settlement.²² Two years later an exploratory party including Phillip, Watkin Tench, and William Dawes sought to establish a land route to the Hawkesbury from Parramatta. The party reached the river near present-day Pitt Town and then travelled along the south bank along an existing path towards Richmond Hill. On 26 and 27 May 1791 the party crossed the study area investigating both the riverbank and the ridge now occupied by George Street (Figure 2-1, below).²³

¹⁸ Williams et al., 2014

¹⁹ McCarthy, 1978; Kohen et al., 1984 and Williams et al., 2014

²⁰ Williams et al., 2015

²¹ *HRNSW*, Vol. 1 part 2: 133

²² *HRNSW* Vol. 1 part 2, p.305 and *HRA* Series I vol.1: 183

²³ Tench 1793: 233



Figure 2-1 Detail of ‘A map of the hitherto explored country contiguous to Port Jackson lain down from actual survey’ showing Phillip’s route through the Windsor district near the junction of the Hawkesbury River and South Creek (Source: Tench 1793).

Following Phillip’s return to England in 1792 the task of settling the Hawkesbury district rested with Lt. Gov. Major Francis Grose. Recurrent shortages of food in the colony encouraged now-acting Governor Francis Grose to grant land along the upper Hawkesbury River, where the soils of the floodplain were superior to those already exploited around Sydney, Parramatta and Toongabbie. On 29 April 1794 Grose was able to report that: ‘I have settled on the banks of the Hawkesbury twenty-two settlers, who seem very much pleased with their farms. They describe the soil as particularly rich, and they inform me whatever they have planted has grown in the greatest luxuriance’.²⁴ By the end of 1794, the new land district, named Mulgrave Place, contained 118 farming grants in a location distinct and distant from the other two main settlements at Sydney and Parramatta.

The majority of soldiers, ex-soldiers, and ex-sailors amongst the grantees were slower to settle, and of the 85 farms established by a population of 400 persons, all but four were by ex-convict grantees.²⁵ All of these farms included water frontages to the Hawkesbury River and its tributary creeks, and by December 1796, stretched from today’s North Richmond to Cattai downstream (Figure 2-2).

On the northern side of the river, on what would become the site of the Windsor Bridge and the northern portion of the study area, one of the 30-acre farms was taken up by Edward Whitton, a convicted highway robber who had arrived in New South Wales in 1788, and an Irish convict woman, Anne Slater. It was on the eastern side of portion 69 that George William Evans sat to prepare the first of his watercolours of Green Hills across the river in 1807 (Figure 2-5). This property passed to their daughter Mary Whitton in 1811.

On the southern side of the river, a ridge of higher and less fertile land between the farms of ex-convict Samuel Wilcox and government storekeeper William Baker had been left as vacant Crown land. This became the centre of the land district named Mulgrave Place. The settlement itself was commonly known as ‘Green Hills’ from around 1800 and became the site for the administration of the district and a place where stores could be brought in by boat and wheat and maize taken back to Sydney. The

²⁴ HRNSW Vol. 2: 210

²⁵ J Barkley-Jack (2009) *Hawkesbury Settlement Revealed: a new Look at Australia’s Third Mainland Settlement*, Rosenberg, Dural: 55-70.

square occupied a section of the western end of this 46-acre government precinct.²⁶ The water frontage of the square and the fact that it sat inside a government precinct ensured it was never absorbed into the growing surrounding residential area.

The settlement was established with little infrastructure to manage the products of successful farming and to facilitate transferral to the Sydney Commissary Stores, from where government provisions were distributed throughout the colony. In January 1795, the first buildings required to store crops and government provisions were erected during the first stage of formal government building, including a log granary.²⁷ These works took place under the supervision of the Commissary John Palmer, an indication of the growing importance of the new settlement as an agricultural district.²⁸ This was an unusual beginning for the government presence, for in the two previous areas settled on the mainland of Australia, a military presence had accompanied the settlers and convicts from the beginning and facilities had been built for them immediately along with provision stores and granaries on various government sites.²⁹

²⁶ Barkley-Jack 2009: 177.

²⁷ *HRNSW* Vol.2: 254

²⁸ Collins, *An Account of the English Colony*, vol.1: 338–340.

²⁹ *HRA*, series 1, vol. 1: 56, 97, 143.

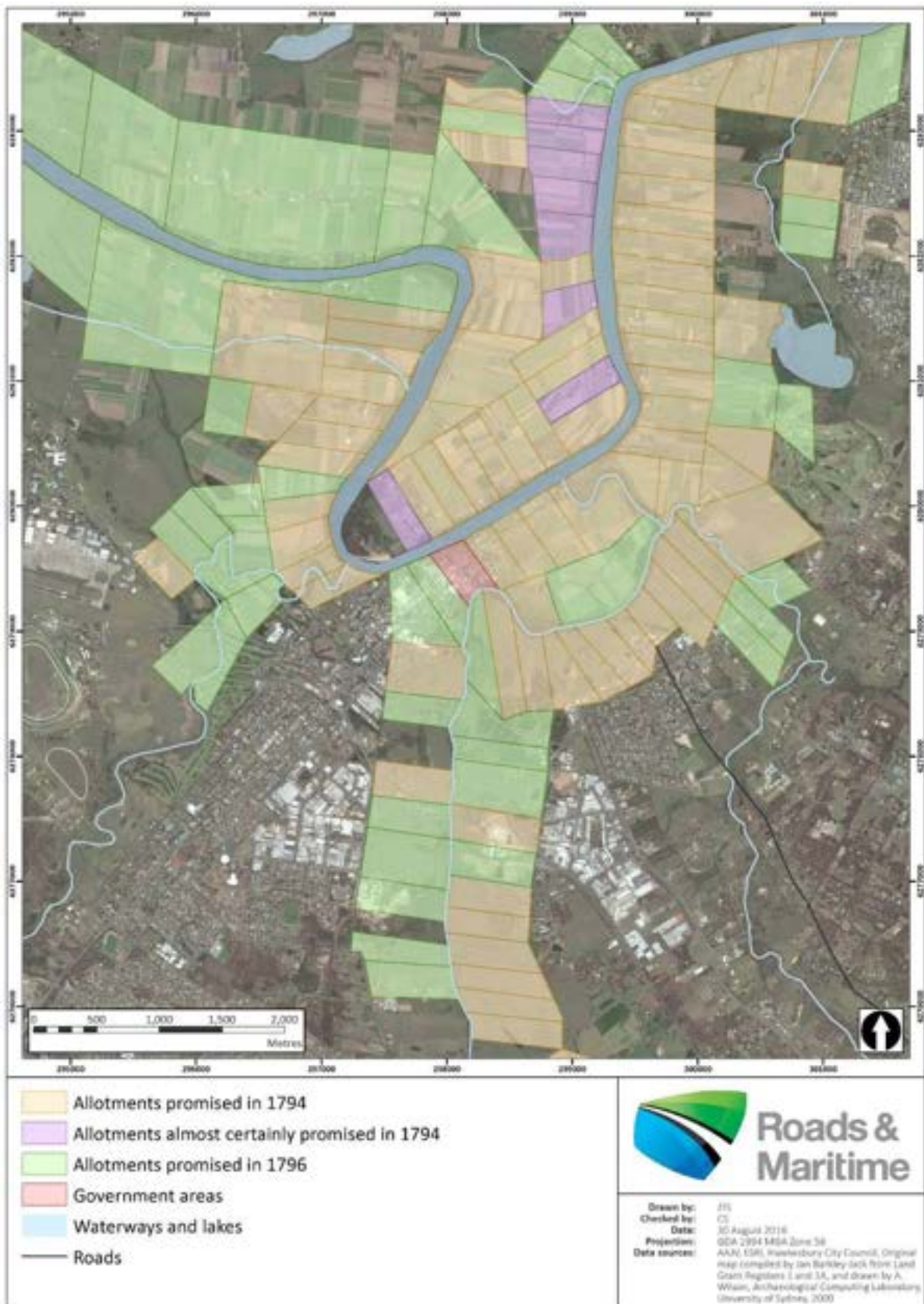


Figure 2-2 Grants promised at Mulgrave Place by December 1796 (Source: Map compiled by Tom Sapienza – content sourced from Jan Barkley-Jack from Land Grant Registers 1 and 1A, and drawn by A Wilson, Archaeological Computing Laboratory, University of Sydney, 2009).

At Windsor, first a wharf was keyed into the sloping bank and then a storehouse was built nearby, enabling provisions for the settlers to be landed from government vessels and put under the protection of a small military guard.³⁰ It is almost certain that the first wharf and provision store were close to the water on the north-western side of Thompson Square. In 1799, a severe flood washed away both wharf and storehouse, and Governor Hunter acknowledged that the floods had 'proved a most distressing circumstance to the settlers... where we have in some seasons rais'd from fifteen to twenty thousand bushels of wheat'.³¹ Two new storehouses were built close to the same position in 1799 (Figure 2-5).

All government buildings constructed before 1796 in the vicinity of Thompson Square were assembled in an *ad hoc* manner and quickly needed replacement. The military detachment remained under canvas or billeted until mid-1795, when a detachment of almost one hundred men was stationed in the Hawkesbury area and the first dedicated soldiers' barracks was built. In 1796 Governor Hunter described the soldiers' barracks as a 'miserable building', and by 1800 the original barrack building was replaced by a new structure on the ridgeline to the south-west of today's Thompson Square, probably close to the position of the earlier barracks (Figure 2-5).³² By 1807, the space was denuded of trees, and various other buildings for the military and those in government employ had accumulated on the slope below the barracks, remaining there until 1812. The Evans paintings span this period and show that the area took on the appearance of a small village, with an informal public space at its centre.



Figure 2-3 The Government Precinct at Green Hills in 1807, with a boat, the 'Governor Bligh', under construction just below the central log granary. (Source: George William Evans, watercolour, Hordern House, Colonial Paintings catalogue, 1994, item 4)

³⁰ Collins, *An Account of the English Colony*, vol.1: 340.

³¹ Collins, *An Account of the English Colony*, vol.1: 340; vol.2: p143-144; *HRNSW*, vol.3: 80, 668; Hawkesbury City Council, *Hawkesbury Flood Levels*, Windsor, 2012.

³² Barkley-Jack 2009: 66, 292, 293-294; *HRNSW*, vol.3: 80; vol.4:152.



2-4 G.W. Evans, 'The Settlement on the Green Hills', watercolour, 1809, (Mitchell Library, State Library of NSW, PXD 388, vol.3 fo.7).



Figure 2-5 Detail of G.W. Evans' 1809 view of the settlement, showing the informal cluster of government buildings within the western side of the Crown reserve during the early years of the 19th century (Source: GW Evans, 'The Settlement on the Green Hills', watercolour, 1809, Mitchell Library, State Library of NSW, PXD 388, vol.3 fo.7).

Note: The provision stores, rebuilt in 1799, are likely to be the two small buildings with ventilated gables (red arrow). The second Military Barracks, built between 1796 and 1800, are likely to be the cluster of buildings on the ridge with a fenced paddock running down to the provision stores.

The granary constructed in 1795 proved totally inadequate, and in August 1796, Governor Hunter was forced to rebuild 'a large granary for the reception of wheat and maize' constructed in log and thatch.³³ Almost simultaneously, a well-built, commodious weatherboard dwelling was constructed on the north-eastern part of the government precinct for the commandant of the settlement, Edward Abbott. This cottage became the residence of governors when they were visiting the district.³⁴ Access to the commandant's residence was initially from the west (later lined with trees) with a second path communicating directly with the river.

By 1798, a second log granary had been built adjoining what would become Andrew Thompson's lease, and both granaries were enclosed for added security within a paling fence with a guardhouse located close by. By the time GW Evans first painted Thompson Square in 1807, the earlier of the two granaries had been removed, but the other, likely to be the 1798 granary, is shown clearly on the north-eastern side of Thompson Square. Andrew Thompson's small cottage, where he lived until he built a new residence early in the nineteenth century, is shown in all the early paintings and etchings of Thompson Square to adjoin the paling fence between his lease and the 1798 granary (Figure 2-6).

Thompson, an ex-convict, was given the exceptional right to hold a lease within the government precinct in 1799 on land he had already occupied as the local constable since 1796. Once established, Thompson's lease formally delineated the north-eastern boundary of the 'square'. He continued to hold this acre of land that extended from the ridgeline down to the riverbank for eleven years, a period of time in which he became the Hawkesbury's leading farmer and businessman and a key figure in the district's growth. Ultimately, through his deep involvement with land acquisition and trade, Thompson quickly became one of the largest grain growers and wealthiest settlers in the colony.³⁵

The square had long been frequented by the Hawkesbury's earliest settlers in the course of acquiring provisions, storing the grain they wished to sell to the government or seeking the help of the constables, the military or the magistrate. Many of the colony's elite visited Windsor to attend the annual musters, held initially in the vicinity of the Government House and Thompson Square, and used the square as a place to catch up on their dealings with each other or to hear the doings of the district.³⁶ Regular visitors included Judge Advocate David Collins, the Commissary John Palmer, John and Elizabeth Macarthur, the Reverend Samuel Marsden and Deputy Surveyor Charles Grimes. Some of the elites of the colony recounted the hospitality of their stay there as guests of Andrew Thompson.³⁷

In 1803, under Governor King, the earlier stores and log and thatch granaries were replaced by a three-storey brick building on top of the ridge to the south-east of the square. At around this time Thompson, at the height of his prosperity, built his own three-storey store facing the square slightly to the west of this Government Granary. In 1804–1805 a two-storey Schoolhouse/Chapel and Schoolmaster's Residence, that also served as a courthouse was constructed to the east of the new granary. The Government Granary became associated with the end of the rebellion of Irish convicts that culminated in the Battle of Vinegar Hill in 1804 when the Irish leader, Phillip Cunningham, was 'to be publicly executed on the Stair Case of the Public Store [at Green Hills], which he had boasted in his march he was going to plunder'.³⁸ The vicinity of Thompson Square was the scene of another event linked to wider turmoil when, in January 1808, soldiers burned an effigy of Governor Bligh in the Military Barrack paddock on hearing their peers in Sydney had deposed the Governor.

³³ HRNSW, vol. 13, 80.

³⁴ Macquarie, L (1979) Journals of his Tours in New South Wales and Van Diemen's Land, 1810–1822, *Library of Australian History and Library Council of New South Wales, Sydney*.

³⁵ J.V. Byrnes (1967) Thompson, Andrew (1773–1810), *Australian Dictionary of Biography*

³⁶ HRNSW, vol. 3: 217.

³⁷ Elizabeth Macarthur in 1795, HRNSW, vol.2: 510.

³⁸ *Sydney Gazette*, 11 March 1804, 2; Silver, LR (2002) *Australia's Irish Rebellion: The Battle of Vinegar Hill*, 1804, rev. ed., Watermark Press, Sydney, 150.



Figure 2-6 Detail of GW Evans' 1809 painting showing the eastern side of the government precinct. From left to right: the 1798 Government Cottage, 1803 Schoolhouse & Church, 1803 Government Granary, and Thompson's buildings and garden are seen bordering the open ground of what would become Thompson Square to the right. Thompson's small cottage (circled) that he occupied as constable is shown next to the obsolete 1798 granary and attached guardhouse. (Source. GW Evans, watercolour, 1809, 'Settlement on the Green Hills', State Library of NSW, Mitchell Library, PXD 388, vol. 3, fol. 7).

2.3.3 THE MACQUARIE ERA TO THE END OF TRANSPORTATION (1810–1839)

When Lachlan Macquarie arrived in 1810 to restore normal government, he quickly found Thompson an invaluable adviser on Hawkesbury affairs. Governor Macquarie saw him as one of the founding fathers of Green Hills and, in keeping with his philosophy of benevolence to any ex-convict whose good behaviour had illustrated genuine reform, appointed Thompson as the colony's first ex-convict magistrate in 1810, shortly before Thompson's death.³⁹

In December 1810, Governor Macquarie held a dinner in the Government Cottage where he announced the creation of five new towns on high land along the Hawkesbury-Nepean River, namely the towns of Castlereagh, Pitt Town, Richmond, Wilberforce, and Windsor. On 12 January 1811, Macquarie recorded that he:

rode out...to survey...the ground marked out for the town and township of Windsor, which having finally fixed on...I walked over the whole of the present village on the Green Hills, forming the beginning or basis for the new town⁴⁰

Windsor was unique among Macquarie's new towns as it required the incorporation of an existing village. He quickly gave the Deputy Surveyor-General, James Meehan, instructions to provide a detailed survey of the new town. New allotments were laid out, and Meehan's plans were to include several new streets; 'the old ones to be enlarged and improved in various respects', with the principal thoroughfare, George Street, running in a westerly direction from a gateway at the Government Cottage fence to the east (Figure 2-12).⁴¹

³⁹ Macquarie, L (1979) 4-6 December 1810, 12 January 1811, 43.

⁴⁰ *Ibid.*, 31.

⁴¹ *Ibid.*

Macquarie, in his journal entry in January 1811, refers to the pre-existing 'square' in the village of Green Hills, recording that he named it Thompson Square 'in honour of the memory of the good and worthy late Andrew Thompson'.⁴² Macquarie's administration ushered in the designation of such formal civic spaces in New South Wales town planning, that Macquarie termed 'squares' after those he had known in Britain. Thompson Square, however, bore little resemblance to any formal civic space that would be recognisable as a 'square'. Unlike Macquarie's new towns along the Hawkesbury Windsor (Green Hills) was an established settlement. His redesign of the town included a Great Square in the centre of the extended town and a Small Square within the existing township (Thompson Square). Town planning and design under Macquarie, including the development of Windsor have been analysed in detail by Iain Stuart in *Macquarie and the Towns* (JRAHS Vol 105, Pt 1 (June 2019) pp. 26-48).

The informal layout of the existing village had been most apparent within the newly named Thompson Square, with huts and fencing sprawling across the sloping ground (Figure 2-5). In late 1811, Macquarie set about making improvements to the now vacated public space, removing the last of those old structures between Thompson's lease and the new allotments to the west. The square had little in the way of organised routes to the waterfront, being limited to a broad undulating slope of bare ground with a winding track beside the Thompson lease and 1798 granary (Figure 2-5 and Figure 2-6). By the time Philip Slaeger's etching was made in 1811 or 1812, a secondary cart track appears to have been in place, descending from the western side of the square to the waterfront in the vicinity of today's bridge (Figure 2-8).



Figure 2-7 'A view of part of the town of Windsor in New South Wales, taken from the banks of the River Hawkesbury', Philip Slaeger in Absalom West 1813 (Source: NLA PIC Drawer 2230 #U2028 NK2044/B)

⁴² *Ibid.*



Figure 2-8 Detail of P Slaeger's 'A View of Part of the Town of Windsor', showing the now bare ground of the newly-named Thompson Square, with Thompson's cottage seen at left above the beaching facilities for small boats. In addition to the track beside Thompson's former lease, a cart track is seen at right, winding down from the area of the military barracks, soon to be relocated.

No wharfage had been in place since the severe floods of the early years of settlement and the only landing facility was the river verge, an arrangement suitable only for small boats (Figure 2-8).⁴³ This deficiency was addressed in 1814 when Macquarie contracted the ever-ready John Howe and James McGrath to make improvements to Thompson Square, including the construction of new wharfage.⁴⁴ In 1814, at the outset of the protracted wharf construction, Howe also established a regular punt service across the Hawkesbury, the punt being located a short distance upstream from the wharf, near the location of the current Windsor Bridge. Part of the 1814 contract involved the cutting away of the riverbank in the vicinity of the new wharf, so that there was a turning place for carts and this adjustment to the bank would have assisted access to the new punt.

Both Mulgrave Place grantees, the educated free settler Howe and convicted highwayman McGrath, made an unlikely business pairing on paper, yet the partnership was a productive one and the pair held a virtual monopoly over government works contracts throughout the Windsor region during the Macquarie era. Andrew Thompson had demonstrated the astonishing wealth that could be accumulated through service to the government and the acquisition of land. Howe and McGrath now stepped into roles Thompson had filled for Macquarie, with Howe assuming many of Thompson's former appointments and both men applying their ingenuity to necessary government works.⁴⁵ In this way, they acquired large areas of land, including McGrath's purchase of 30 acres of Thompson's 'West-hill', or Red Hill farm, during the auction of Thompson's estate, for which Howe acted as executor.⁴⁶

⁴³ Collins, *An Account of the English Colony*, vol.1, 348; J Barkley and M Nichols, *Hawkesbury 1794–1994: the First 200 Years of the Second Colonisation*, Hawkesbury City Council, Windsor, 1994, Appendix 17: 178.

⁴⁴ Howe Papers, State Library of NSW, Mitchell Library, ML MSS 106, no. 37, 38.

⁴⁵ *Sydney Gazette and New South Wales Advertiser*, 23 May 1812: 2.

⁴⁶ *Sydney Gazette and New South Wales Advertiser*, 15 Dec 1810: 2.

The new wharf was to be 50 feet (15.25 m) long, projecting 18 feet (5.5 m) into the river and supported by piles '16 to 18 inches [0.4 to 0.45m] thick'.⁴⁷ Part payment was made in November 1814 but a further contract was issued in April 1814 for construction of a larger wharf, 3 feet (0.9 m) higher than the one mostly completed and apparently built over it. This new wharf was largely destroyed by a high flood on the 2 June 1816 (Figure 2-9 and Figure 2-10). Early in July, a report to the Governor concluded pessimistically that 'all the planking is carried away and there is no part of the wharf that can be built on again'.⁴⁸ In November 1816, Francis Greenway, the acting Colonial Architect, prepared plans for repairing and completing the wharf in a solid and durable manner. Howe and McGrath were given eight months to complete this work but there was another great flood in February 1817, followed by another in February 1819. The expensive wharf works, costing in all over £1,000, were not finalised until early 1820.⁴⁹

As part of the initial works in 1814, the grade of the slope down to the river shown in the Evans and Slaeger views was to be diminished by 'piling the Front of Thompson's Square for filling up the same and reducing it to a gradual slope from the Rise or Ridge on which His Majesty's Store stands'.⁵⁰

Further alteration of the natural landscape was required in 1814 with a request that:

the Bank to the westward of the New Wharf and adjoining to that part of the River [upstream] where the Punt and Ferry Boats land is to be cut away sufficiently wide to admit of Carts turning at the Landing Place.⁵¹

The wharf contract of 1814 specified that Howe and McGrath were also to build either one 'sewer' in the middle of Thompson Square 'with Channels leading thereto', or two sewers, 'one on each side of the Square'.⁵² The contractors are believed to have chosen to build a single central drain for which a large number of bricks, between 120,000 and 150,000, were made to complete the structure.

These changes within Thompson Square from 1810 to 1820 were the most significant in shaping the appearance of the open space and waterfront until the bridge construction period from the 1870s. The built environment that developed on three sides of the square underwent considerable change from Macquarie's administration onwards.

⁴⁷ Howe Papers, no. 37.

⁴⁸ Report by Cox, Mileham and Fitzgerald, 4 July 1816, SRNSW, Reel 4045, 4/1735: 83; Bowd, *Macquarie Country*: 42

⁴⁹ Col. Sec. Correspondence, SRNSW, Reel 6050, 4/1746: 209-211; State Library of NSW, Mitchell Library, A 773: 74; Barkley and Nichols, *Hawkesbury, 1794-1994*: 178.

⁵⁰ Howe Papers, no.37.

⁵¹ Howe Papers, no.38.

⁵² Howe Papers, no. 37, 38.

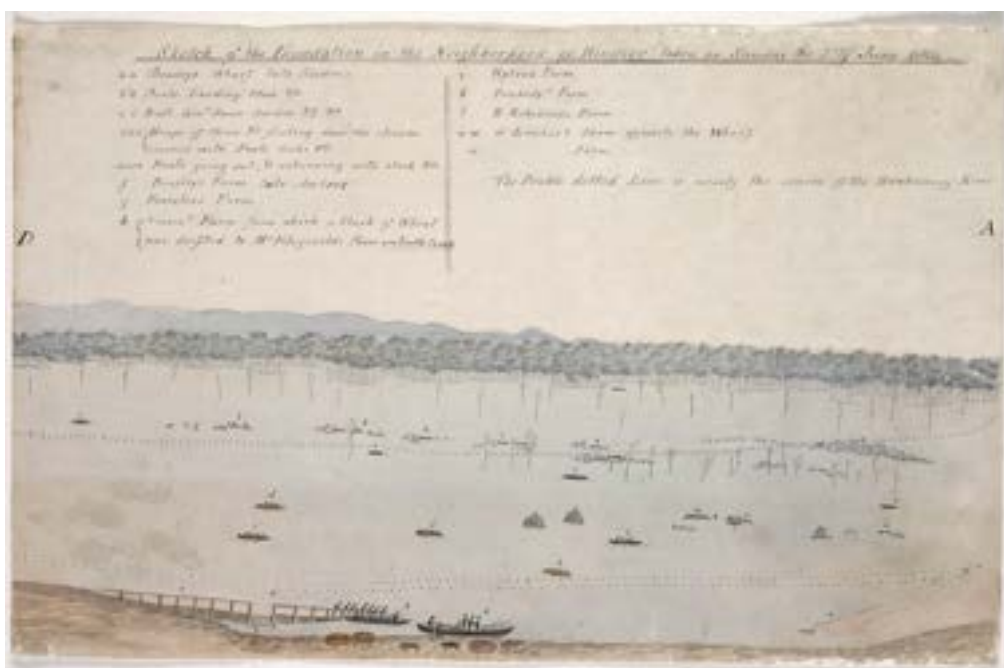


Figure 2-9 Sketch of the Inundation in the Neighborhood of Windsor taken on Sunday the 2nd of June 1816. Panel 4 of 4, showing Beasley's Wharf at left and Government House garden wall at right (Source: ML PX*D 264).



Figure 2-10 A View of Hawkesbury, and the Blue Mountains. New South Wales, 1817–1819. The view shows the destroyed wharfage following the flood of 1816. (Source: Plates for James Wallis Australian Views - Historical Account of the colony of New South Wales, 1817–1819, Folio 1, SLNSW PXD 373).



Figure 2-11 Thompson's store, at the top of Thompson Square, facing south-west across the Square, drawn in 1820. (Source: State Library of NSW, Mitchell Library, Bonwick Transcripts, box 10 p.4259.)

East of the square, the lease held by Thompson had reverted to the Crown after his death but was still shown on Meehan's map of 1812 as Thompson's 'premises'. Thompson had planted fruit trees on the lower part of his leasehold land and this established orchard was absorbed into the Government Domain garden.

The government buildings shown to the south and identified by Meehan in 1812 (Figure 2-12) are the Schoolhouse/Church of 1803–1804 (1), the Granary and Store of 1803 (2), and the Government House of 1796 (3). Thompson's buildings are not shown. At the highest point of the colonial square there was a significant landmark, a bell mounted on a high post that initially served to notify the times of convict labour and summon the settlers in times of peril, but which later became a focal point and familiar meeting-place.⁵³ The bell-post is shown in all the early watercolours and etchings of the Green Hills, often in association with a pillory or stocks for public punishment.⁵⁴

Early roads in this area included the original road to South Creek, seen on Meehan's map of 1812 (Figure 2-12). This road was essentially a continuation of George Street, running eastward of the 1803 Granary and Store and down to Thompson's bridge over South Creek. A drive extended northward from this road to the Government Cottage, commencing just to the east of the 1803 Schoolhouse/Church. Macquarie changed this configuration in 1814, again contracting Howe and McGrath to form a new route for which payment was made to 'Mr. John Howe, for a Street and Road constructed by him and James McGrath, between the Town of Windsor, and the New Bridge over the South Creek'.⁵⁵ The

⁵³ Ridley Smith & partners Architects (1986) Windsor Streetscape Study: Volume 1 and 2. *Unpublished Report for Hawkesbury Shire Council* and D.G. Bowd (1986) *Hawkesbury Journey, Library of Australian History, North Sydney*: 83.

⁵⁴ J. Steele (1077) *Early Days of Windsor*, Tyrrells, Sydney: 139.

⁵⁵ *Sydney Gazette and New South Wales Advertiser*, 30 Apr 1814: 2

resulting road, Bridge Street, commenced from the south-eastern corner of Thompson Square, linking with George Street on an alignment that conformed to Meehan's town plan and forming the eastern boundary of Macquarie's formalised Government Domain, enclosed within a boundary wall built in brick, with sections of timber paling. The new bridge over South Creek became known as Howe's Bridge and Bridge Street became the main road out of Windsor to Parramatta.

By 1827, George Street no longer extended beyond Bridge Street at the corner of Thompson Square, terminating instead at the Domain boundary where a new gateway separated a newer, more direct drive connecting the Government Cottage and the town (Figure 2-13). The sandstock brick wall bonded with shell lime mortar, which partially survives below the house at 4 Bridge Street (built in 1955), is likely to be part of this Domain boundary, denoting the edge of the government garden, originally Thompson's garden. This was constructed during the Macquarie administration between 1813 and early 1816, as drawn in June 1816 during the 14 m flood that destroyed Howe and McGrath's second wharf, that depicts and identifies it as 'Wall, Govt. House Garden' (Figure 2-9). Further lengths of wall were gradually constructed along Bridge Street that separated key government buildings from the public thoroughfare.

In 1817 to 1818, a new Military Barracks (Figure 2-14a) was built along the southern extent of the Domain boundary wall just above the corner of Bridge Street and Court Street, replacing the old site which had been privatised in 1811. The new Military Barracks was enlarged in the 1830s, and a separate guardhouse, ordnance store, and stables first appear on a plan in 1835.

Abbott's plan of 1831 shows this clearly and accentuates the boundary by colouring government buildings red and private buildings blue (Figure 2-14). This plan shows the government buildings above the garden to include Thompson's former store, now a prisoner's barracks (F); the police barracks (G), and the government stables (E). Across George Street, the old government granary (C) now served as the commissariat store. The old schoolhouse/church of 1804–1805 (B) was also still standing just east of the commissariat stores and a newer, small watch-house (D) had been built on Bridge Street close to the commissariat store.

The police barracks and government stables, as shown in Abbott's plan, do not appear on two plans of 1827 suggesting they were constructed after this date. However, a small, unidentified building is shown in the general area of the police barracks in 1827 (Figure 2-16). This is possibly the building depicted in the location of the police barracks, directly behind the Domain wall, in a sketch of Thompson's store made around 1820 (Figure 2-11). This raises the possibility that an earlier building erected by Thompson, possibly that shown to the north of Thompson's store in Evans' paintings (Figure 2-5 and Figure 2-6), may have been converted into the police barracks. The auction notice of Thompson's estate in 1810 lists his Windsor property, as distinct from his other farms including that on South Creek, as including 'a good Dwelling House, Stores, Granaries, Cellars, Stabling, and other convenient and spacious Warehouses'.⁵⁶ It is therefore probable that buildings additional to Thompson's store survived on the site of the barracks and stables after 1810, and that elements of these earlier buildings were incorporated into the new structures.

By 1835 (Figure 2-15), the police barracks had been demolished, as the building was replaced by an extension of the garden. Thompson's former store, condemned by the Government Architect in 1820, but apparently serving as the prisoner's barracks after 1823 (the year the former barracks in Macquarie Street became the hospital), had finally been replaced by a smaller structure associated with the stables.⁵⁷

⁵⁶ *HRA*, Vol. 10: 690-691

⁵⁷ Mitchell Library, MSS.106, article 37, 8 August 1814.

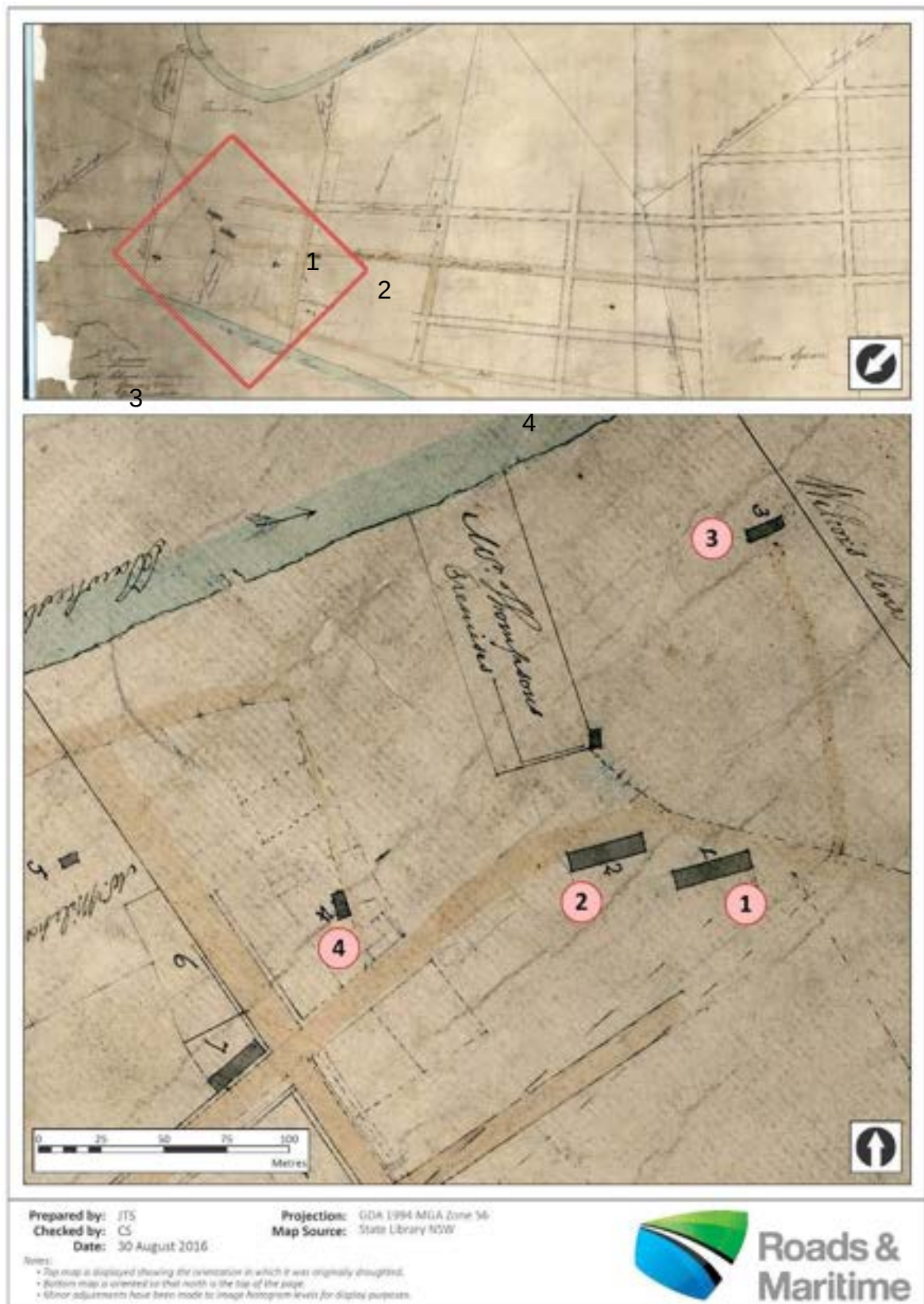
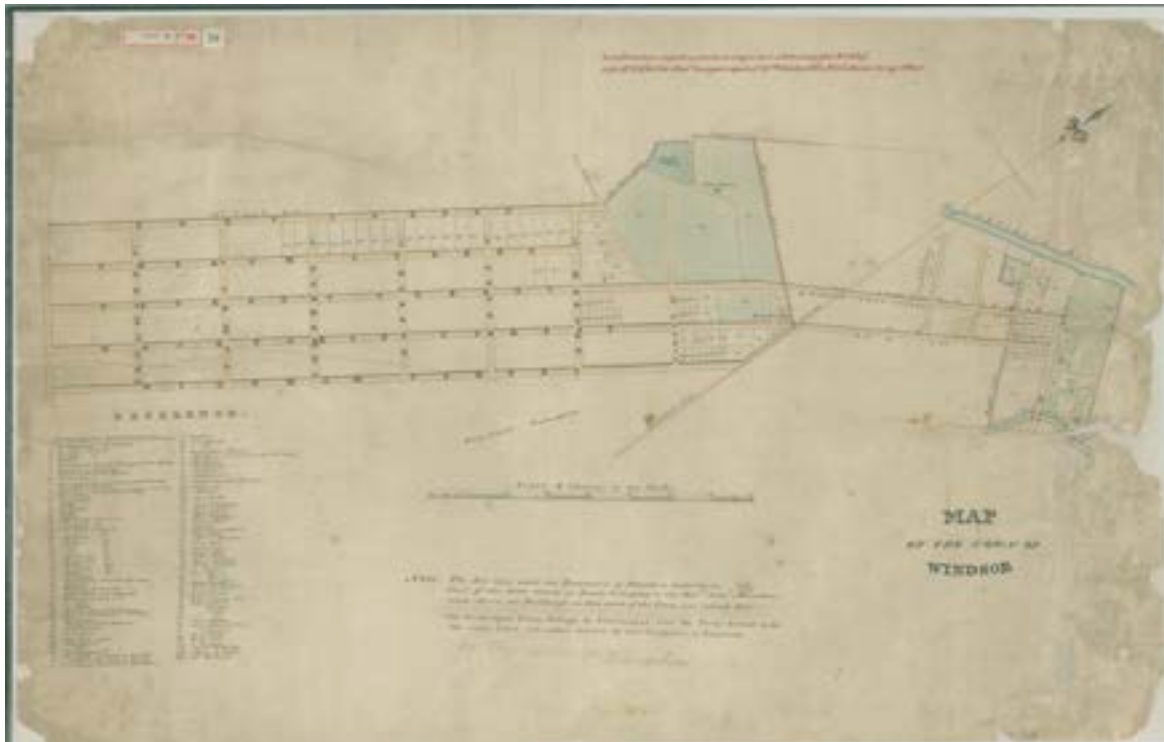


Figure 2-12 Government buildings surrounding Thompson Square in 1811–1812. Private buildings, including those of the late Andrew Thompson are not shown. (Source: J. Meehan, plan of Windsor, 1812, SRNSW, Map SZ 529).



2-13 'Map of the Town of Windsor' (Source: Thompson 1827, NSW SRNSW. Map SZ526).

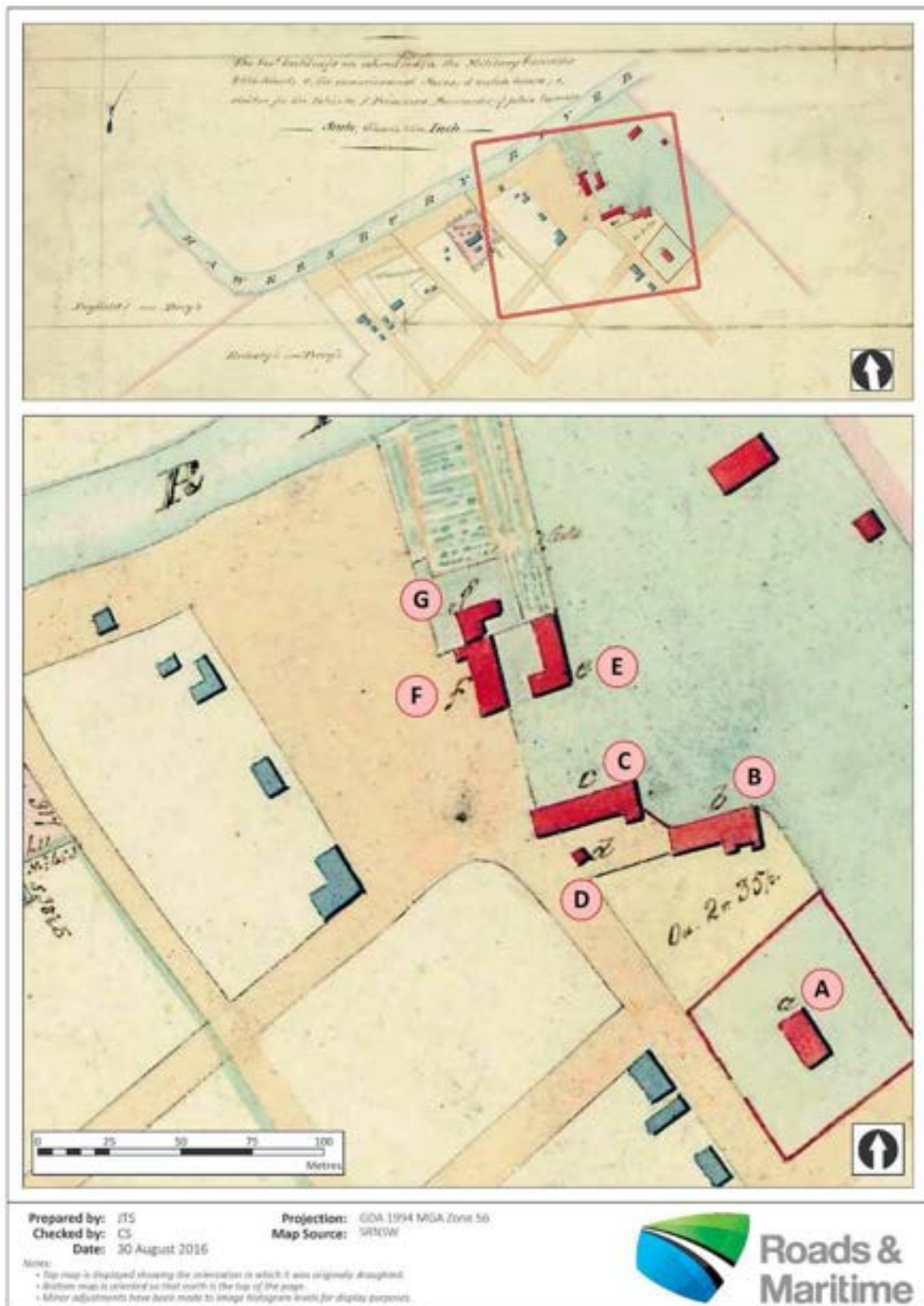


Figure 2-14 The development of the Government Domain and Thompson Square at Windsor by 1831 (Source: Detail of plan of school land by surveyor John Abbott, 1831, SRNSW, Map 1816).

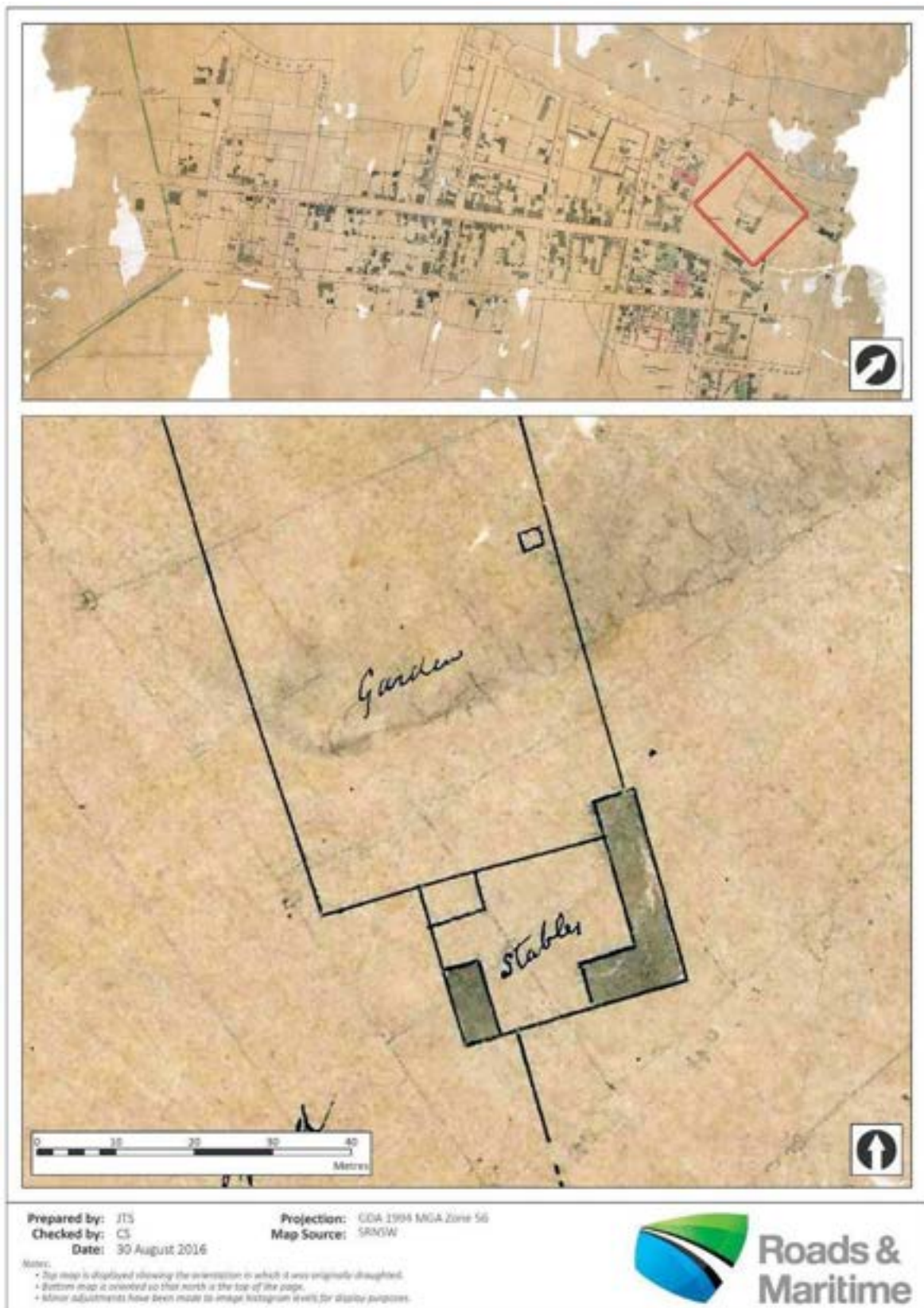


Figure 2-15 Detail of an 1835 plan showing the changed configuration of buildings surrounding the Government stables on Thompson's former lease, close to the later, north-eastern corner of Bridge Street and George Street. The remaining section of the Prisoners' Barracks (Thompson's Store) has been incorporated into the stable enclosure. (Source: GB White, plan of Windsor, 1835, SRNSW, Map 5968).

Following the clearing out of huts from the square from 1811, Macquarie set about changing the south-west side of the civic space from military and government store use to four promised town grants that lie just outside the present study area. The initial survey of these intended grants is shown by Meehan in dotted lines extending north from George Street. Meehan also shows the earlier Military Barracks (no.4, Figure 2-12) on the south-west side of Thompson Square.

All four intended grants were taken up but the largest allotment of land, on the corner with George Street, was officially granted to Richard Fitzgerald on the promise that he builds 'a handsome commodious inn of brick or stone and to be at least two stories high'.⁵⁸ This was the largest of the four grants, being approximately one acre in size. Fitzgerald's new inn was begun in 1812 and appears to have been enthusiastically rendered, prior to its completion, as a three-storey building by Philip Slaeger in his view of Windsor (Figure 2-8). The Inn was opened for business as the Macquarie Arms (still extant) by the eponymous governor in 1814.⁵⁹ A wall was built around the Inn in 1817 and it later functioned as a Military Mess.

Further residential buildings were soon erected on the three remaining lots and are shown on surveyors' plans by 1827, and this new residential area constituted 'the aristocratic quarter of old Windsor town' in the later words of the newspaper editor, G.C. Johnson.⁶⁰ Of the present buildings, John Howe's House, now part of the Windsor Regional Museum, seems to have supplemented and then replaced an earlier large house on the allotment closer to Baker Street in the 1830s. The cottage on Loder's grant next door was probably built in the 1850s.⁶¹ On the grant closest to the river held by Charles Beasley owned a dwelling and tenement known as the Freemason's Arms, which was leased to James Doyle in 1819 and licensed as the Lord Nelson Inn.⁶² James Doyle, although often simply described as an innkeeper, was a former convict who had amassed a sizeable fortune as well as landholdings throughout the colony. In 1831 Doyle transferred the lease to Joseph Delandre who operated the premises as the St Patrick's Inn. In 1835 Delandre transferred the licence to premises in George Street but James Doyle appears to have remained in residence here until his death on 2 April 1836. Following Doyle's death, the property was transferred to his widowed sister Bridget Canton. In 1837 Edward Coffey took up the licence of the former St Patrick's Inn renaming it the Daniel O'Connell Hotel.⁶³ Coffey subsequently transferred the licence to the building on Howe's grant adjacent to the Macquarie Arms at some time before 1842.

The plans of the 1820s and 1830s reveal that there was still no formal road system within Thompson Square. The first map which clearly shows a cart-road leading down to the river through Thompson Square is a private sub-division plan of 1842 that shows a road turning off George Street in front of the Macquarie Arms (then the Military Mess House) and curving north across Thompson Square before descending to the west onto the riverbank where the punt docked (Figure 2-19). This road is, however, likely to have existed in some form since the wharf, punt, and associated works were established between 1814 and 1820, as indicated by the track rendered by Slaeger in 1812 to 1813 (Figure 2-8).

A small cottage for the punt master was built on Crown land on the north-western side of Thompson Square, between the river and the newly built Lord Nelson Inn run by James Doyle. This structure was in place by the time of Thompson's 1827 map (Figure 2-16) and was still referred to as the 'Punt House'

⁵⁸ Macquarie, *Journals*, 1810-1822: 42.

⁵⁹ Macquarie, *Journals*, 42; Land and Property Information, Grants Register 2 fo.131; Slaeger, 'A View of Part of the Town of Windsor', etching published by Absalom West, Sydney, 1813.

⁶⁰ GCJ, 'A Town with a History: Windsor'; *Windsor and Richmond Gazette*, 21 April 1900, 1. For the identification of GCJ, see Steele, *Early Days of Windsor*: 213. Thompson Square had already been called 'that aristocratic quarter' in 1881 (*Australian*, 28 May 1881: 2)

⁶¹ Bowd, DG (1986) Hawkesbury Journey: Up the Windsor Road from Baulkham Hills. *Library of Australian History*, Sydney: 88.

⁶² State Planning Authority 1967: 20

⁶³ *The Australian*, 21 July 1837

until its demolition in 1904. By 1835, the Punt House was enclosed by a small fence and yard on the high ground above the riverbank, known by that time as 'The Terrace' (Figure 2-17).

Although the Punt House was on the Windsor side of the river, there was a recurrent relationship between the Punt Master and the inn known as the Squatters Arms on the opposing bank and, for a while, the lessee of the Squatters Arms and its 15-acre farm was also the Punt Master.⁶⁴ The inn was built on the western half of Mary Whitton's farm, that Mary's husband Richard Barnes had divided into two equal, 15 acre parts in 1816.⁶⁵ Following the death of Richard Barnes his widow married John Eccleston in 1827⁶⁶. The family retained the property into the twentieth century. The western half of the property was advertised for sale in 1822 as 'Whitten's Farm, at Wilberforce, opposite the Punt, Windsor, comprising 15 acres, all cleared, and in cultivation, with dwelling-house, out-houses, [etc.].'⁶⁷ This land was purchased by Robert Smith, who developed the cottage as a public house. In 1839 Smith was obliged to sell his half of Whitton's Farm to Thomas Chapman, who in 1841 sold the 15 acres to Michael McQuade.



Figure 2-16 The Punt House in 1827 (circled in red). Thompson Square is indicated by the number 10 (Source: Thompson 1827, NSW SRNSW. Map SZ526).

⁶⁴ Fitzgerald JCL (1923) *Those Were the Days: More Hawkesbury History*, NSW Bookstall Co, Sydney: 85.

⁶⁵ Biographical Database of Australia online; B Hall (2009) *The Irish Vanguard: the convicts of the Queen, Ireland to Botany Bay, 1791*, Sydney, p178-181; SRNSW, 'Old Register One to Nine', register 5 149

⁶⁶ NSWBDM Name: John Eccleston Spouse Name: Mary A Barnes Marriage Date: 1827 Marriage Place: New South Wales Registration Place: Campbelltown, New South Wales Registration Year: 1827 Volume Number: V B

⁶⁷ *Sydney Gazette and New South Wales Advertiser*, 17 May 1822: 2.

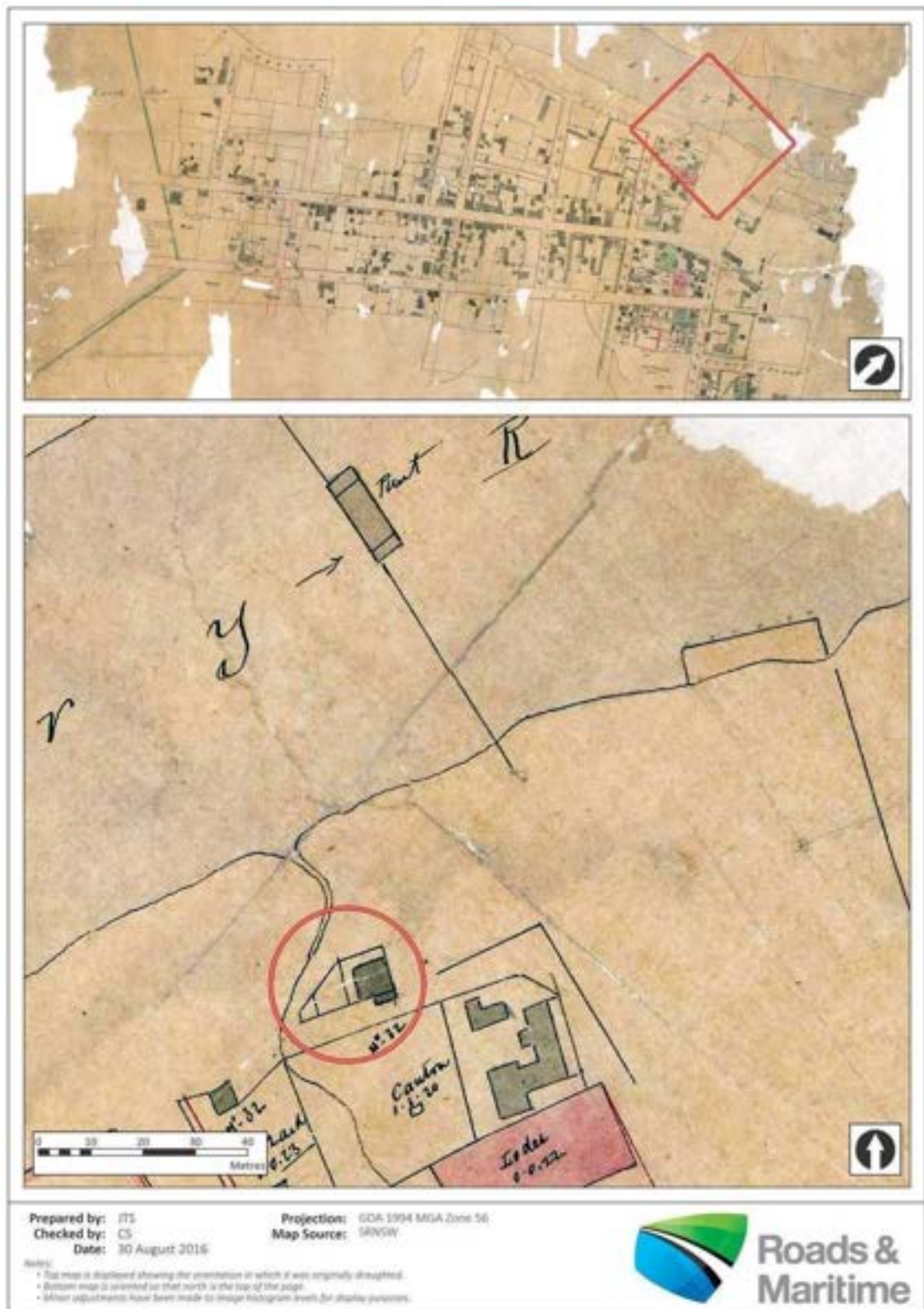


Figure 2-17 The Punt House after its apparent extension (Source: GB White, plan of Windsor, 1835, SRNSW, Map 5968).

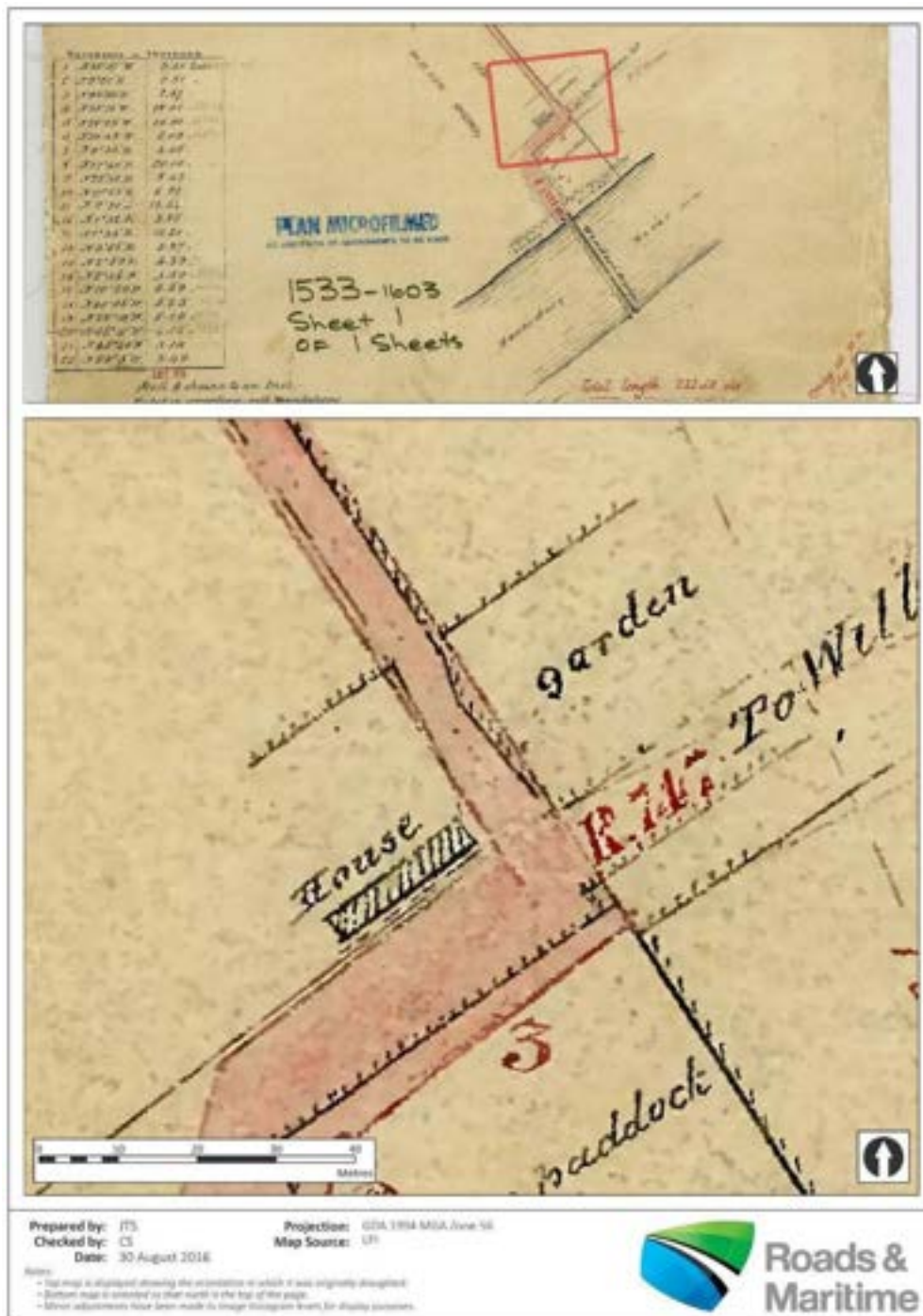


Figure 2-18 The disused Squatters Arms on Whitton's Farm, shown, as 'house' in this 1878 plan, in the right-angle between Wilberforce Road and Freemans Reach Road (Source: G Matcham Pitt, 1878, LPI, Crown Plan R 1533.1603).

2.3.4 THE TOWN OF WINDSOR (1840–1873)

The military withdrew from Windsor in the 1840s and the area of Macquarie's Domain was gradually privatised. The remaining military barracks became associated with the police precinct, officially after 1860, and the government cottage was at times occupied by the Police Magistrate from at least 1842. The cottage survived, in increasing disrepair, until 1921 when it was finally pulled down despite public

protest (Figure 2-19). The barracks buildings, excepting the surviving stables, were also demolished in 1929 to make way for the new police station (Figure 2-20).



Figure 2-19 The Commandant's Barracks and later the Government Cottage, c. 1880
(Source: Ian Jack (2010), *Macquarie Towns*, Heritage Council of New South Wales: 42).

Government influence within Thompson Square declined throughout the Victorian period. The former government garden was abandoned in 1852 to make way for a Presbyterian manse and a cottage (6 Bridge Street) was built over part of the former stables and police barracks. All remaining buildings, including the stables, were demolished when the two-storey house called Lilburn Hall (10 Bridge Street), an important element in Thompson Square, was built in 1856 by Dr Dowe.

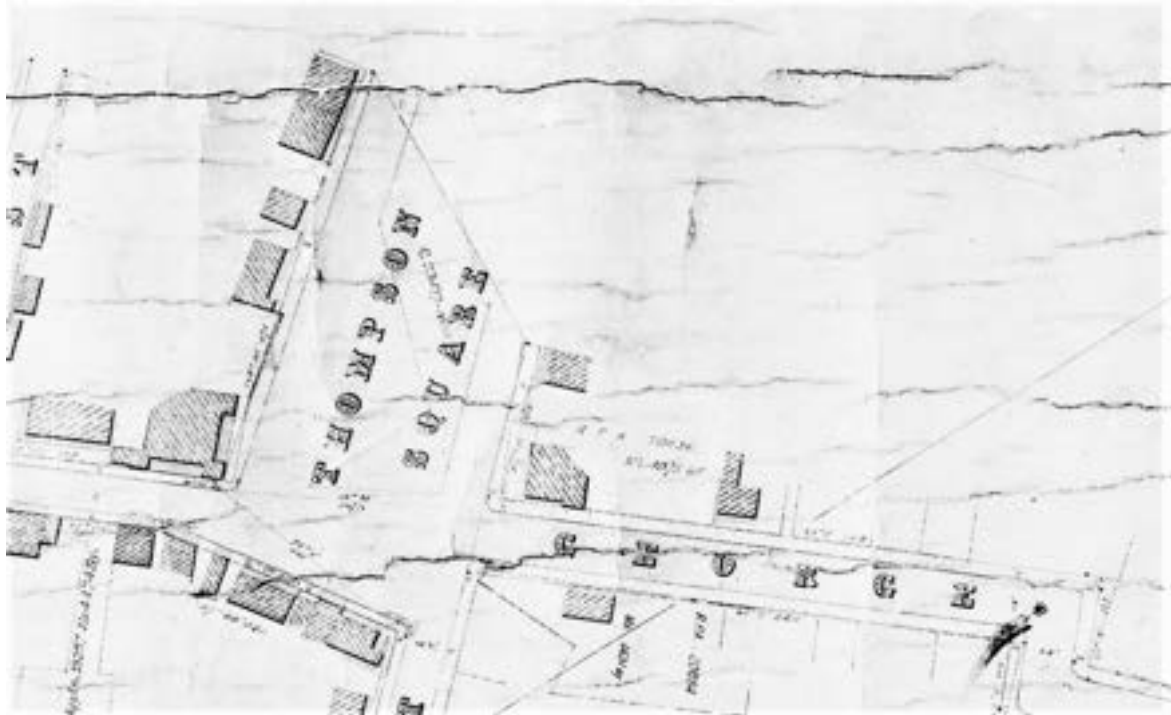


Figure 2-21 R. Handcock, 'Plan of the Town of Windsor', 1871 (Source: NSW LPI 1.1039).

On the northern bank of the Hawkesbury the inn built by Smith was apparently allowed to fall down and, in 1846, McQuade leased the 15-acre farm to John Cunningham and his son for five years, with the stipulation they should build and license another inn on the property. The Cunninghams opened their Squatters Arms within a few months of taking up the lease.⁷⁰ From the 1860s until 1913, both allotments were leased to one farmer, Johnny Ryan. Ryan's brother Tom held the licence to the Squatters Arms. The hotel was a long rectangular building with six or seven rooms, until the flood of 1867 closed its doors permanently.⁷¹ The Squatter's Arms lay on the section bought by McQuade, on the western corner of the junction of Freemans Reach Road and Wilberforce Road. After 1867, the building was used as a stable for Ryan's stock.

⁷⁰ Primary Application packet, SRNSW, 17513/2/181/15136, item 12; Steele, *Early Days of Windsor*: 151.

⁷¹ Primary Application packet, SRNSW, 17513/2/181/15136, item 8; 17513/5/101/18115, item 8.

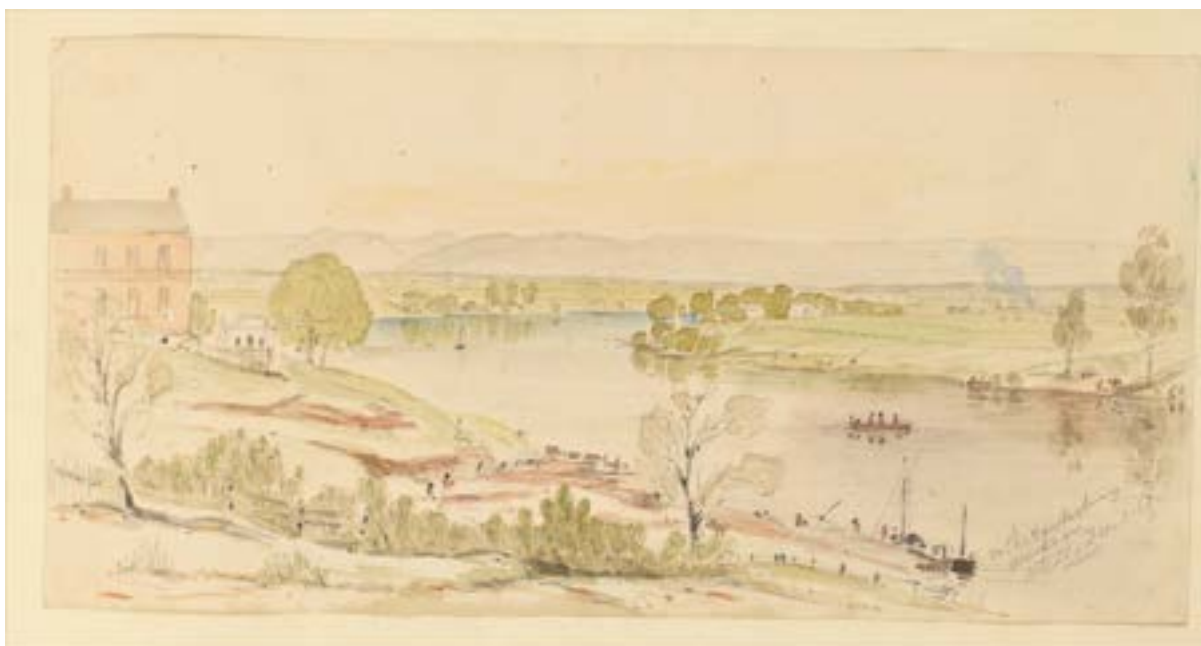


Figure 2-22 'On the Hawkesbury, Windsor, NSW', 3 December 1863. View from the Government Cottage showing the doctor's house, punt house, punt, and wharf. (Source: SLNSW DL PX 43 Volume 2: Sketches of N. S. Wales, 1857-1888 by H. Grant Lloyd f.155).

2.3.5 WINDSOR BRIDGE AND THE LATE NINETEENTH CENTURY (1874–1900)

Plans for a road bridge across the Hawkesbury were put forward by Hon. William Walker after the opening of the railway to Windsor in 1864. It was discussed at length in Parliament for the next few years, with those involved concerned about whether it should be a high-level or low-level bridge. A design was settled on in 1872, with the bridge planned at 14.5 feet (4.4 m) above the tidal level. Windsor Bridge was opened on 20 August 1874. The bridge was 480 feet (146.3 m) long, and cost £10,280. The opening consisted of a great procession through the town and, in the evening, a dinner in Thompson Square (Figure 2-23).

The provision of a bridge across the Hawkesbury at Windsor greatly improved the position of those who lived on the farms around Wilberforce and Ebenezer, giving ready access to Windsor railway station and its direct links to Parramatta and Sydney. It also joined the Windsor road system to the Putty Road, leading to the Hunter, where many Hawkesbury families had settled since the early nineteenth-century, and which was developing industrial importance through the coal industry.

The construction of the bridge abutment below Thompson Square required a large area of the riverbank to be cut away between the wharf and the steep bank below the Punt House, as illustrated in C. Scrivener's plan of 1894 (Figure 2-24). These works are also likely to have included the construction of timber retaining on Thompson Square (current roadway) below the Doctor's House; a feature that is present in a photograph of 1879 (Figure 2-25). In 1885 sections of Thompson Square (current roadway) were cut down by over 3 feet (0.9 m) to reduce the steepness of the adjusted grade.⁷²

The lower section of the adjoining road that wound down through Thompson Square to the wharf continued to serve the Windsor Bridge on a slightly tighter curve that commenced lower down Thompson Square (current roadway) effectively dividing the open space of Thompson Square into two separate parts. By 1888 the existing punt road had been widened, cutting into the existing slope, and

⁷² *Hawkesbury Chronicle and Farmers Advocate*, 6 Jun 1885: 2.

filled along the length of the approach to the bridge abutment. In conjunction with these changes, an extension of Bridge Street was made on the eastern side of the square from George Street to the road to the wharf and punt between 1879 and 1888 (Figure 2-27).⁷³ This road is now known as Old Bridge Street. However, the road quality remained poor, and by 1892 locals reported 'a regular gorge' having been washed out of the road 'near the old sewer'.⁷⁴

Following the completion of the bridge, an ongoing pattern of minor modifications to Thompson Square and surrounds commenced, including the installation of post and rail fencing to both portions in 1881 with the lower portion to be used as a grazing paddock. This was followed by the addition of a pavilion to the upper reserve and in 1897 the 'small reserve below Thompson Square' was 'levelled' and re-landscaped with the stock fencing upgraded to match the large, white fence in the upper portion of the square.⁷⁵ The square was repeatedly referred to as unsightly, or in disrepair, over the succeeding years and the best purposes for its future use were debated within the community.

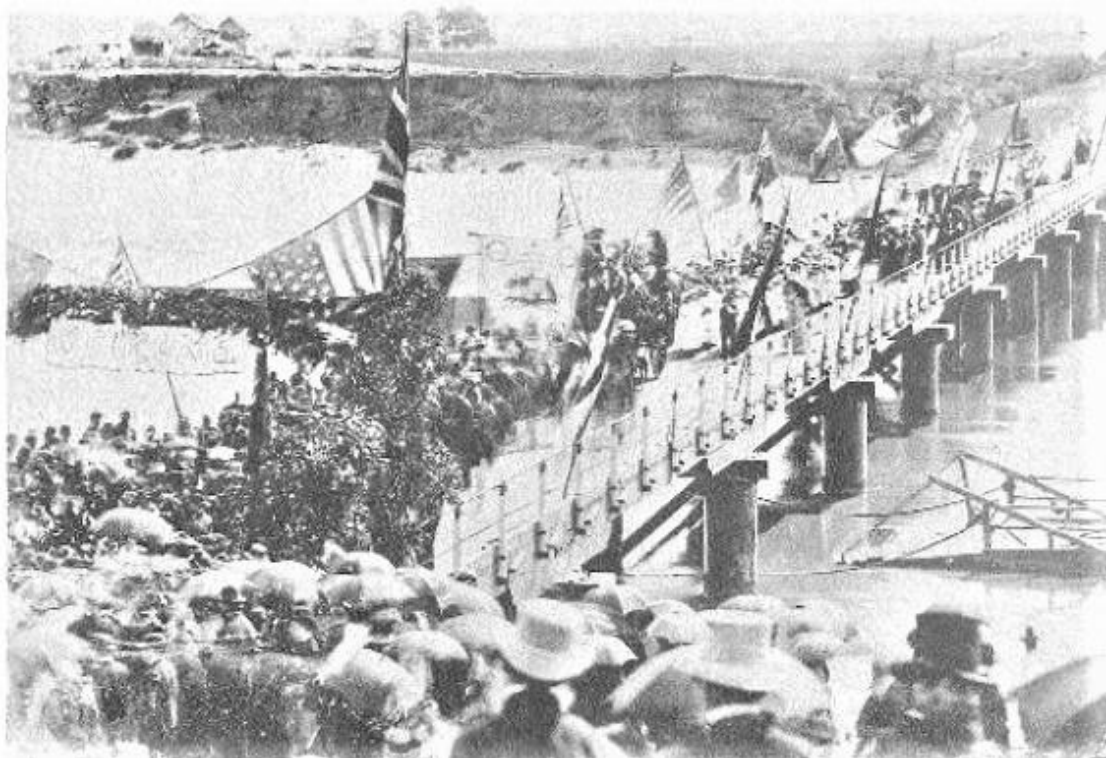


Figure 2-23 Opening of Windsor Bridge, 20 August 1874 (Source: Bowd 1979 p.15).

⁷³ *Sydney Morning Herald*, 29 December 1855: 3.

⁷⁴ *Windsor and Richmond Gazette*, 26 March 1892: 3

⁷⁵ *Windsor and Richmond Gazette*, 27 February 1897: 3.

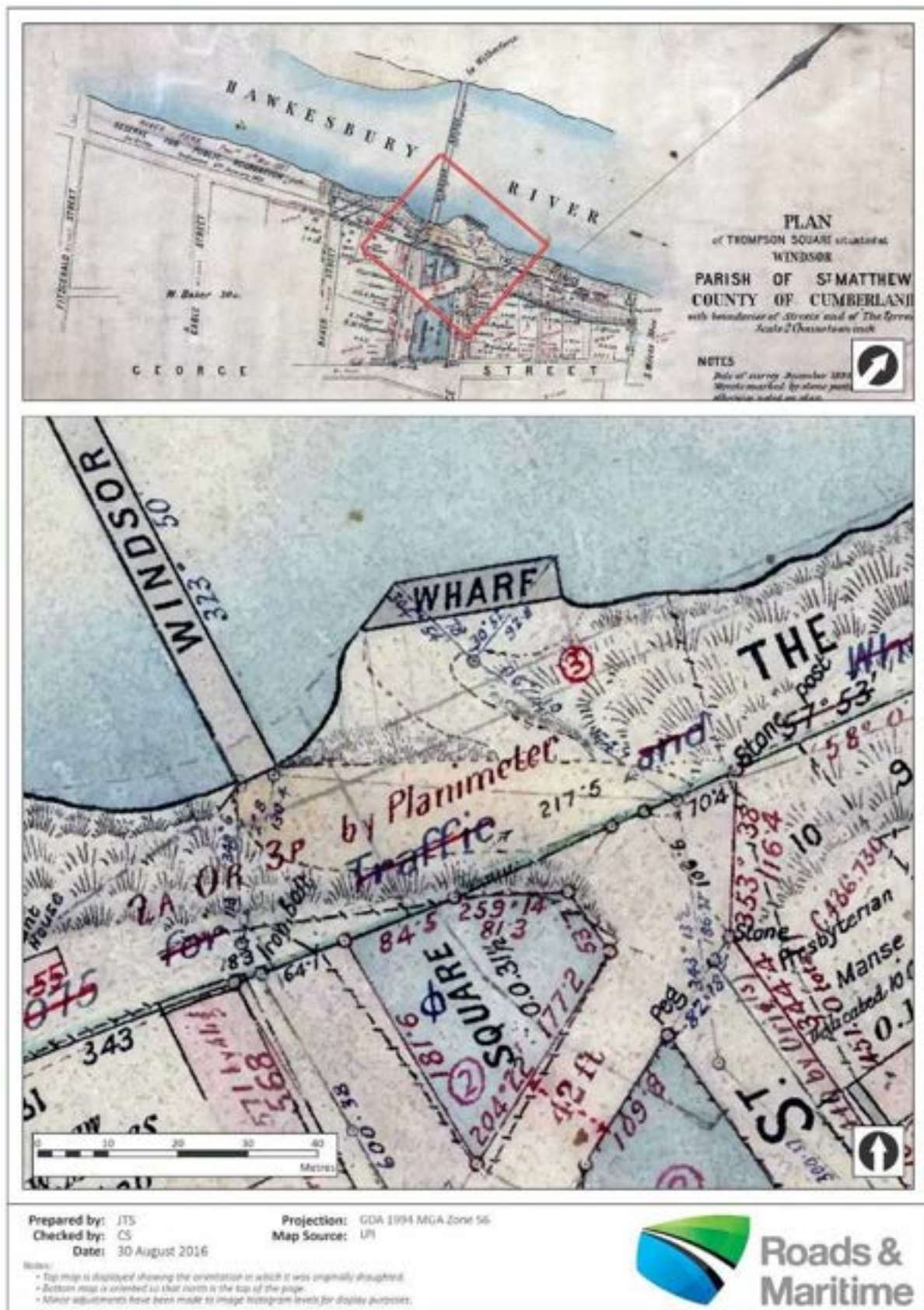


Figure 2-24 Plan showing the footprint of the new road and bridge construction in 1874. (Source: C Scrivener, plan of Thompson Square, 1894, LPI, Road Plan R 1009.3000).

Between 1896 and 1897, the deck level of the bridge was raised to reduce the number of occasions that it was made impassable due to flooding. The alteration was made by placing collars on top of the old piers and by constructing a new pair of braced piers at the Wilberforce end. The abutment margins and approach road also needed to be raised by the necessary 8 feet (2.44 m), requiring hundreds of loads of soil to be carted from the lowland near Mileham and Brabyn Streets to fill in the riverbank to the higher level.⁷⁶ During works a temporary bridge was constructed across the river. Following these adjustments, the higher-level bridge was opened in April 1897, at a cost of £4,000. When the bridge over the Hawkesbury was opened on 20 August 1874, the redundant punt was moored downstream of the bridge. When the level of the bridge was raised in 1896, the punt was brought briefly back into service before the upstream temporary bridge was ready for use.⁷⁷

The 1890s also saw the formal creation of three reserves between George Street and the river. In conjunction with the raising of the bridge, Reserve 24075 was proclaimed in May 1896, forming a long narrow strip along the riverbank on both sides of the bridge known as The Terrace. This reserve was primarily for 'traffic and wharfage' but also developed a recreational aspect as the 'River Reserve'. In 1899, the two areas of Thompson Square divided by the roadway were also declared public recreation reserves: Reserve 29900 was the southern area up to George Street, and Reserve 29901 was the smaller northern section below the doctors' house.



Figure 2-25 Portion of Windsor, showing bridge, 1900 (sic) c.1879. View shows the bridge in its pre-1897 form. (Source: NRS-4481-3-[7/16220]-Sh1652 - Government Printing Office 1 – 06257)

⁷⁶ J Steele, *Early Days of Windsor*, Tyrrells, Sydney, 1916, reprinted Library of Australian History, North Sydney, 1977: 184.

⁷⁷ Windsor and Richmond Gazette, 15 February 1896: 3.



Figure 2-26 Windsor Bridge, Windsor, 1900 (sic), c.1879. View shows the bridge in its pre-1897 form. (Source: NRS-4481-3-[7/16220]-Sh1652 - Government Printing Office 1 – 06263).



Figure 2-27 Thompson Square and surrounds in 1888, showing the new extension of Bridge Street at top left and fencing within the square. By this time Thompson Square (current roadway) has been regraded and trees have been planted in the square. (Source: State Library of NSW, digital order number d1_06274).

On the northern bank of the Hawkesbury the former inn is shown on a Crown plan of 1878 as a ‘house’ (Figure 2-18). By 1915 this structure had become ruinous and was demolished. After the McQuade family sold the land to Robert Judd, yet another Windsor publican, it was replaced by the present Federation cottage, called ‘Bridgeview’, which lies a short distance to the north-west of the inn site.

2.3.6 THE EARLY TWENTIETH CENTURY (1900–1934)

Following the road and bridge works undertaken in the late 1890s Thompson Square had become an unsightly repository for left over materials, prompting further discussion over the need for improvements

and the best ways to use the space, while a need was identified for an improved approach to the bridge, as access down 'punt hill' was degraded and steep for horse and cart traffic.⁷⁸ The Council were advised that the new road:

would require four feet of filling, just at the turn off to the wharf approach. This would cut off the approach to the wharf, and another road would have to be made along the side just below Mrs. Hopkins'. They could procure stone at a reasonable price from Miss Dick, and this, with the bricks from the old punt-house – which unsightly structure would be demolished.⁷⁹

This solution appears to have been finally addressed in 1904 and as noted in the newspaper article, the Punt House was demolished and a new route cut from the bridge along The Terrace, allowing traffic to move through town via Kable Street (Figure 2-28).⁸⁰



Figure 2-28 Thompson Square, the wharf and Windsor Bridge after 1904. The view shows the elevated bridge deck and the cutting for Terrace Road at right. (Source: State Library of NSW, Mitchell Library, Small Picture File).

Despite extensive reconstruction in the 1890s, the Bridge was in need of extensive repairs by the end of the Great War. The proposed solution was to use the existing system of piers and replace the timber deck and beams with reinforced concrete. The concrete work was undertaken by the State Monier Pipe and Reinforced Concrete Works, a state-owned with the works undertaken in 1921 by the Department of Public Works. The bridge was extended to 468 feet (144 m) in length, with additional reinforced concrete piers at the Wilberforce end. The finished deck height was 22 feet (6.8 m) above normal river level. The concrete elements were formed on site on the southern approach road to the bridge. Much of the southern approach to the bridge was also occupied as a works compound restricting access to the bridge (Figures 2-29 to 2-32).

⁷⁸ *Windsor and Richmond Gazette* 26 September 1903: 4.

⁷⁹ *Windsor and Richmond Gazette* 2 April 1904: 1.

⁸⁰ *Windsor and Richmond Gazette* 27 February 1904: 3.



Figure 2-29 Windsor Bridge, 28 November 1921. Beam replacement, looking east (Source: SRNSW NRS-4481-4-88-[AF00184635] Department of Public Works).

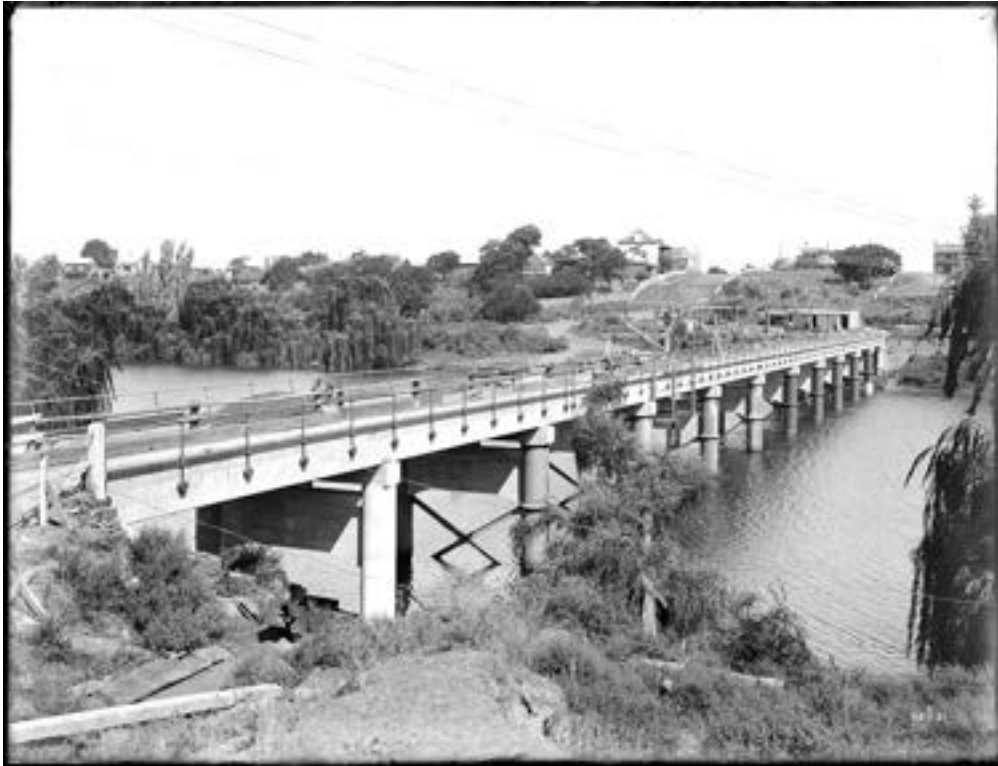


Figure 2-30 Windsor Bridge, 28 November 1921. Looking east showing new concrete piers on north bank. (Source: SRNSW NRS-4481-4-88-[AF00195496] Department of Public Works).



Figure 2-31 Windsor Bridge, 28 November 1921. Beam casting area (Source: SRNSW NRS-4481-4-88-[AF00196955] Department of Public Works).

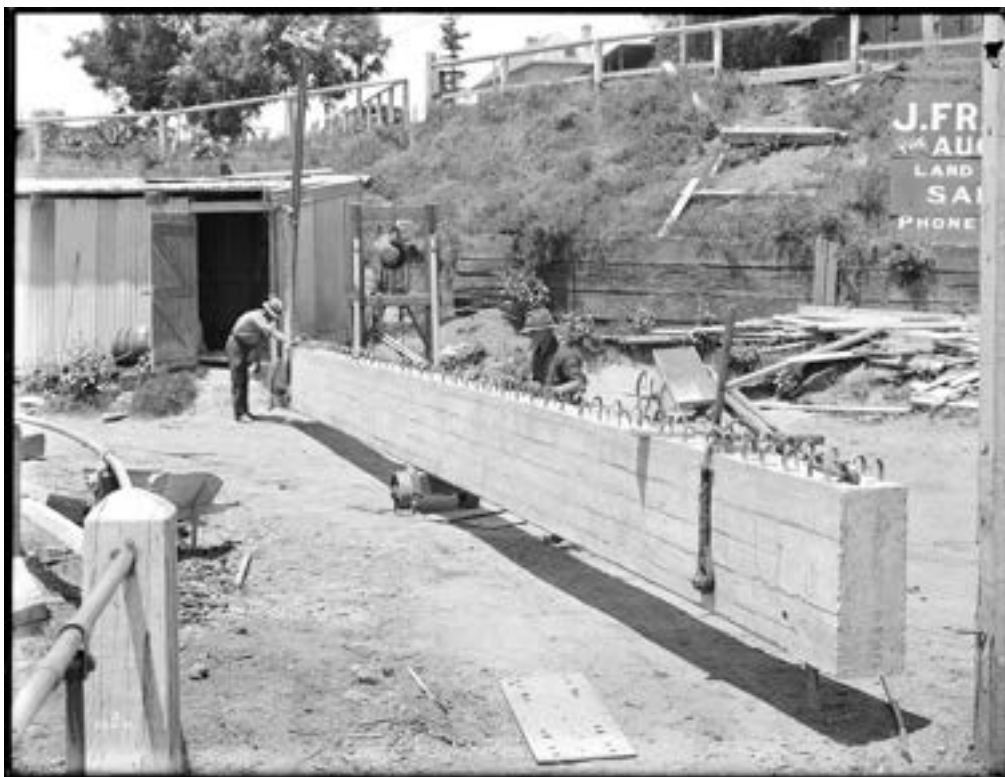


Figure 2-32 Windsor Bridge, 28 November 1921. Works area, south bank (Source: SRNSW NRS-4481-4-88-[AF00184629] Department of Public Works).

Despite reconstruction of the bridge itself, the road approaches remained much as they had in the 1890s. The bridge was also subject to inundation, as happened in 1929 (Figure 2-33).



Figure 2-33 Thompson Square in 1929, during the October flood, from the north, showing some plantings in the two reserves, 29900 (upper) and 29901 (lower). It also shows part of the wharf reserve, along the riverbank (Source: Aerial photograph, courtesy of Carol Roberts, from the collection of her mother, the late Iris Cammack. Photographer, Frederick Halpin Wilson, RAAF, 1929).

Despite the improvements to the bridge, requests for funds to be allocated toward the ‘beautification’ of the square itself persisted into the twentieth century.⁸¹ In 1930, the open space within the upper reserve was leased as a mini golf course. The mayor opened the course, named the Riverview Golf Links, however, the venture was not a success and closed in May 1932.

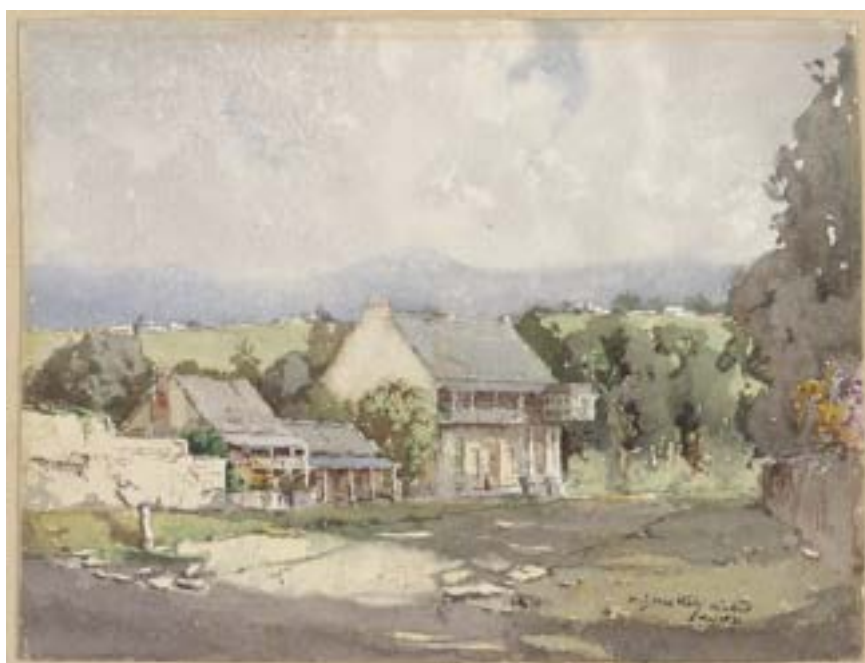


Figure 2-34 Thompson Square, Windsor. M J McNally, May 1931. (Source: ML VIB.Wind.2 a1528241r).

⁸¹ *Windsor and Richmond Gazette*, 7 May 1920: 4 and *Windsor and Richmond Gazette*, 4 Jun 1920: 1.

In 1934, a new approach road to the bridge was commenced from George Street, creating the present deep cutting aligned north-west to south-east through Thompson Square. Concrete retaining walls were employed at various places within this new extension to Bridge Street, and large concrete retaining walls were constructed at the intersection of Bridge Street and The Terrace, where it replaced the timber slab retaining of the nineteenth century. The new road cutting intersected the Victorian roadway that lay on the opposing diagonal. The works included the laying of 480 feet (146.3 m) of premixed bituminous surface on a concrete bed.⁸² The construction of road cuttings effectively prevented easy access between the three public reserves that had now been reconfigured. The eastern and south-eastern portions of Reserve 29900 (upper) were excised as road reserve, and the area adjacent to Bridge Street graded flat. Reserve 29901 (lower) was bisected by the new line of road with a small surviving portion on the western side of the old reserve being incorporated into the upper reserve, together with the section of former roadway. The surviving eastern portion of Reserve 29901 also incorporated a patch of Reserve 29900 and a section of the former road reserve.



Figure 2-35 Windsor Bridge approach looking west, Hawkesbury River, 25 May 1934 (SRNSW NRS-4481-3-[7/16032]-St16517 - NSW Government Printer series: Main Roads: Main Road 165]).

⁸² NSW Legislative Assembly 1935 (2nd Session) *Department of Main Roads 10th Annual Report*: 19



Figure 2-36 Windsor Bridge approach looking east, Hawkesbury River, 25 May 1934 (SRNSW NRS-4481-3-[7/16032]-St16516 - NSW Government Printer series: Main Roads: Main Road 165)).

2.3.7 MODERN DEVELOPMENT (1935–2020)

The arrangement of reserves within Thompson Square is shown in a survey of 1946 in Figure 2-37, below. The sections of the earlier roadway that were closed and added to the reserves 29900 and 29901 are coloured blue. These sections of roadway were subsequently buried within the upper portion of the newly shaped upper Thompson Square, set aside as Reserve 74215 in 1951. Despite these changes, the built fabric along the eastern and western margins of the Square remained substantially unchanged throughout the latter part of the twentieth century and into the twenty-first century.

In 1949, the Upper Hawkesbury Boat Club built a club room in the lower reserve (Figure 2-39). This building, raised on brick piers, was demolished in the 1990s. By the mid-twentieth century, the 1820 wharf had fallen into disuse and ruin and was subsequently buried beneath filling and recently constructed gabion retaining along the riverbank. Much of the current appearance of both Thompson Square and buildings within the conservation area was achieved during improvements made during Bicentennial restoration works up to and during 1988, with tree plantings and changes to the configuration of surrounding roads implemented since that time.⁸³ The restoration programme included works on surviving sections of sandstone kerbing. Windsor Wharf was also reconstructed using the Bicentennial funds.⁸⁴

The Royal Australian Historical Society proposed that an obelisk to Governor Macquarie be erected in the Square in 1949 but this was not accepted by Council. As part of the 1988 works, an anchor memorial to the early European settlers was erected.

⁸³ *Hawkesbury Gazette* 30 May 1988:3.

⁸⁴ Thompson Square Restoration: Official Opening, 23 April 1988, Hawkesbury Shire Council, Windsor, 1988.

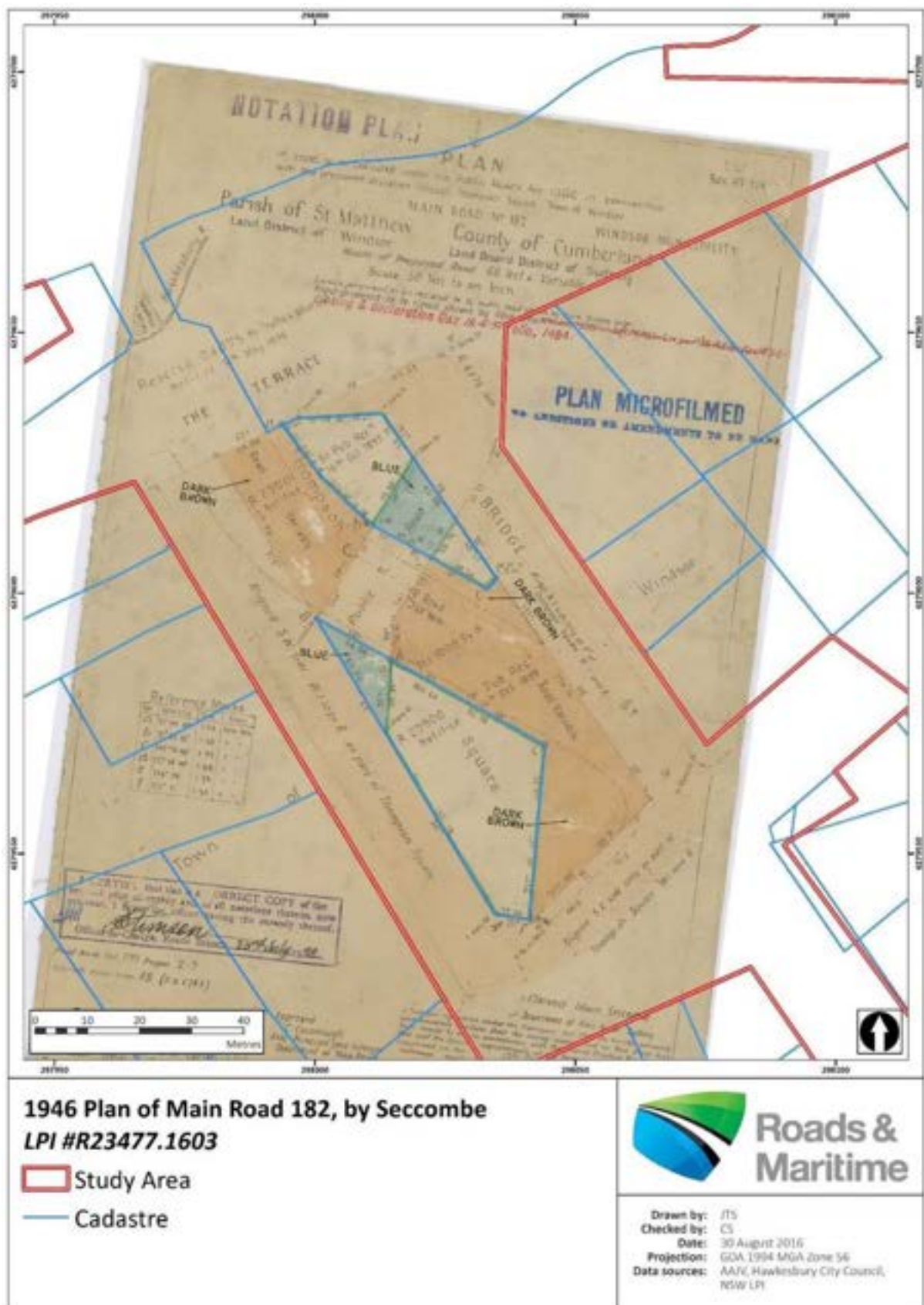


Figure 2-37 The present road alignment within Thompson Square, showing in blue the previous diagonal going south-west to north-east (Source: C. Seccombe, plan of Main Road 182, 1946, LPI, road plan, R.23477.1603).



Figure 2-38 Windsor Bridge, 1947 (Source: SLNSW, Mitchell Library. GPO 1-40931, 1_40931r).



Figure 2-39 The club room of the Upper Hawkesbury Motor Boat Club (centre), c.1978 (Source: SCMP Figure 52).

Throughout the twentieth century the area on the northern side north of the river and surrounds was used for grazing and then from the 1940s onwards for turf farming. Turf farming resulted in the general levelling of much of the land bordering the Wilberforce Road. The northern section of the project area remained substantially unchanged since 1965.

Formal recognition of Thompson Square as a significant surviving landscape element began in 1975 with its inclusion on the National Trust of Australia Register followed in 1980 by its inclusion in the

Register of the National Estate. The NSW Government placed a permanent conservation order on the site in 1982 as a prelude to its listing on the State Heritage Register in April 1999.⁸⁵



Figure 2-40 1956 Aerial image of Thompson Square and Windsor Bridge, Windsor. The current cadastre is shown in blue (Source: LPI, Overlay by Tom Sapienza, 2016).

⁸⁵ NSW State Heritage Register listing Item 00126

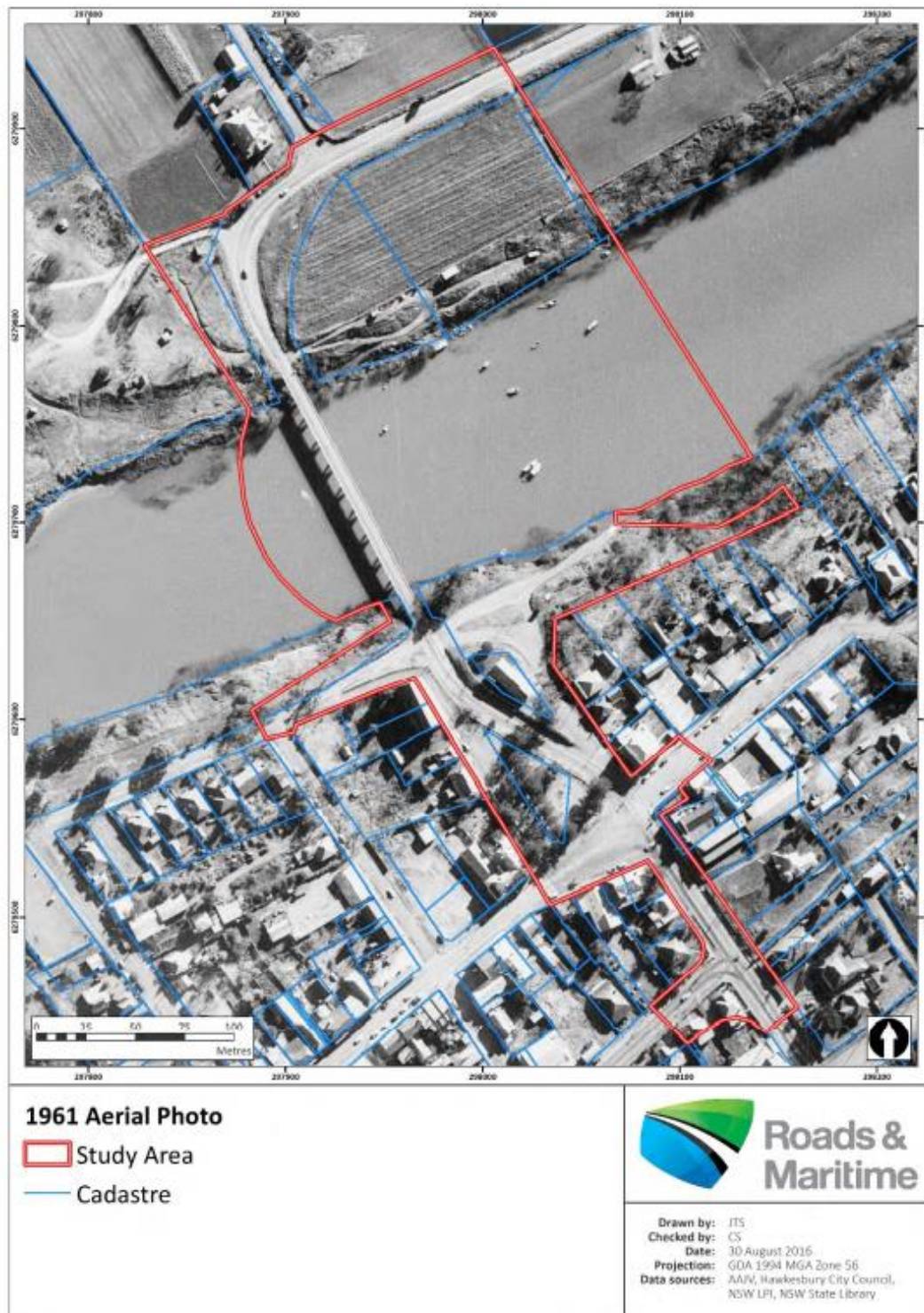


Figure 2-41 1961 Aerial image of Thompson Square and Windsor Bridge, Windsor. The current cadastre is shown in blue (Source: LPI, Overlay by Tom Sapienza, 2016).

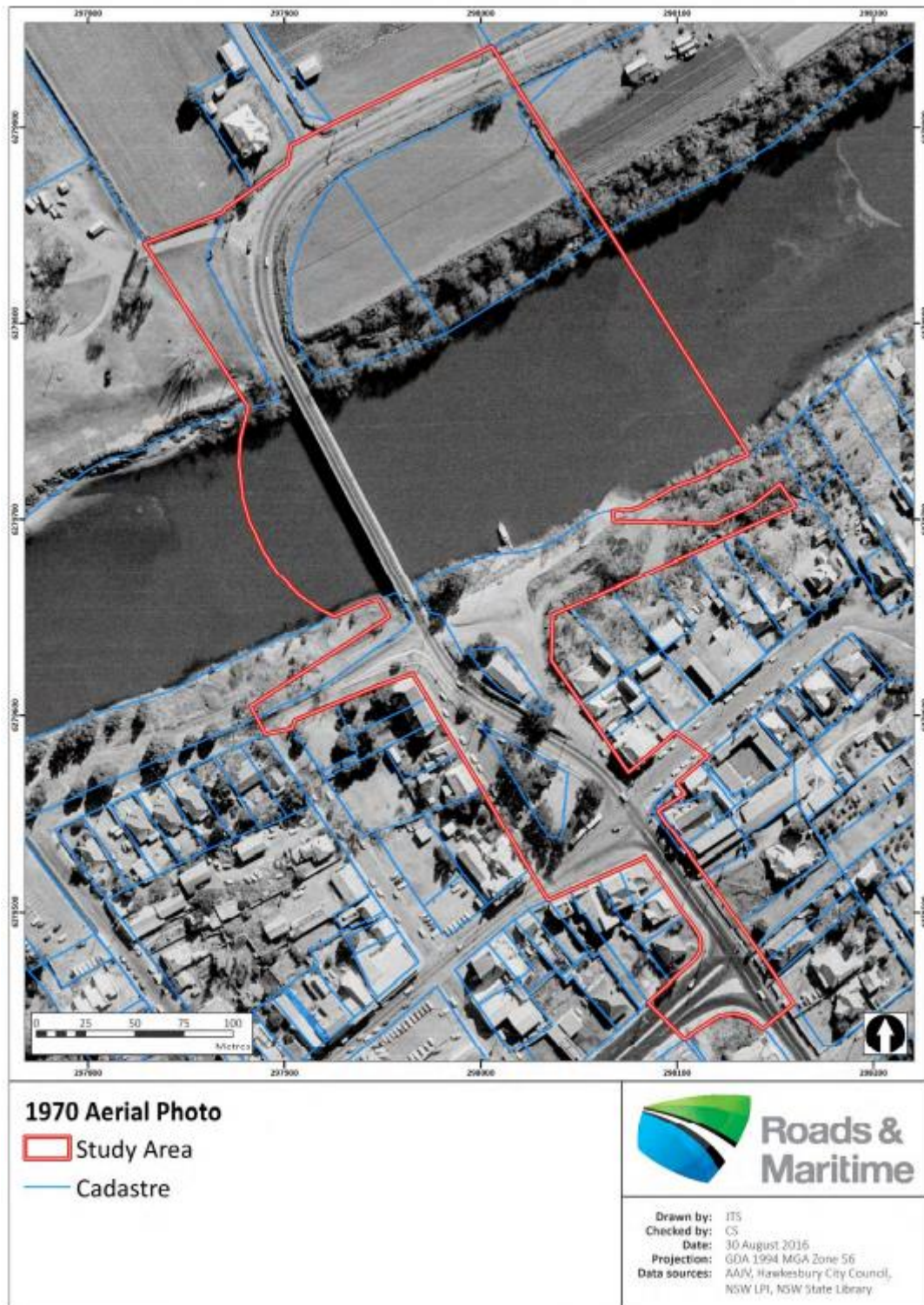


Figure 2-42 1970 Aerial image of Thompson Square and Windsor Bridge, Windsor. The current cadastre is shown in blue (Source: LPI, Overlay by Tom Sapienza, 2016).

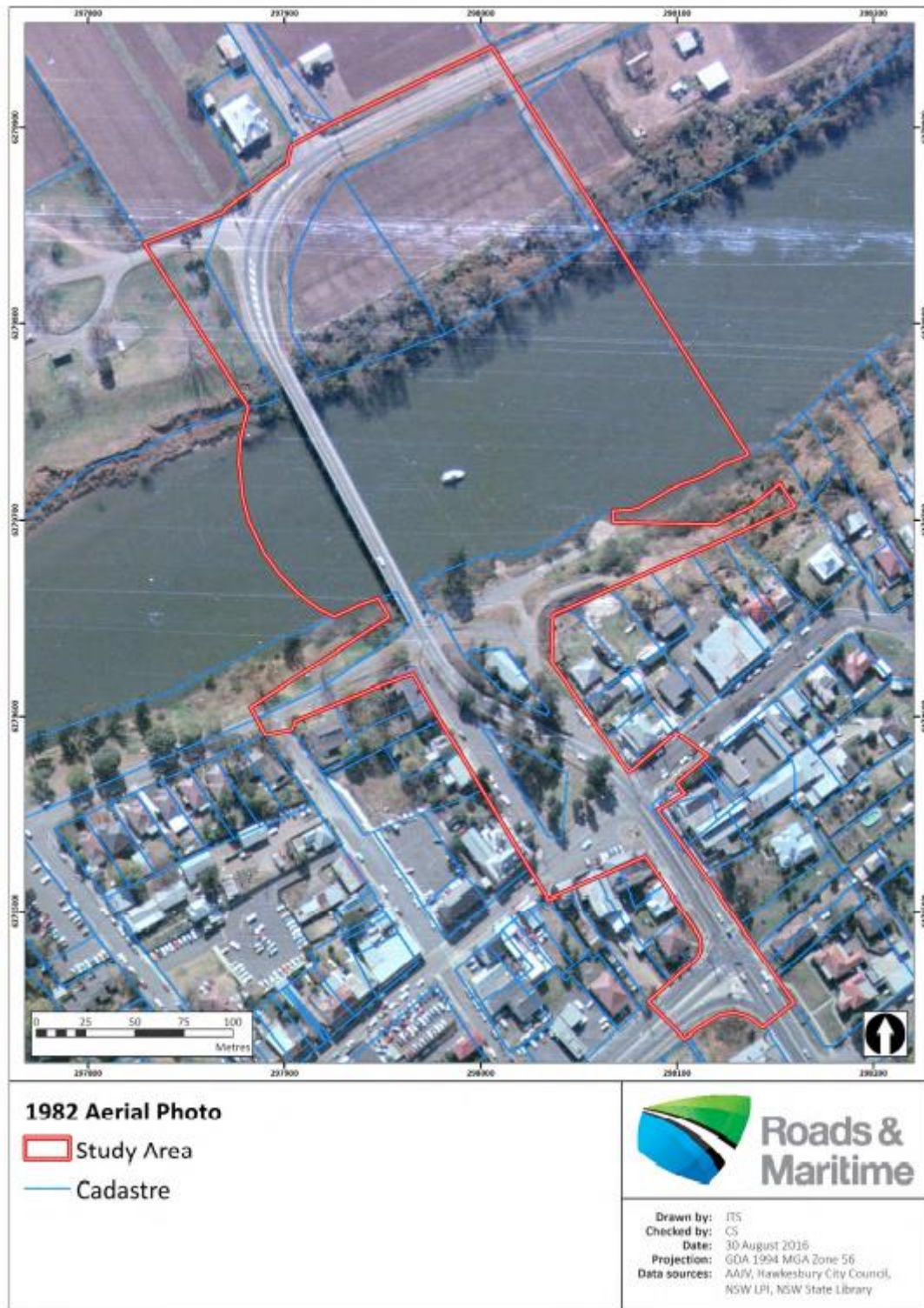


Figure 2-43 1982 Aerial image of Thompson Square and Windsor Bridge, Windsor. The current cadastre is shown in blue (Source: LPI, Overlay by Tom Sapienza, 2016).

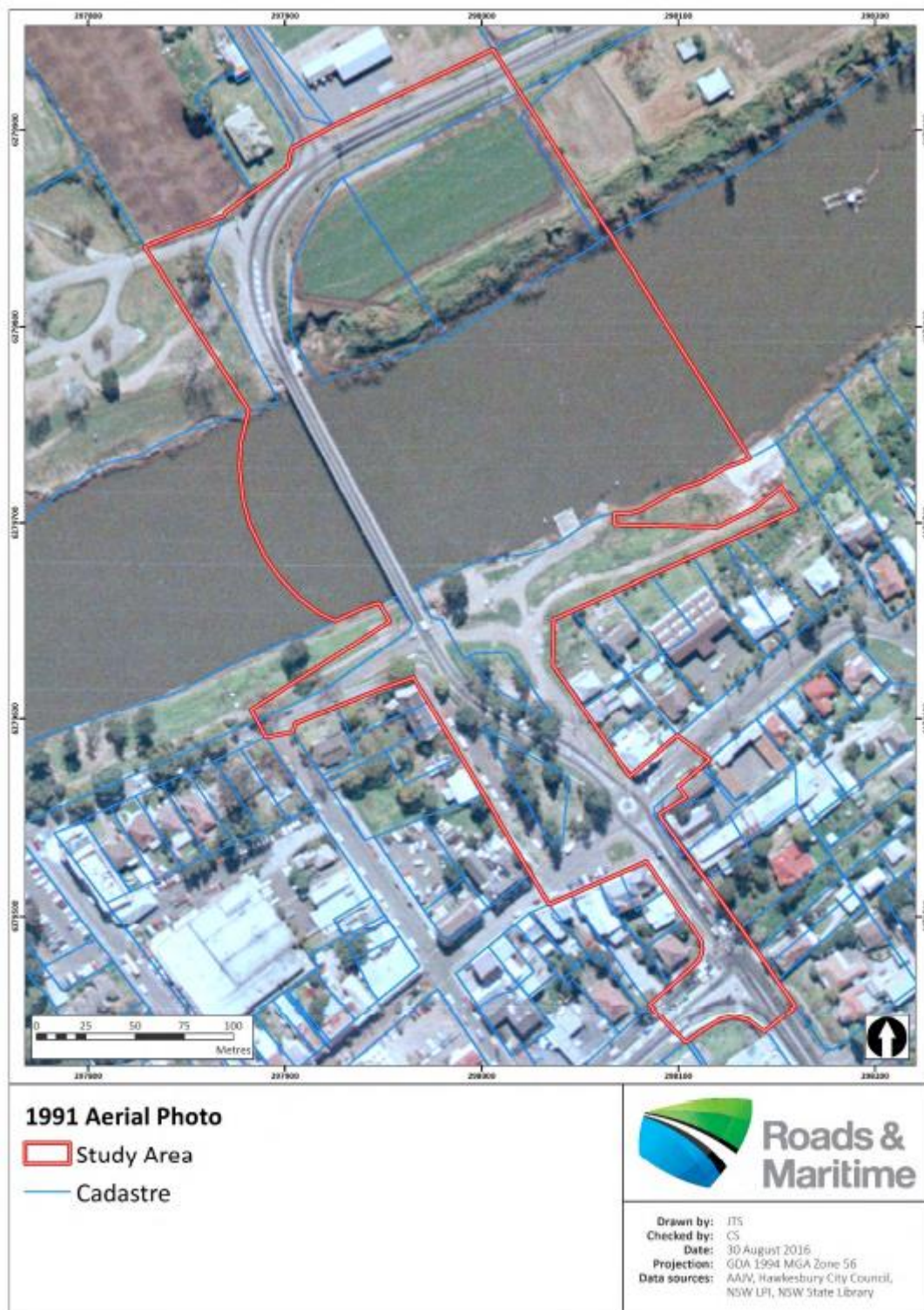


Figure 2-44 1991 Aerial image of Thompson Square and Windsor Bridge, Windsor. The current cadastre is shown in blue (Source: LPI, Overlay by Tom Sapienza, 2016).



Figure 2-45 2013 aerial image of Thompson Square and Windsor Bridge, Windsor. The current cadastre is shown in blue (Source: LPI, Overlay by Tom Sapienza, 2016).



Figure 2-46 2016 aerial image of the study area. The current cadastre is shown in blue (Source: LPI, Overlay by Tom Sapienza, 2016).

3 SALVAGE EXCAVATION RATIONALE

3.1 Objectives and aims

Following the completion of the on-site works and post-excavation analysis for salvage Stage 1 in 2017, several key tasks remained in order to comply with the methodology outlined in the DSS:⁸⁶

- complete the recommended program of historical archaeological investigations required for areas 2–5 of the WBRP area;
- prepare supplementary historical archaeological reports detailing the results of the archaeological works undertaken in areas 2–5;
- prepare a supplementary historical archaeological report detailing the results of the supplemental historical archaeological works which were undertaken in the remainder of Area 1 following the amendment of the bridge construction design;
- consolidate the findings of this report and all additional, supplementary reports into a single document that summarises all historical archaeological works undertaken as part of the WBRP; and
- provide input as required into the development of an Interpretation Plan for the Thompson Square area.

3.2 Excavation areas and approach

To enable construction and archaeological works to proceed in a coordinated manner, the WBRP site was divided into five main excavation areas (Figure 3-1). These were further subdivided as required throughout the excavation process. Area 3 was divided into three sub-areas. Each area corresponded to portions of Thompson Square that could be isolated in such a way as to maintain some degree of traffic flow.

The management of the site's archaeological resources was undertaken through four main methods of investigation:

- salvage excavation—formal archaeological excavation was conducted in areas where archaeological remains of high significance had been previously confirmed;
- archaeological monitoring—archaeological oversight was conducted during construction works in areas with confirmed or potential archaeological resources that had been disturbed, or were of lesser significance;
- Unexpected Finds Procedure—Excavation Director notified during works of the exposure of possible archaeological material in areas that had been assessed as having limited or unconfirmed archaeological potential; and
- maritime archaeological investigation—specialist investigation of confirmed marine archaeological remains.

Salvage excavation was undertaken in all five nominated archaeological areas. In both the monitoring phase and the operation of the Unexpected Finds Procedure, there was scope for targeted salvage if warranted.

⁸⁶ AAJV 2017d.

Monitoring was also undertaken for works in the southern portion of the Thompson Square reserve, the George Street / Bridge Street intersection, and on Bridge Street, between George Street and Macquarie Street. All other areas within the southern development footprint operated under the Unexpected Finds Procedure. The historical archaeological management zones are shown in Figure 3-2.

The northern side of the river operated under the Unexpected Finds Procedure.

Excavation methods within the salvage zones included the use of mechanical excavators under archaeological supervision, followed by manual excavation and recording. In the monitoring zones, mechanical excavation was followed by localised manual clearance when warranted.

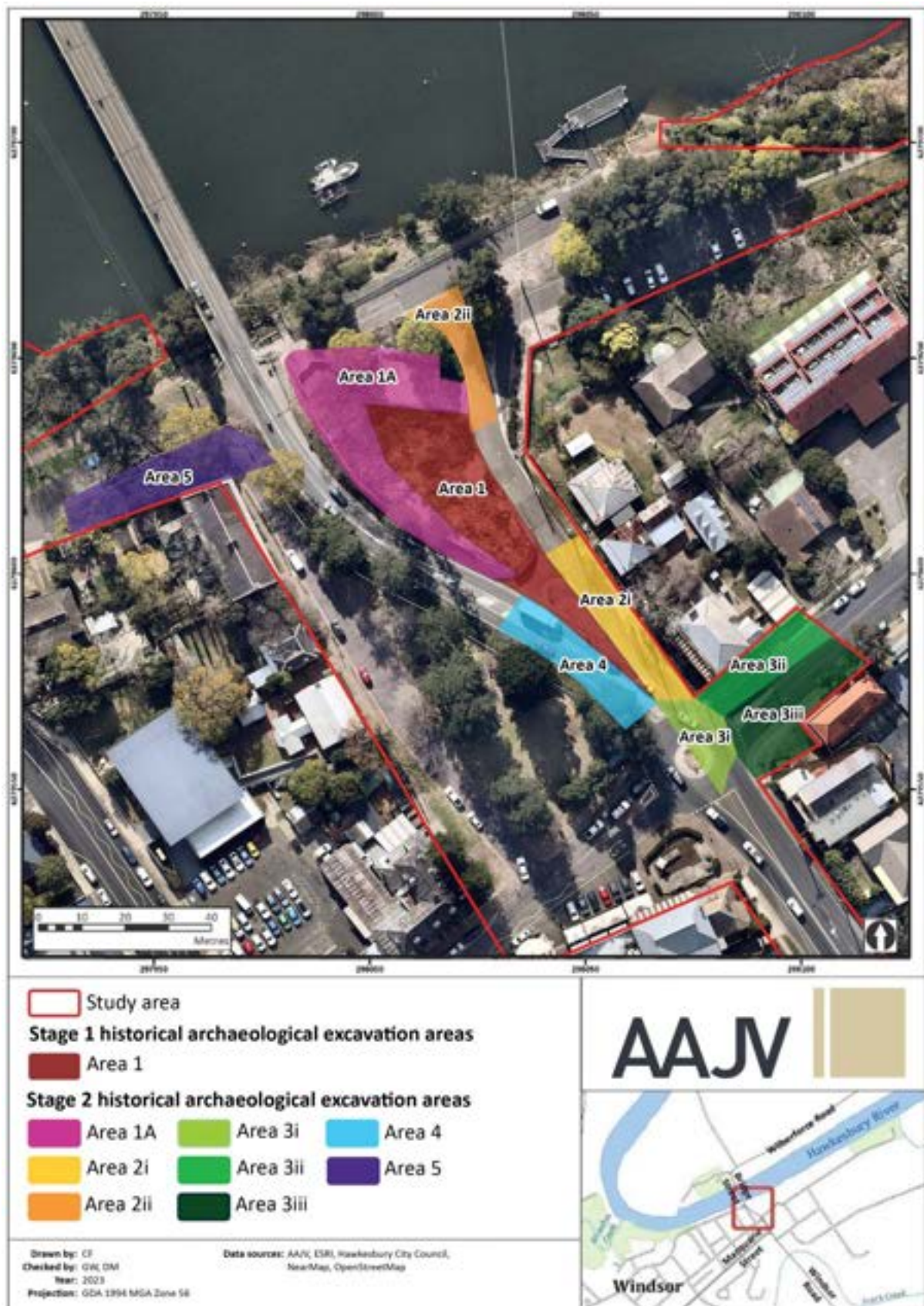


Figure 3-1 Historical archaeological excavation areas in the south portion of the WBRP area.

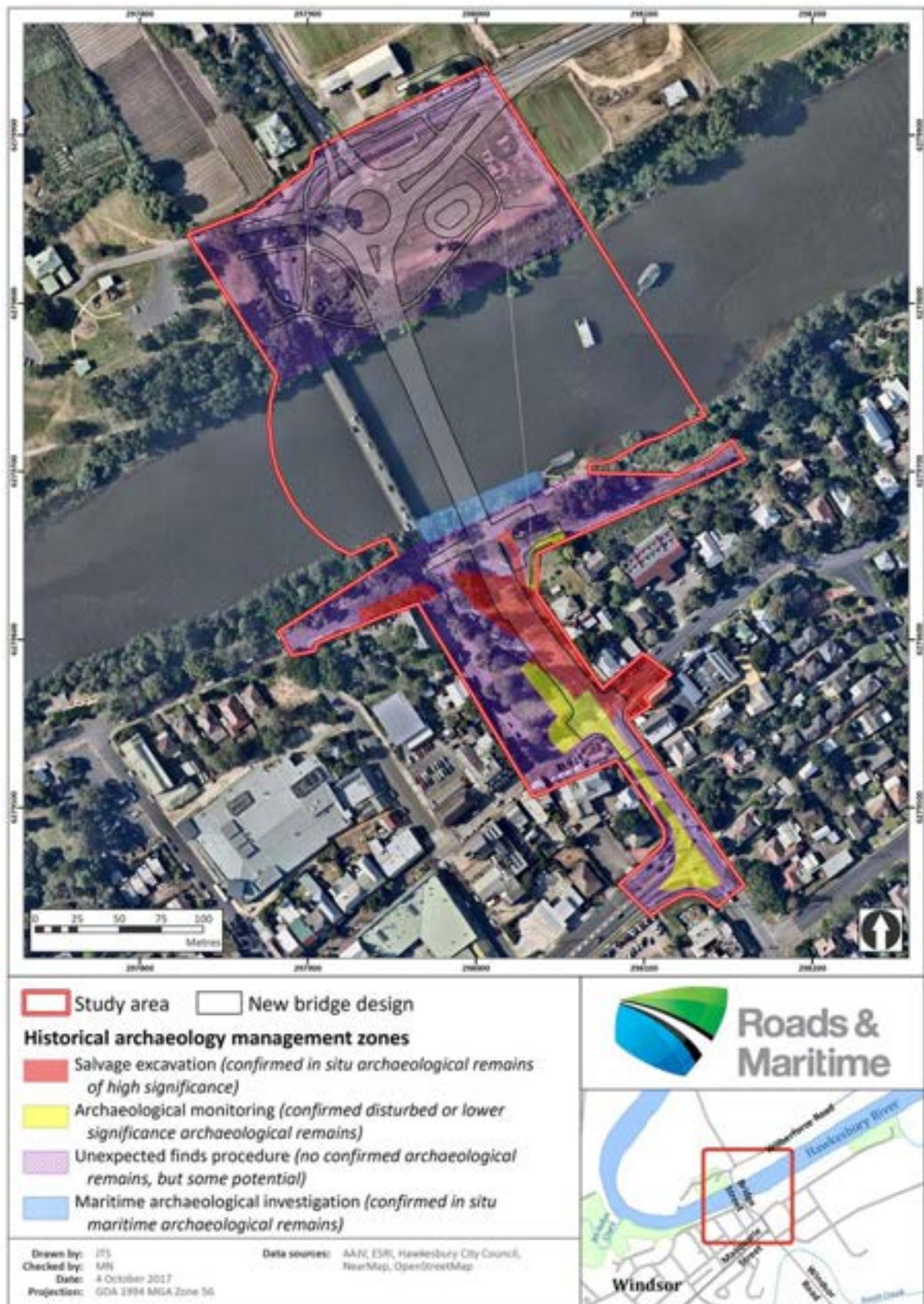


Figure 3-2 Historical archaeological management zones.

4 EXCAVATION RESULTS

4.1 General

The archaeological salvage excavation results presented in this section serve to act as addendum to the works undertaken to date, in many cases supplementing information gathered during the previous archaeological investigations. Aboriginal and maritime archaeological excavations are the subject of separate investigations to the historical program.

The site was excavated through open area, stratigraphic reduction by mechanical excavator (7 tonne) under the supervision of David Marcus (Secondary Excavation Director), with input as required from Anita Yousif and Dr Matthew Kelly (Primary Excavation Directors). Where historical features or deposits were encountered, these were then cleaned up by hand and recorded through photography, archaeological site plans, and context recording sheets.

The initial clearance of the site involved the removal of topsoils across Area 1A, and removal of various road or pavement surfaces from other parts of the site along with twentieth century demolition materials and fills. Subsequent excavation involved the further reduction of twentieth and late nineteenth century levelling fills and archaeological features reflecting the known development history of the site. This provided details of site formation processes and identified stratigraphic boundaries that form the basis of archaeological reduction, phasing and interpretation. Excavation continued until either the extent of archaeological remains had been identified and the full record of historical activity had been established, or until the maximum depth of proposed impacts in any particular area had been achieved.

The vertical and horizontal positions of all structural elements were recorded by the project surveyor. When required for archaeological site plans, spatial information was also recorded by dumpy level with reference to a permanent site datum. All significant elements were photographed with a scale bar and north arrow where possible. Digital media were used for general photographic recording. It is noted however that during one of the flood events along the Hawksbury River, several site notes and fieldwork equipment including a camera were subject to a period of inundation following the completion of the parts of the Area 1A fieldwork. While it was possible to preserve the paperwork, photographs on the camera were not fully recoverable.

Spatial data for the project was recorded using Australian Geodetic Datum (AGD) coordinates and Australian Height Datum (AHD) elevation formed the basis of archaeological plans and section drawings that illustrate the spatial relationships and stratigraphy of the site. In addition to the figures included here additional site plans and sections from the site are provided for reference in Appendix 1 as required.

The Aboriginal salvage excavations in Area 1A were conducted following the removal of all overlying historical deposits and agreement between the Aboriginal and historical excavation directors that the surface of the basal sand body had been exposed. The Aboriginal salvage excavations also occurred concurrently with the historical salvage excavations.

Context numbers were provided with a prefix numeral representing the area in which the context was located (e.g. 1001 for Area 1, 201 for Area 2, 301 for Area 3, etc), and were allocated to all stratigraphic and archaeological elements and are referenced throughout this report. Due to the presence of extensive fill events of variable materials which were recorded across different parts of the site at different points in the excavation, several deposits were allocated superfluous contexts numbers during the course of the excavations, as well as new numbers being provided for features in Area 1A which were previously recorded in Area 1. As identified, these occurrences were periodically consolidated under the first, governing context number. Key context numbers for each area are presented in Appendix 3 and site plans in Appendix 1.

Historical artefacts found within the salvage excavation area were recorded, collected, cleaned, and catalogued in accordance with the methodology outlined in the ARD⁸⁷ and appropriate archaeological practice. Archaeological deposits identified during the salvage excavation were frequently identified as fill materials sourced from unknown locations, however soil samples for future archaeobotanical or palynological examination were taken where this was deemed appropriate.

Discussion of the artefact assemblages in this addendum report is limited to context date ranges, number of individual specimens (NISP), minimum number of individual items (MNV), and notable finds. Date ranges have been determined by the use of the standard archaeological parameters of the date after which objects are known to have come into production (*Terminus Post Quem* [TPQ]) and the limit (date) that objects are known to have remained in production to (*Terminus Ante Quem* [TAQ]). Where more than one item is represented, the earliest TPQ and latest TAQ of that assemblage are provided. Where 1794 is given as the TPQ, this denotes that the object was in production before the establishment of the settlement at Windsor, which occurred in that year. It should be noted that for historical archaeological sites within Australia, the TAQ is of limited application as a dating tool due to the acknowledged use of items beyond their date of production. Where a more concise TAQ can be provided by the known date of an overlying event (e.g. completion of the oviform drain system in 1814), that date is adopted as the TAQ.

State significant historical archaeological features were investigated, recorded, and retained *in situ* wherever possible. Where this was not possible due to the major constraints of the development design, all significant historical deposits, structures, and features were subjected to salvage excavation and recorded in full. This included the removal by hand and storage of any brickwork or other significant built heritage items from areas subject to impact down to the depth of the proposed development, with deeper material protected and left *in situ*.

4.2 Historical phases of development

The archaeological investigation of the lower Thompson Square portion of Area 1 carried out in 2017–2018 identified six phases of historical development. These are summarised in Table 2 and in detail in Table 3.

Table 2. Summary of the historical archaeological phases of development

Historical phase	Date range
Phase 1: The Natural landscape	Up to 1794
Phase 2: The Green Hills settlement	1794–1814
Phase 3: The Howe and McGrath drainage system	1814–1816
Phase 4: The mid-nineteenth century	1816–1874
Phase 5: Windsor Bridge and associated roads	1874–1934
Phase 6: The modern era	1934–2018

⁸⁷ Austral Archaeology/Extent Heritage (AAJV) (2016) *Windsor Bridge Replacement Project – Historical and Maritime Archaeological Research Design and Excavation Methodology*. Unpublished Report for NSW Roads and Maritime Services.

The excavation results are presented according to each of these phases in chronological order, commencing with the natural landscape (Phase 1) and concluding with the modern era (Phase 6). Each phase represents a segment of the continuous history of the site and the phasing is largely analogous with the historical outline presented in Section 3 of this report. As such, the phasing reflects dated archaeological evidence of the known historical events of the site. Discussion of the relative contributions of the evidence for each phase is provided in Section 7.

4.3 Area 1A

The archaeological salvage excavations undertaken in Area 1 had focussed solely on an investigation of potential impacts associated with the project as required at the time of undertaking.⁸⁸ Following the completion of the excavation documented in the previous archaeological report, a portion of land measuring approximately 15 m wide remained unexcavated between the cutting of Bridge Street to the west and the Area 1 excavation boundary to the east. However, during the course of the construction program, it was identified that this area would also be subject to impacts that required the archaeological salvage of this remaining area, designated as Area 1A.



Figure 4-1 Location of Area 1A.

In summary, the salvage works identified archaeological remains relating to five phases, namely a natural soil profile representing the natural landscape (Phase 1), various thin occupational deposits associated with the Green Hills settlement (Phase 2), the box drains and oviform drain that formed the

⁸⁸ AAJV 2020 *Windsor Bridge Replacement Project – Salvage Excavation Report – Area 1 – Historical Archaeology*. Unpublished Report for NSW Roads and Maritime Services, 43–44.

Howe and McGrath drainage system (Phase 3), pits associated with use of the area during the nineteenth century (Phase 4), and subsequent construction of Bridge Street and the various lines of the river crossing (Phase 5). Note that to avoid overlapping context numbers with previously excavated areas, contexts in Area 1A were numbered starting at [1401]. In general, since excavation of Area 1 had terminated at an arbitrary section on the western side, the majority of deposits, fills, and other archaeological material identified in Area 1 continued westwards into Area 1A but were subsequently given new context numbers. Reference is made here to the previous archaeological report in which these deposits and features were described in greater detail than is needed here.

The earliest archaeological evidence relating to the natural landscape (Phase 1) consisted of various deposits which formed the stabilised aeolian sand body previously identified in Area 1.⁸⁹ Within Area 1A, these were excavated as part of the Aboriginal archaeological salvage program. While a sparse topsoil [1067] and subsoil [1074] dating to the Green Hills settlement (Phase 2) had been identified in Grid Area 2 during the Area 1 excavation, evidence suggested that it was already thinning to the west before reaching the eastern section.⁹⁰ No further deposits relating to Phase 2 were identified within Area 1A.

The most prevalent archaeological remains within the study area related to both the box drains and oviform drain that formed the core components of the Howe and McGrath drainage system. All three box drains and the oviform drain had been previously identified and recorded as part of the Area 1 excavation, and the existing system of context numbering used for the drains was maintained in Area 1A, with Box Drain 1 being the southernmost drain, Box Drain 2 being the middle drain, and Box Drain 3 being the northernmost.

At the conclusion of the Area 1 excavations, 10 m of Box Drain 1 [1143] had been exposed, showing the typical box drain profile of having been constructed in English bond using sandstock bricks in six courses, with the basal course being laid in stretcher bond. Evidence of timber boards were identified covering the drain, and bonding was provided by a shell lime and sand mortar. Unlike other drains, that contained varying degrees of curvature along their alignments, Box Drain 1 ran in a straight line towards the oviform drain, approaching it at a tighter angle of approximately 50°, in contrast to the approximately 65° angle of Box Drain 2 and the approximately 80° angle of Box Drain 3.

Excavation of Area 1A identified a 6 m continuation of the box drain [1501] that terminated abruptly approximately 3 m east of its junction with the oviform drain, at the start of the alignment of the former Bridge Street cutting. The intact section of box drain was identical with the section recorded in Area 1, measuring approximately 800 mm wide and constructed of bricks measuring approximately 100 mm wide by 230 mm long and 65 mm high, bonded with a sand and lime mortar. The timber boards identified in the previous section of the drain were also present. Where the former Bridge Street alignment cut the drain, it provided a cross-section through the box drain that showed the simple means of construction, with the two side walls constructed abutting the three-brick wide base laid in stretcher bond. The base of the drain survived within the Bridge Street cutting in the form of partial remains of the basal course of bricks, with the cutting also unfortunately removing the junction between the oviform drain and Box Drain 1.

The earliest phase of construction of this drain was represented by a single posthole identified below the lowest course of bricks within the base of Box Drain 1. The posthole cut [1499] measured approximately 150 mm by 150 mm and 70 mm deep, with a packing of brick rubble in the base, and a fill consisting of a dark brown-black silty sand [1500] with occasional wood fragments. The purpose of the posthole is unclear, as it is considered too small to be structural, but its location within the narrow

⁸⁹ *Ibid.*, 44.

⁹⁰ *Ibid.*, 48 and 50.

confines of the box drain is considered deliberate rather than coincidental. It is possible that a line of posts, including this one, were used as a means of identifying the proposed line of the drains.

When it had been identified during the Area 1 excavation, a large portion of Box Drain 2 had survived relatively intact, with the drain containing a brick-lined base as it continued westwards beyond the section.⁹¹ Excavation of Area 1A revealed an additional 7.5 m section of Box Drain 2 [1449] that extended through to the western section of Area 1A as defined by the edge of the present Bridge Street cutting. However, the main portion of the drain present in Area 1A had collapsed, with only the westernmost 1.5 m section remaining intact with each side displaying five courses of bricks laid in the English bond pattern identical to the section of drain previously recorded. No brick base was present in this portion of the drain, with the base consisting instead of compacted clay [1455]. A similar construction cut [1450] and fill [1451] was present as with other box drains.

While the intact portions of the drain appeared similar to the other identified box drains, the middle portion of the drain had fallen in on itself at an unknown point in time. The collapse appeared to be a structural fault rather than as a result of human interactions. All the bricks which formed the drain were still whole rather than broken as a result of the walls tumbling over, and it was possible to identify where sections of the sidewalls had collapsed inwards but each course had remained intact relative to the one below. From this, it was determined that the northern wall had given way first before the southern wall had collapsed on top of it. The cause of the collapse could not be determined, but it was noted that the base of the drain below the collapse was compacted clay, rather than brickwork. While there was no evidence of substantial water flow having eroded the base of the drain, many of the bricks from the collapse showed potential evidence for water damage in the form of smoothed faces and rounded corners. The westernmost end of the drain had retained its shape, although it was heavily damaged by the roots of a large tree growing over the drain.

⁹¹ *Ibid.*, 61.



Figure 4-2 **Box Drain 2 during excavation, looking west.**

The excavation also identified a square brick inlet [1428], similar to that previously recorded overlying the western extremity of Box Drain 3 in Area 1.⁹² The inlet consisted of two courses of bricks and measured approximately 850 mm by 850 mm, overlying but also not keyed into the underlying brickwork and, unlike the box drain, the bricks were held in place with a shell mortar, meaning that it had held its shape while the walls of the box drain had fallen. While three sides of the inlet were intact, the eastern side was absent, although it was unclear if it had split apart when the box drain collapsed or if it had never been constructed. As with the inlet from Area 1, it is presumed that the inlet provided a means of channelling water from the surface down to the box drain. Previous evidence of erosion from the various box drains noted during the excavation of Area 1 indicated that the box drains to the west of their connection to the oviform were constructed but not used and it is likely that this was the case with Box Drain 2. However, it is possible that water still entered the box drain through the inlet and it was this which led to the collapse of this section of drain. It is not possible to determine when this collapse occurred, but a 1921 penny was recovered from the fill of the inlet [1480], possibly indicating either a date for the collapse or a date when the subsidence was identified and repaired.

Box Drain 3 marked a 10 m continuation of the drain identified from Area 1 with no noticeable differences in construction techniques. The drain was built of bricks [1466] with timber capping planks [1470] present along its length, with a second brick inlet [1480] constructed at the western boundary of excavation. The brick-lined base of the drain stopped approximately 7 m along its length, 3 m before reaching the inlet [1428]. There was no evidence of erosion along the clay base [1455], although a thin lens of silt along the base of the drain indicated that at least a little water was flowing along it prior to the length of drain fully silting up. As identified in Area 1, the drain is likely to have filled with soil when the overlying planks finally rotted or when the ground level was raised.



Figure 4-3 View along Box Drain 3, showing remnants of timber cover, looking west.

⁹² *Ibid.*, 69.

The later construction of the Bridge Street road alignment had destroyed parts of Box Drain 1 as well as the inlet connecting it to the oviform drain; it had also resulted in the removal of the upper arch of the drain itself, allowing access to the main channel of the drain (Figure 4-4). While earlier trenching works associated with the construction of a sewerage system in Area 1 had cut a cross-section through the oviform drain, the drain itself had either silted up or been sealed by clay deposits on either side of the cut. However, the exposed section in Area 1A allowed access into the drain itself, although due to the confined nature of the drain, it was not possible to physically enter the drain. As recorded in Area 1, the internal space of oviform drain [1498] measured approximately 930 mm across and 1.2 m high (3 feet wide and 4 feet high) (Figure 4-5). The interior of the drain contained a deposit of large (300 mm diameter) cobbles held in a matrix of red-brown sandy silt [1497]. The cobbles completely filled the void made in the roof of the oviform drain, and had also rolled down-slope from where they had been dropped in. The cobble deposit appears to relate to the 1874 realignment of Bridge Street and was used to fill the oviform drain in order to stabilise the void to carry the new road. While damage to Box Drain 2 caused by the construction of the new road alignment was noted in Area 1, the impact of the road construction noted here indicates that the drainage system was not in use by the 1870s. It is unknown if the presence of the drainage system was known to the builders of the new road, but the way by which the box drains and upper portion of the oviform drain were removed and filled in shows that there was little respect paid to antiquity or ingenuity that the drains represented. This is also further evidence that the oviform drain was known of at the end of the nineteenth century but was not deemed of sufficient local significance to warrant discussion in the press of the day.

No further archaeological remains relating to Phase 3 were identified within Area 1A.



Figure 4-4 View showing interior of oviform drain within Area 1A, looking northeast.



Figure 4-5. View within the oviform drain following removal of internal fill.

As with Area 1, there was limited evidence for activities associated with the mid-nineteenth century (Phase 4) other than similar depositional and erosional acts across Area 1A, with the frequent deposition of levelling fills confirming the view postulated for Area 1 that erosion of the hillslope required constant and ongoing landscaping. Evidence of Phase 5 activities, relating to the construction of the bridge and associated changes to the road, were widespread across Area 1A and were generally more destructive to earlier phases of occupation. This included the construction of the 1874 Bridge Street alignment and the importation of more soil as landscaping of the surrounding park began, with the deposition of a brown-red silt [1536] capping all pre-1874 deposits in a manner similar to that found in Area 1. Various postholes were also identified which are interpreted as belonging to a white timber fence visible on contemporary photographs of the area as lining the sides of the road.⁹³

Other parts of the site contained discrete features relating to this phase of activity, including ten parallel concrete beams [1511] that lay below the former car park area to the southeast of the bridge. These beams measured approximately 150 mm wide and were spaced approximately 370 mm apart. The beams were cast *in situ*, with the upper surface smoothed but the other three sides left rough. The concrete beams formed part of the casting frame for the concrete decking beams that replaced the original timber decking of Windsor Bridge in 1921 (see Figure 2-31). One other feature dating to this period of use was a stone road marker [1458], potentially related to a similar object [1200] identified in Area 1 and possibly used to mark the edges of the 1874 road realignment. The stone measured approximately 1 m high, and 300 mm by 300 mm, with the upper 300 mm smoothed and peck marks

⁹³ *Ibid.*, 27.

present on the remainder of the stone (Figure 4-6). The stone was set in a dark brown sandy silt [1457] that covered the northern slope of the site.



Figure 4-6 Sandstone road marker during excavation, looking northeast.

As with Area 1, the most recent archaeological deposit present in Area 1A was an orange-red silty sand [1536] that was a backfill deposit placed within the former Bridge Street road alignment at the time that the new cutting was constructed. This, along with various modern landscaping works within the park such as the construction of a small, terraced car park marked the end of impacts associated with Phase 6.

4.3.1 NORTH OF AREA 1 AND FORMER CAR PARK

Excavation in the north-western part of Area 1A, referred to as the 'car park area', occurred following the completion of the salvage works within Area 1A and are therefore documented here separately. The archaeological investigations in this portion of the site identified remains predominantly relating to two phases of occupation: the McGrath drainage system (Phase 3) and to a beam casting area associated with the re-decking of Windsor Bridge in 1921 (Phase 5).

Looking firstly at the remains of the drainage system, it is noted that the required limit of excavation meant that the main oviform drain itself was not exposed as part of these works. Instead, archaeological remains revolved around its construction and subsequent back-filling in the form of the wide excavation trench dug into the natural sand body and the dumping of redeposited material back into the construction trench following its completion, in a manner similar to that which was seen in Area 1.⁹⁴ The backfill of the trench also contained four whole timber logs in varying states of preservation ([1545], [1546], [1547] and [1548]), that were variously identified as being iron bark or stringy bark (Figure 4-7 to Figure 4-11). The logs were unworked but appeared deliberately placed in the fill in a manner similar to that of the five logs also identified within the fill of the oviform drain trench in Area 1.⁹⁵ While appearing to confirm that it was a conscious decision to place the logs within the trench, it is still unclear why this decision was taken. The trench section demonstrated that the logs were sometimes located within larger dumps of material, such as log [1547] being contained by sandy deposit [1551], while at other times the log marked the end of dumps of material, such as with log [1546] and deposits [1557] and [1559].



Figure 4-7 Timber logs [1546] and [1547] and additional two logs (arrowed) at the base in of the cut in the former car park. Looking south.

⁹⁴ AAJV 2020, 66–67.

⁹⁵ *Ibid.*, 63.



Figure 4-8 Exposure of log [1546] and [1547] in section (dwg 27/section 4 Timber Section west of the oviform drain). They are contained in the construction trench of the oviform drain.



Figure 4-9 Detail of timber log in section [1546].



Figure 4-10 Detail of timber remnant [1547].



Figure 4-11 Detail of timber log [1546] after sectioning showing well preserved outer skin.

The other phase of activity identified in the car park area related to the substantial alterations made to the bridge between 1920 and 1922 when several piers were replaced, others strengthened, and the deck replaced. In order to keep the bridge in operation while this was occurring, concrete beams were cast on site and manoeuvred into position. The archaeological investigations identified a series of features that related to the casting yard constructed for this purpose, predominantly consisting of a series of parallel concrete rails [1510] set in a red-brown sandy silt deposit [1542]] (Figure 4-12). The concrete rails had been previously identified by the test excavations undertaken by Wendy Thorp in 2002. Evidence of the casting works included the presence of nails, wood, and rusted fragments of metalwork.

A total of ten concrete rails were uncovered and while all extended beyond the limit of excavation to the north or south, they measured between 660 mm and 6.5 m long with a standard width of 150 mm. The rails were arranged in pairs spaced 370 mm apart, with each pair being approximately 550 mm from the next set. The westernmost pair of rails lay 2.15 m from their nearest counterparts to the east. While it was originally considered that this space may have represented a missing pair of beams, instead a flat timber plank [1545] with sawn ends was located in this space, potentially acting as a spacer. The concrete rails [1510] themselves were cast *in situ*, with no metal reinforcing used. The upper faces of the beams were polished smooth, presumably through use, and the rails were left in place and covered over following the completion of the casting works for the bridge. The casting plant in operation is shown in Figure 2-31.



Figure 4-12 Concrete rails [1510] on west side of drain exclusion zone following exposure.



Figure 4-13 Timber log [1545] exposed between concrete rails.

4.4 Area 2

Area 2 was designated in the DSS as being the former alignment of Old Bridge Street from its junction with Bridge Street in the south to the junction with The Terrace in the north (DSS, 54; Figure 3-1). However, as archaeological material was only identified in discreet areas located at the northern and southern portions of Old Bridge Street, for ease of discussion in this report, the area has been divided into two sub-areas as follows:

- Area 2i: The southern part of Old Bridge Street between the intersection with Bridge Street to the south, and a line level with the northern limit of the driveway of 4 Bridge Street to the north.
- Area 2ii; The northern part of Old Bridge Street extending from the intersection with The Terrace and heading southwards for approximately 30 m.



Figure 4-14 Location of Area 2i and Area 2ii.

4.4.1 AREA 2i

Area 2i was the location of three archaeological test pits excavated during the 2016 testing program, although archaeological remains were identified in only two of the pits: SA26 and SH6. The third test pit, SA27, did not contain any significant historical deposits. Of the other test pits, SA26 was located in the road corridor of Old Bridge Street and contained brickwork that, although at the time of exposure was unable to be interpreted, was later identified as belonging to part of a brick-lined box drain that tied into the wider drainage system identified in the Area 1 salvage excavations.⁹⁶ The results from test pit SH6 were more difficult to interpret due to limitations posed by the presence of numerous services within the proposed excavation easement. However, the trench identified patches of crushed sandstock brick that was interpreted as relating to the presence of former structures, or material relating to their demolition. A small assemblage of artefacts dating from the early to mid-nineteenth century was present in the footpath area as well.⁹⁷ As such, Area 2i was predicted to contain further evidence of '[r]emains of nineteenth century brick drain, mid-nineteenth structural remains and occupation deposits'. While the DSS noted that only 'limited potential for *in situ* conservation of structural remains [exists] along the western edge of the area...within [the] current road verge and footpath', it also noted that this was dependant 'on [the] final service locations'. Following the completion of the design stage however, it was not feasible to retain any archaeological material within Area 2i *in situ*.

⁹⁶ AAJV 2020, iv.

⁹⁷ *Ibid.*, 41.

In summary, the salvage works identified archaeological remains relating to four separate phases: various thin deposits associated with the Green Hills settlement (Phase 2), the box drains that formed part of the Howe and McGrath drainage system (Phase 3), pits associated with use of the area during the nineteenth century (Phase 4), and subsequent use of the study area as a road corridor and footpath (Phase 5). However, it is the two box drains identified in Area 2i that are the only direct archaeological evidence of pre-twentieth century use of the land. Note that to avoid overlapping context numbers with previously excavated areas, contexts in Area 2i were numbered starting at [2201].

The earliest archaeological evidence associated with British settlement in Area 2i was very limited, most likely due to this part of the study area being open ground as shown on contemporary maps. The eastern side of the square remained an open space until 1879, when the Old Bridge Street road alignment was formed. Archaeological deposits dating to the nineteenth-century were identified below the present footpath, where they were recorded only in the section as they generally did not extend beyond the kerbing for Old Bridge Street and into the study area. These deposits lay below topsoil [2218] and included a thin layer of grey sand [2221] overlying a dark brown silty sand [2225], that contained large amounts of oyster shell fragments as well as brick fragments. Both of these deposits varied in thickness, although they averaged 150 mm, and overlay the natural clay [2207] (Figure 4-15). They are interpreted as having formed through the deposition of household waste, predominantly organic food scraps, mixing with the soil from the open space to the west. Further northwards, in the vicinity of construction cut [2241] and Box Drain A, the natural clay [2207] fell towards the north and additional deposits appeared in the section including a deposit of dark black brown silty sand [2224] that included a lens of shell mortar fragments, and a mid-orange/brown clayey sand [2229] with fragments of brick and gravel (Figure 4-16). There was no evidence to suggest that the shell mortar related to the demolition of any specific building, nor that the descending level of the clay related to any specific construction cut. Instead, the downward slope is likely to be a variation in the natural topography of the hill as it dropped down to the Hawkesbury River, similar to the undulations in it identified during the archaeological investigations of Area 1. As such, it is assumed that the additional deposits in this location were dumps of soil used to fill in the gully. These deposits were later cut by Box Drain A (discussed below).



Figure 4-15 East section with thin occupational deposits between topsoil [2218] and natural clay [2207] (outside 10 Bridge Street, looking east).



Figure 4-16 East section in vicinity of construction cut [2241] for Box Drain A, showing downward slope of natural clay [2207] and additional soil accumulation (outside 10 Bridge Street north of previous image, looking east).

The only other potential evidence for the early European use of the study area consisted of a pit measuring approximately 400 mm wide and approximately 250 mm deep, located in the northeast part of Area 2i, below the driveway to 4 Old Bridge Street but only partially within the limit of excavation. The surface deposits consisted of topsoil [2218] and the associated asphalt driveway surface, as well as compacted deposits and bedding deposits associated with the construction drive and underlying services (Figure 4-17). The uppermost layer in pit [2502] consisted of a compacted deposit of shell mortar and brick fragments held in a matrix of light brown sandy silt [2503], that was 80 mm at the thickest point, but which thinned towards the edges of the pit. Below this lay a deposit of light brown, firm sandy silt [2507], and the lowest deposit was a thin layer of burnt ash in a matrix of dark brown-black sandy silt [2508]. The base of the cut was irregular in both section and plan and appeared merged in places with the underlying natural clay [2207]; when combined with the presence of burnt material in its base it suggests that this may have been a tree bole where the tree roots were burnt out when the stump was removed (Figure 4-18). It was not possible to directly determine a date for this event, but the fact that it was sealed with shell mortar suggests an early nineteenth century date.

These features and deposits represent the only evidence relating to the use of Area 2i during Phase 2.



Figure 4-17 View of area below driveway in Area 2i, showing various service cuts as well as shell mortar capping of tree bole [2502] in upper right corner (arrowed), looking north.



Figure 4-18 North section of pit [2502], location of a possible tree bole, after excavation (outside 4 Bridge Street, looking north).

Evidence associated with Phase 3 use of the study area related solely to the box drains that formed part of the Howe and McGrath drainage system. As with all previously identified box drains, while the overall form of the two drains was consistent with the concept of a square-sectioned drain or culvert to channel water towards the main oviform drain, each box drain contained unique elements that suggested an evolving method of construction of the drainage system by Howe and McGrath. Of the two drains present in Area 2i, the northern-most, Box Drain 1 [1143], was previously recorded in both areas 1 and 1A, with the drain continuing southwards through Area 2i. The southern box drain, initially identified in test pit SA26 (has been named Box Drain A for the purpose of this report).

Looking first at Box Drain 1 [2234 and 2240], a length of approximately 7.5 m of the drain was identified running on a southeast to northwest alignment through Area 2i. The drain was first identified during trenching works undertaken alongside the eastern edge of the former Old Bridge Street alignment [2234] (Figure 4-19), with the remainder of the drain [2240] recorded following the removal of the bitumen road surface [2205] and bedding layers [2206] (Figure 4-20). As was previously recorded with regards to the drain, it measured approximately 800 mm wide with individual bricks measuring approximately 230 mm by 65 mm by 100 mm. The upper course of the drain had undergone considerable levels of disturbance caused presumably by the initial grading and construction of Old Bridge Street and the subsequent construction of the bitumen road surface.



Figure 4-19 Box Drain 1 [2234] during excavation within alignment of Telstra trench, looking south.



Figure 4-20 Box Drain 1 [2240] following exposure, showing compacted clay [2235] capping interior of drain and continuing either side, looking northeast.

In general, the sides of the drain were constructed in English bond using sandstock bricks bonded variably with a shell lime and sand mortar or by mud mortar, and with the lowermost course of bricks laid stretcher-to-stretcher to form the base of the drain. The drain varied from six courses in the footpath area to five courses within the former Old Bridge Street road alignment, with the upper course likely removed during the initial phase of road construction. While the drain was generally well preserved, the upper course within the road alignment was heavily compressed while the section identified below the footpath was impacted by roots that had degraded much of the upper courses. As such, none of the timber boards identified over the drain in Area 1 were identified within the portion of the drain present in Area 2i. A narrow construction trench [2241] was present, but only on the southern side of the drain. The cut measured approximately 80 mm wide and was filled with a red-orange silty clay [2242] with frequent inclusions of shell fragments (Figure 4-21). However, the width of the cut reduced towards the west along the drain and was not visible at the eastern extremity of the study area.

While the western part of the box drain was lined with bricks, similar to the other three drains, there was an abrupt change where the brickwork finished and the base of the drain changed to a compacted orange-yellow clay [2237] that contained fragments of sandstock brick (c.f. Figure 4-22), and was likely a redeposit of the natural clay [2207]. In parts of the drain where the brick base was present, the outer walls of the drain were constructed on the bricks, but where the clay base was present, the drain walls were constructed directly on the redeposited clay [2208] (Figure 4-22). Neither the brick-lined part of the drain or the clay-lined part showed evidence of erosion, suggesting that the drain was never operational. There is no functional reason to leave the base as clay, as any water running down the channel would erode the clay and lead to water running below the brick base. Furthermore, as the sides of the drain were constructed directly onto the clay, there would be no ability to later insert a brick base in this location without needing to waterproof the join between the base and the side walls.

There are several other key points associated with the change from brick-lining to clay. The final bricks in the base consisted of two half-length bricks laid either side of one full-length brick in order to keep the English bond pattern and to ensure the end of the brickwork was flush. In addition, the walls of the drain on either side of the change from brick to clay continued unchanged, whereas if the western, clay-lined drain was a later extension, it would be expected that this part of the wall would be keyed into or abut the eastern section. On this basis, it is considered that there was a conscious decision made either in advance or during construction that the brick-lined base would not extend along the full length of the drain. It is known from documentary sources that the quality of the workmanship being undertaken by Howe and McGrath's workmen was being questioned by March 1816, and it is difficult to see the decision to not brick-line the base as anything other than a cost-cutting measure.⁹⁸ In the previous archaeological assessment, it was considered that timber slats may have been used to cover the box drains as a cheaper alternative to stone where, once buried, it would only be an issue several years later if the wood rotted and the ground subsided.⁹⁹ It seems that a similar approach was used on this section of drain, where it gave the appearance of being functional but was operationally flawed, and once buried, problems would not be identified until many years later.

The drain was filled with a light brown-grey silt [2235] that contained large brick fragments (Figure 4-23 and Figure 4-24). Considering the clay base of the drain meant that it could not realistically have been in use, it is likely that this deposit was either the result of backfill thrown into the drain immediately after construction or, if the drain was covered with wooden boards as was the case elsewhere, then it was the result of sedimentation following erosion of the wooden covers. However, the presence of brick fragments suspended in the matrix would imply that it is more probable the drain was backfilled upon

⁹⁸ Austral Archaeology/Extent Heritage (AAJV) (2020c) RE. *Windsor Bridge Replacement Project; Archaeological Management Strategy for Barrel Drain Relating to Construction of Water Pipelines*. Unpublished Report for NSW Roads and Maritime Services, 6

⁹⁹ AAJV 2020, 57.

completion. The drain was later capped with various thin deposits including compacted orange clay [2206], that all relate to the construction and use of the Bridge Street road alignment.



Figure 4-21 West facing view post-excavation of Box Drain 1. Note end of brick-lined base, level with scale.



Figure 4-22 View of Box Drain 1 showing abrupt transition from brick-lined drain to clay lined base, looking north.



Figure 4-23 View showing interior of Box Drain 1 and damage caused by tree roots on either side, looking south.



Figure 4-24 View showing clay base forming interior of Box Drain 1, looking northwest. Note brick fragments in section.



Figure 4-25 View showing base and fill within Box Drain 1, looking southeast.

The second box drain located in Area 2i, Box Drain A, was the southern-most box drain identified as part of the archaeological investigations. In comparison to the other box drains, it was the most heavily damaged of the drains with only the base surviving intact (Figure 4-26). The western-most end of the drain was truncated by the present road surface [2205], that presumably reflected the road level of the original Old Bridge Street alignment in this part of the site. The junction with the main oviform drain most likely occurred in Area 4, where the drain had been truncated by the current Bridge Street cutting.

Despite only the base and lowest course of brickwork surviving, the drain contained many unique elements in its construction that suggest that it was either the first drain to be constructed and demonstrated that the proposed method of construction was flawed and needed to be changed for subsequent drains, or it was the last, where no care was taken in how the drain was constructed and the goal was to simply finish the contract.



Figure 4-26 View showing base of Box Drain A and truncation by former road alignment, looking southeast.

The excavation program noted that the current road surface [2205] and bedding gravel [2206] for Old Bridge Street were laid directly onto the compacted natural clay [2207]. The box drain was located immediately below the bedding gravel that overlay a layer of geofabric to protect it (Figure 4-27). One point of note is that despite the relatively shallow depth of the drain, it is unlikely that it would have been exposed even though it was under the earlier alignment of Old Bridge Street, as the bricks are of too poor a quality to have survived extended exposure or continued damage from the wheels of vehicles passing over them. This suggests that upper courses of the drain were removed either when the first alignment of the road was laid, or when the current asphalt road was constructed. However, considering that the ground levels of the buildings to the east are similar to that of the current road level, it is unclear exactly how much the ground could have been reduced. What this does highlight is that on at least one occasion since it was initially covered over, the drain was exposed, certainly during the grading works associated with the construction of the modern road surface when their remains were covered with geofabric and potentially during the construction of Old Bridge Street. For the modern works, this is yet another occasion in the history of Thompson Square where elements of the drainage system were encountered within the last thirty to forty years without its presence being widely reported.

Unusually the base of the drain was three courses thick, suggesting that trenching for the drain had been over-dug. Raising the base of the drain created a fall that allowed it to function.



Figure 4-27 Western portion of Box Drain A showing box drain immediately underlying road bedding gravel [2206], looking west.

As noted above, the drain was in a poor state of preservation due to impacts caused by construction of the Old Bridge Street alignment and by a trench cut associated with the installation of a modern PVC pipe and associated gravel deposit [2211] (Figure 4-28). While it initially appeared that the box drain was cut by the PVC pipe trench (Figure 4-29), once fully exposed, it became apparent that there was an unexpected and considerable drop in height of 250 mm before the drain continued eastwards beyond the limit of excavation (Figure 4-30Figure 4-31). This is probably the result of the removal of two courses of brickwork from the base of the drain leaving only the lower course in place.



Figure 4-28 Western portion of Box Drain A cut by modern drainage service, looking northeast.



Figure 4-29 North section through modern drainage cut showing gravel fill [2211] and PVC pipe installed to drain excess water, with eastern portion of Box Drain A on both sides of the modern cut, looking north.



Figure 4-30 Post-excitation view looking northwest of junction between higher western and lower eastern box drain.

As previously noted, the drain was in a relatively poor state of preservation with what appeared to be only the base and lowest course of wall surviving. This made it difficult to determine what aspects of the brickwork formed part of its initial phase of construction as opposed to later modifications. It initially appeared that, as with the other drains, the structure consisted of two parallel walls although unlike the bases of the other drains, this one consisted of three courses of brickwork laid edgewise, header-to-header at a height a little above the outer courses of bricks that constituted the walls (Figure 4-31), while several sections of the base were missing bricks completely (Figure 4-32). This was initially interpreted as being a result of water damage, as seen in other box drains or, more likely, as damage caused by grading from the construction and maintenance of the road corridor. Where a cross-section of the drain was provided at the point where it was cut by the drainage cut filled with gravel [2211] surrounding the stormwater drain, it appeared to show a profile that was comparable to all other box drains (Figure 4-33).

Looking first at the eastern portion of the drain, only a short section of the drain had survived within the study area, and this severely limited its interpretative value. It was only possible to note that the brickwork was four courses wide, with the bricks laid directly onto the natural clay [2207]. Based on the appearance of the other box drains, it is interpreted that the outer two courses would have formed the foundation for the walls of the drain, while the inner two courses would have been the actual base of the drain (Figure 4-34).

This portion of the drain was excavated below the original ground surface and placed in a construction trench that measured approximately 2.5 m wide, although it was not possible to record the full width as the northern side of the cut was damaged by the installation of a modern telegraph pole (Figure 4-35). The soil profile of the southern side of the cut showed the original ground level as consisting of various thin occupational deposits [2221] overlying the natural clay [2207], with an almost vertical construction cut for the drain cutting vertically through the upper 300 mm, then tapering inwards at a

shallower angle (Figure 4-36). The fill of the construction cut consisted of redeposited silty sand overlain by the later gravel [2211] as part of the installation of the stormwater drain.



Figure 4-31 Brickwork in the western portion of Box Drain A, looking southwest.



Figure 4-32 View showing section of Box Drain A probably damaged by grading works, looking northwest.



Figure 4-33 View showing cross section of Box Drain A following removal of gravel [2211], looking northwest.



Figure 4-34 View showing the eastern remnant of the Box Drain A and back-filled robber trench (lower left), looking east



Figure 4-35 Elevation of drain following removal of bricks, looking northwest.



Figure 4-36 View from above of sondage excavated through drain. Note construction cut to right (north).

The use of three courses of brickwork forming the base of the drain may indicate that the trench for this drain was excavated prior to the construction of the main oviform at the point at which the two drains were to join, resulting in an intercept that was too low. The solution appears to have been to raise the base of the drain by two courses. It is unknown if the internal height of the drain was raised to compensate for the loss of drainage capacity.

Archaeological evidence relating to Phase 4 in Area 2i was in the form of occupation deposits located along the eastern edge of the study area. As previously noted, the bedding layers for the current Old Bridge Street road alignment were laid directly onto the natural clay [2207]. While it is likely that the occupational deposits once existed across the entirety of Area 2i, most of these deposits were removed by construction of the road and associated infrastructure. The only clear evidence for nineteenth century occupation was in the section below the existing footpath area that was revealed upon removal of the existing kerbing and in pockets where the natural clay sloped downwards close to the eastern edge of the road (Figure 4-37).

In the trench section along the George Street ridgeline, the soil profile consisted of approximately 100 mm of topsoil overlying the natural clay (Figure 4-38). It was only in the central part of the section, conforming approximately with the property boundary between 6 and 10 Bridge Street, where the ridgeline started dropping down to the river, that a more complicated stratigraphy was observed. This consisted of topsoil overlying two thin lenses of sand, [2219] and [2220], that are likely to have been formed during the establishment of the current footpath and grassed verge. Below this was variously 100 mm of black-grey sand [2221], or 100 mm of black-brown silty sand [2224]. Deposit [2221] was interpreted as potentially representing an earlier ground surface as it contained oyster shell, that may have been deposited as refuse from surrounding residences. However, deposit [2224] was interpreted as a demolition fill as it contained fragments of glass, sandstock brick, and crushed lime mortar. However, it is unclear whether this related to an *in-situ* building that was demolished, or whether instead the material was brought to the site to be disposed of, potentially to level uneven ground. Below the demolition deposit [2224] was a thin, 40 mm thick deposit of brown silty sand [2225] containing occasional brick fragments and large amounts of charcoal, that overlay the natural clay [2207].



Figure 4-37 Remnants of Phase 4 deposits to left of scale bars within road alignment, looking north.



Figure 4-38 Eastern section along ridgeline, with topsoil [2218] overlying natural clay [2207], looking east.

Where deposits were noted within the road corridor, their presence was limited to parts of the road alignment towards the southern end of Area 2i (Figure 4-39), where they appeared to be a continuation of deposits [2224] and [2225], although they contained a greater number of larger brick fragments than was recorded from the section. However, fragments of charcoal and crushed mortar were also present. The full depth of the deposit was not identified as it lay below the limit of excavation impact. It is noted though those deposits only extended approximately 1 m eastward into the trench, that is presumably the point where the natural topography rose and any overlying deposits were removed by construction of the later road alignment. Apart from the presence of brick, charcoal, and mortar fragments, there was no evidence to suggest that a building was present in this location, and the deposits are still viewed as having been imported to the study area to level depressions in the natural topography of the slope, possibly in advance of the later construction of the road.



Figure 4-39 Levelling fills [2224] and [2225] within the road alignment, looking east.

Despite the study area forming part of the present alignment of Old Bridge Street, very little evidence relates to Phase 5, or the period between 1874 to 1934 when the first road alignments in this part of the site were being formed. This is presumably due to later grading and laying of an asphalt surface for the present road having removed evidence of the earlier road, that is likely to have only been formed from compacted earth. The only features tentatively dated to this phase of occupation are three sandstone gutter-blocks [2228] located below the footpath area immediately south of the driveway to 6 Bridge Street (Figure 4-40). The gutter was below an orange-brown clayey sand [2229], that formed part of the present footpath and verge. It is likely that these blocks reflect the original height of the road during the early to mid-twentieth century, and it shows that while little change has occurred to the level of the road, the footpath is likely to have been considerably built up since the early twentieth century. Modern (Phase 6) development within the study area included the concrete bases of signposts and trenches for the installation of services.



Figure 4-40 Gutter-blocks [2228] and overburden [2229] associated with Phase 5 of historical development, looking east.

In addition to the archaeological remains documented above, an additional feature was identified below the footpath outside 10 Bridge Street that, although of archaeological interest, was left *in situ* with no further excavation occurring following its identification. This feature consisted of a 600 mm section of wall [5030] comprising sandstock brick running in east-west alignment before abruptly terminating in the west (Figure 4-41). It is noted that while service pits for the present project were excavated to the west of the termination of the wall, the wall was set in a compact light brown silty clay [5026], that continued to the west, indicating that the truncation had occurred prior to the recent construction work.

The wall itself consisted of one row of bricks laid in stretcher bond and a second row laid in header bond with a shell lime mortar, in a manner identical with the walls identified in Area 3i and 3ii. However, while the upper courses of the walls identified in Area 3i and 3ii sat directly on the bricks from the lower courses, with the lower course of wall [5030] on the southern side formed a step-out. However, no further excavation was undertaken to confirm the means of construction of the wall as no further works were proposed in the vicinity of the wall following its initial identification.

In terms of the purpose of the wall's construction or phasing, it is difficult to reach a definitive conclusion based on the limited evidence available, and further investigation would require archaeological excavation within the garden of the adjacent property of 10 Bridge Street. The manner of construction of the wall, matching that of the outer wall of the Government Domain identified in Area 3i and 3ii, suggests that it belongs to a similar period of construction, i.e. Phase 4. The 1831 map of the Government Domain does not show any walls or buildings in the vicinity of the archaeological remains at this time and, unlike the walls in Area 3i and 3ii, this wall does not appear to be a replacement of an

earlier timber fence.¹⁰⁰ Instead, it is possible that the wall represents part of the later rebuild and adaptation of the site following its conversion to a police stables in the mid-1830s, as later plans do show lines and potential structures in the location of the identified wall.¹⁰¹ However, the similarities in its method of construction with the other identified, with an outward face of header courses, suggests that this particular structure formed an external, northwards-facing wall for the main stables area, with a likely construction date of the 1830s. Subsequent development throughout the course of the nineteenth and twentieth centuries has resulted in the removal of the remainder of the wall as well as its potential return.

The feature was subsequently covered with geofabric and clean fill, and it remains *in situ* below the new footpath.



Figure 4-41 North facing view showing the location of wall [5030] at right in relation to prior excavation works.

¹⁰⁰ AAJV (2017a), Figure 8.

¹⁰¹ AAJV (2017a), Figure 9.



Figure 4-42 East facing view showing wall [5030] and adjacent stratigraphy.



Figure 4-43 East facing view post-excavation showing lower course step-out.

4.4.1 AREA 2ii

Area 2ii was the location of two archaeological test pits during the 2016 testing program, although archaeological remains were only identified in one of the pits, SA32. The other test pit, SH8, did not contain any significant historical deposits. Test pit SA32 was located in the road corridor of The Terrace and contained what was identified as a cobbled surface, potentially related to the approach road to the wharf after the higher-level bridge was constructed.

The archaeological investigations in Area 2ii primarily identified two further areas of cobbles, both located in the vicinity of the cobbles previously identified in test pit SA32 (Figure 4-44). These deposits were located below a grey-brown silt [2101] that correlated with deposit (SA32-003) recorded in the test excavation program. In general, this silt [2101] overlay a variety of different deposits of sands, all likely to relate to the redeposition of material during the many different floods that are known to have scoured the lower banks of the river. The southern area of cobbles [2103] covered an area of approximately 2.2 m by 1.6 m and, as with deposit (SA32-003), it included both rounded river stones and brick fragments (Figure 4-45). The cobbles ranged from 50 mm in diameter up to 300 mm while the bricks ranged from half-size down to fragments. In general, the bricks appeared to demarcate the northern and eastern extents of the cobbles, although the post-deposition removal of cobbles made this difficult to confirm. A sondage excavated through the dark grey-brown sand [2105] that abutted both the cobbles and bricks showed that they were a single layer thick and pressed onto the surface of the underlying natural yellow-brown sand [2107].



Figure 4-44 View during excavation showing location of cobble deposit [2102] in foreground and cobble deposit [2103] in background, looking southwest.



Figure 4-45 View during excavation showing cobble deposit [2103], with possible brick edging, looking west.

The second location of cobbles covered an area of approximately 3 m by 3 m, although the cobbles were densest in an area of approximately 1 m² and became sparser around the edges (Figure 4-46). The deposit [2102] included a large number of cobbles measuring from 40 mm up to 300 mm in diameter, although unlike the previous areas, bitumen fragments were also present in deposit [2102] ranging from 100 mm to 500 mm in diameter. The bitumen was generally angled downwards rather than laying as a flat surface, and it was dispersed throughout the deposit seemingly at random. A sondage excavated through the dark grey-brown sand [2104] that abutted both the cobbles and bitumen showed the deposit varied considerably in thickness and appeared to have been dumped to fill depressions in the underlying natural yellow-brown sand [2105] (Figure 4-47).

As such, the archaeological excavation confirmed that the cobbles likely relate to a former alignment of an approach road that ran down to the wharf, and this is the only archaeological deposit remaining within this portion of the study area. The precise age of the cobbled surface is unknown, but it is agreed with the interpretation from the Test Excavation Report (AAJV 2017b, 88) that the deposit is likely to date to the late nineteenth or early twentieth century. It is unclear whether the bitumen represents part of the original method of constructing the surface, or later repair. However, the fact that the cobbles in the vicinity of the bitumen consist of more than one layer and fill a localised depression in the natural sand is seen as evidence that this deposit was laid in a single event at the time of initial construction.



Figure 4-46 East facing view of cobble deposit [2102], mid-excavation.



Figure 4-47 East facing view of sondage excavated into sand [2104] showing cobbles [2102] filling depression (top left).

4.5 Area 3

In order to manage the undertaking of archaeological investigations within an active road alignment, Area 3 was divided into three sub-areas:

- Area 3i: the northern lane of George Street, east of the roundabout with Bridge Street;
- Area 3ii: the southern lane of George Street, east of the roundabout with Bridge Street; and
- Area 3iii: the eastern half of the roundabout and junction of Bridge Street and George Street.

An additional sub-area, Area 3i.i has also been added to this discussion to cover the footpath area to the north of Area 3i.



Figure 4-48 Location of Area 3i, Area 3ii and Area 3iii.

4.5.1 AREA 3i

Area 3i was the location of archaeological test pit SA25 during the 2016 testing program, that identified an early-nineteenth century wall footing. As such, Area 3i was predicted to contain further evidence of '[m]id-nineteenth century structural remains' with 'occupational deposits uncertain due to shallow depth of deposit'. Proposed impacts within Area 3i required excavation to a depth of up to 300 mm from the existing asphalt surface within the road alignment for the construction of new road pavement, as well as deeper trenching related to the installation of services relating to the operation of the new traffic lights to be installed at the junction. Additional excavation work was required within the footpath to the north of the roadway relating to the construction of new kerbing and installation of new electrical cabling.

In summary, the salvage works identified archaeological remains relating to two separate phases: the boundary wall associated with the Government Domain and, following its demolition, the ongoing use of the area as a path and road. As noted in the test excavation report, no buildings were known to have been constructed within the current alignment of George Street, that was mapped as a road reserve as early as Meehan's 1812 plan. However, the wall approximately matched the alignment of a boundary fence that was absent on the 1812 plan but was known to be present by 1820, when it appears in a sketch and is later shown as a solid line on the 1841 plan. The boundary fence shown on the 1820 sketch consisted of a timber paling or palisade fence, with a recessed gate flanked by timber or masonry posts with ball finials. It is assumed that the timber fence was replaced with a masonry wall when the Government Stables were constructed in the 1830s.

Archaeological material related to the boundary fence consisted of two sections of brick wall and various associated postholes either abutting or adjacent to the main wall. It was not possible to categorically determine whether the postholes related to wooden elements associated with the extant wall, or whether they related to re-used elements of the original timber fence. However, the lack of a common spacing between the identified postholes suggest that the masonry wall was likely to have been constructed on the same alignment as the earlier fence, possibly even incorporating larger, structural elements of the wall into its later form.

The key structural elements of the wall consisted of the brickwork [310] and mortar [319], that was set in a narrow construction cut [313] (Figure 4-49). The wall itself ran on a northeast to southwest alignment and was divided into two sections separated by a space that is presumed to have been a gated entry. Each section of the wall terminated in a square plinth, that would have either been the base for a pedestal or an arch linking the two sides. It is believed that a large posthole [344], that abutted the southern side of the northern plinth, would have held a gatepost.

The wall itself was of relatively simple construction, with the main body of the wall laid in English bond. While results of the test excavations demonstrated that the wall consisted of four courses, only the upper two courses of the wall were fully exposed and recorded during the salvage excavation, with the remaining two courses lying below the depth of proposed impacts. The wall was constructed using shell mortar [319] and placed within an approximately 150 mm-wide construction trench [313]. Of note is that the trench was filled with angular fragments of broken brick [314], suggesting that other structures in the vicinity had been demolished around the time that the wall was constructed, and the rubble used to pack the wall cut. It may be that the bricks of the wall itself were at least partially re-used from elsewhere and those that were not suitable for re-use were discarded in the trench cut. While fragments of render were identified attached to the wall during the test excavations, no additional evidence of render on either face of the wall was noted during the salvage excavations.

The northern section of the wall extended 2.75 m southwards into the trench, consisting of 1.7 m of intact wall, then a space of 460 mm that appeared to have been damaged by later services, and then the remnants of the northern plinth. The southern section of wall within Area 3i measured 2.3 m, then a space of 200 mm that had been disturbed by the installation of a metal water pipe [357], then the plinth, that was more intact than the northern version and that measured approximately 570 mm by 560 mm. The space between the two plinths measured 1.25 m, or approximately 4 feet (Figure 4-50).

Four postholes were identified in the vicinity of the plinths, including two smaller, shallow postholes located to the west of the wall (one in the walkway [349] and one adjacent to the southern plinth [346]) and two larger, square postholes, one abutting the eastern side of the northern plinth [333] and one abutting the southern side of the same plinth [334] (Figure 4-53). As previously noted, there was little ability to phase the postholes, as all four postholes were cut into the natural sand [331] and covered by later road deposits, with no other contexts serving to date them. Where the larger postholes abutted the brick wall rather than being cut by it, this may suggest that the posts were either constructed at the same time as the wall or were structural elements of the earlier timber fence that were incorporated into the brick wall. However, considering how closely the postholes abut the wall, in terms of interpretation it is considered more likely that the square postholes are related to the brick wall, with post [335] likely to represent the terminal post that held the gate, while the function of the post [334] located on the interior side of the wall remains unknown. The purpose of the two small postholes to the west of the brick wall are also unknown, however, it is considered unlikely that they form part of the earlier timber fence, as the illustration shows a palisade fence with regular spacing of slats. The size of the two postholes makes them unlikely to be substantial enough to form the posts of the fence, while the lack of other postholes between them makes them unlikely to be slats.

In terms of phasing, while the postholes may represent two different phases of construction, one potentially relating to the timber fence and one relating to the later masonry wall, it is considered that both walls and all associated features relate to Phase 4 of the site history (i.e. 1816–1874). The

construction of the wall appears to suggest that it was intended to form a typical English garden wall, with a wooden gate framed by the brick piers that may have either supported finials, as was the case with the timber fence on the 1820s illustration, or a brick archway. In either event, the wall was not the main entrance to the Government domain and as such, did not require any elaborate means of construction or overly ornate gates.



Figure 4-49 South-facing view of wall footing [310].



Figure 4-50 East-facing view of entry gap in garden wall [310].



Figure 4-51 East-facing view showing brick rubble backfill in construction trench.



Figure 4-52 East-facing view showing damage to wall.

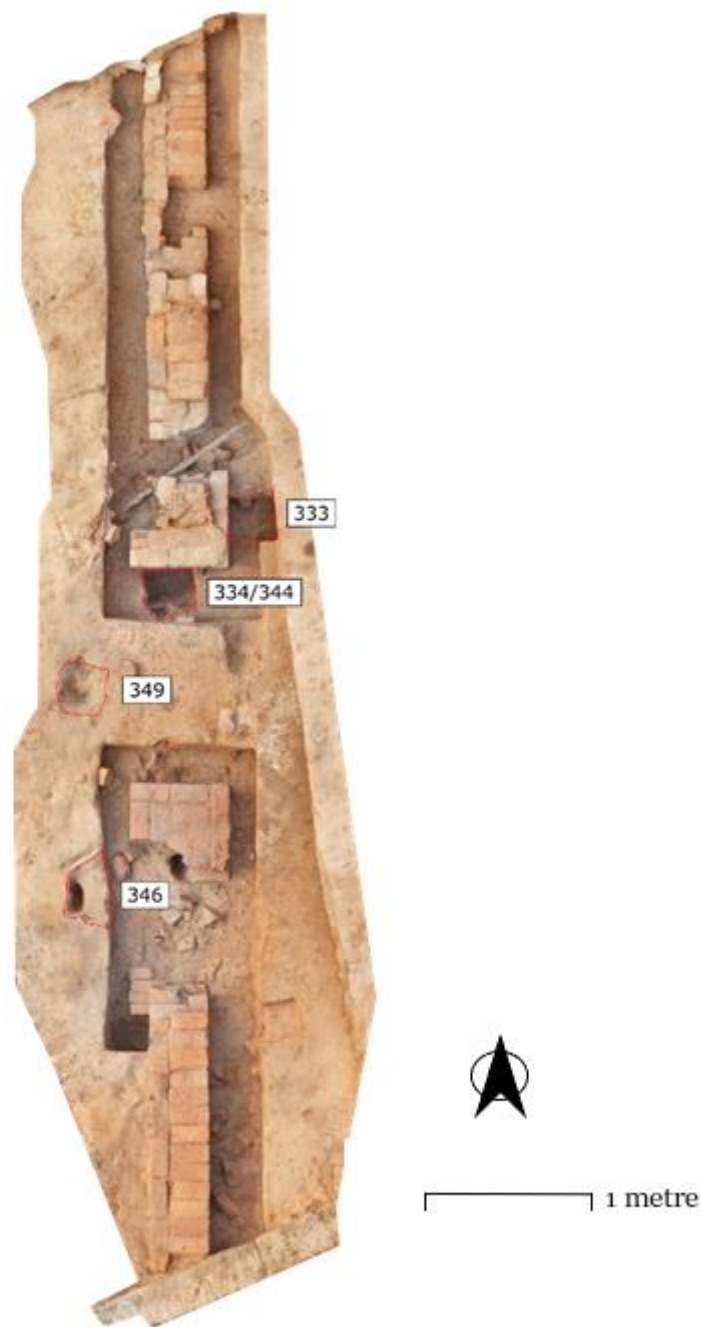


Figure 4-53 Ortho-rectified image of the wall showing location of postholes in relation to brickwork [310].

While the boundary fence served to demarcate the extent of the Government Domain, by the 1820s it also marked the start of a track that led eastwards towards Government House and, following the demolition of the wall by the mid- to late nineteenth century, this track was formalised as an extension of George Street continuing to the east of the intersection with Bridge Street. Various deposits were identified relating to the use of the area as both an unpaved and later paved road surface, as well as the installation of services associated with the increase in development either side of George Street.

The earliest identified road surface simply consisted of a compacted clay surface [305] overlying the natural sand [331]. The longevity of use of the unsurfaced track was demonstrated by many repairs to it, with potholes filled with gravel and clay [306], or a mixture of silty sand, crushed brick fragments, charcoal, and occasional shell fragments [307] (Figure 4-54). Presumably, this deposit was being

sourced locally from either domestic contexts or following the demolition of buildings in the vicinity of the trackway. The unpaved road surfaces were cut by several later services relating to the supply of water, gas, and other indeterminate utilities to the later housing. It is assumed that all these services are either contemporaneous or post-date the construction of the present sealed road in the early to mid-twentieth century. The asphalt for the road itself was laid directly onto parts of the underlying surfaces without the use of bedding gravel or other road base.



Figure 4-54 East facing view showing compacted road surface [306] and later repair [307].



Figure 4-55 North facing view showing metal pipes [362] laid under the road surface, with trench [383] cutting diagonally.



Figure 4-56 West facing view showing modern service trench [365] cutting earlier service trenches.

4.5.2 AREA 3i.i

Area 3i.i consisted of the footpath area along the northern side of George Street, with excavation limited to two discrete sections of the footpath: an area of open excavation between the road corridor and the adjacent property boundary on the northwest corner of George Street, and trenching works against the fence line to the southwest of the 10 Bridge Street property.

The open area excavation identified limited archaeological deposits, with the current cement pavers [386] bedded on a grey sandy deposit [387] that overlay a red-brown sandy silt containing small (<100 mm) rounded cobbles [388] and which in turn overlay the natural, compacted sand [389] (Figure 4-57). A modern service [390] had been excavated alongside the southern edge of the pavers [386] (Figure 4-57).



Figure 4-57 North facing view showing profile of deposits between pavers [386] and natural sand [389].



Figure 4-58 East facing view at limit of excavation in footpath area.

The location of the proposed service trench contained three separate deposits: a loose deposit of crushed blue metal overlying a PVC pipe [391] extending approximately 200 mm into the trench along the western side that cut a red-brown sandy silt [392] that contained large amounts of complete shell from Sydney Cockle (*Anadara trapezia*) and which in turn cut the natural compacted sand deposit [393] (Figure 4-59). All three deposits were immediately below the bedding layer for the existing footpath, with the shell-rich sandy silt increasing in depth westwards to a maximum depth of approximately 150 mm before being cut by the modern service [391]. With regards to the shell, examples of the same species were identified from early to mid-nineteenth century deposits within two contexts from test pits SH 6, and one from SA 9 (AAJV 2017b, 50 and 70). Within Area 3i.i, context [392] contained only shell material, with no other domestic refuse present that would infer that the shell was not being disposed of in an ad hoc manner by occupants of either the police barracks, or later residents of the area. Instead, it is considered that the location of the deposit, in a shallow depression or pit alongside a trackway leading to the Government House and on the ridgeline, suggests that it was part of a dump of shell transported to the location and stockpiled for future lime burning.



Figure 4-59 East facing view showing parallel fills in service trenches.



Figure 4-60 East facing view on completion of the service trench.

Subsequent monitoring works undertaken in the remainder of the footpath area identified a disturbed soil profile with several services being present. However, of note were two postholes identified immediately adjacent to the present fence line of the southern property boundary of 10 Bridge Street (Figure 4-61). These postholes were both excavated through natural sandy clay [5003] and sealed by the interface of topsoil [5001] with fill [5002], suggesting that the postholes are mostly likely dated to no older than the mid- to late nineteenth century.

The northern posthole was sub-rectangular in plan, with cut [5004] measuring approximately 300 mm by a maximum of 180 mm and measured approximately 380 mm in depth from the current ground level, or approximately 200 mm deep from where the cut commenced at the interface of topsoil [5001] and subsoil [5002] (Figure 4-62). The fill of the posthole contained a well-defined pipe for a rectangular post [5005] that was approximately 220 mm wide, with the surrounding cut [5004] also being rectangular and measuring approximately 330 mm wide. The cut and posthole extended into the northern section at the limit of excavation. The upper part of the fill of posthole [5005] was noted as being similar to that of fill unit [5002] through which it was cut, containing fragments of rubble and crushed brick, as well as a few

small asbestos cement fragments. It is thought that this mixing of the two deposits occurred when the post was removed and the hole was likely filled with the surrounding soil.

The second posthole [5006], located in front of the current gate to 10 Bridge Street, was also only half-sectioned due to its proximity to the northern limit of excavation (Figure 4-63). However, unlike posthole [5004], posthole [5006] did not contain an identifiable postpipe, with the cut forming concave sides and a rounded base measuring approximately 200 mm across and approximately 300 mm deep from the current ground level. Again, the fill [5007] was similar in nature to that of subsoil [5002], suggesting that following the removal of the post, the subsequent void was filled with material from the surrounding matrix.

Both postholes post-date the deposition of fill [5002], but as they are filled with similar material, it is likely that they were removed and the subsequent holes were either deliberately filled with the surrounding fill [5002], or the holes filled as a result of material slumping back into the voids. The postholes are currently interpreted as having formed an earlier iteration of the southern fence line for 10 Bridge Street, owing to their relatively recent date of construction, as determined by their cutting of fill [5002] and the similarity in spacing when compared to the present fence line.



Figure 4-61 East section outside 10 Bridge Street during excavation showing the relationship between posthole cuts [5004] and [5006], looking east.



Figure 4-62 East facing view following excavation of posthole [5004].



Figure 4-63 East facing view following excavation of posthole [5006].

4.5.3 AREA 3ii

Area 3i was the location of archaeological test pit SA24 during the 2016 testing program, that identified evidence of a potential early nineteenth century road surface and potential evidence of earlier cultivation in the form of channels. It was also noted that the brick footings from test pit SA25 extended southwest into Area 3ii. As such, Area 3ii was predicted to contain further evidence of '[m]id-nineteenth century structural remains' with 'occupational deposits uncertain due to shallow depth of deposit'. Proposed impacts within Area 3ii were similar to those of Area 3i and required excavation to a depth of up to 300 mm from the existing asphalt surface within the road alignment for the construction of new road pavement, as well as deeper trenching related to the installation of services relating to the operation of the new traffic lights to be installed at the junction.

In summary, the salvage works identified archaeological remains relating to two separate phases: the boundary wall associated with the Government Domain, both in its earlier timber form and later masonry form, and, following its demolition, the ongoing use of the area as a path and road. However, in contrast to the results of the test excavations, only very limited evidence was identified that could be interpreted as being related to evidence of cultivation, while the section of boundary wall identified was also markedly less well preserved than in Area 3i.

Archaeological material identified in Area 3ii consisted of brickwork and postholes relating to the boundary wall, as part of Phase 2 occupation, and various linear and rectangular features relating to services and other purposes, although the lack of associated artefactual material made dating of these features difficult. As such, while it is noted that relative dating of many of the features is possible based on how the layers intersect, many of the features are tentatively dated as either belonging to the late nineteenth or early twentieth century, placing them in Phases 4 and 5.

The brickwork [409] of the wall in Area 3ii extended southwards for approximately 3.45 m from the northern boundary with Area 3i before disappearing, with the wall also being cut by a later service [403] that removed an approximately 600 mm length of brickwork (Figure 4-64). To the north of the modern disturbance, construction of the wall essentially matched that of Area 3i, although only two courses of brickwork were present, while to the south, only a single course remained. As with the section of wall in Area 3i, it was placed within a construction trench [411] of approximately 150 mm wide that was filled with a mixture of redeposited natural and brick fragments (410). The upper course of the section of wall to the north of service [403] was heavily damaged, most likely by compaction of the area prior to construction of the present road, with the result that while the outlines of individual bricks were identifiable, the material which formed the bricks had essentially returned to the constituent clay from which they were made.

The section of wall to the south of service [403] consisted of only a single course of bricks, laid directly on to the underlying natural silt [415]. The bricks forming the southern section of the wall were more severely affected by the compaction that had impacted the northern section, with the fabric of the wall consisting only of pressed clay. This was especially problematic at the southern end of the wall, where it was not possible to determine if the wall terminated by design or if the southern-most part had been removed during the formalisation of George Street. However, although various early plans and sketches of the boundary wall show it terminating at the former granary building, the archaeological investigations in Area 3ii did not identify any evidence of structures within the road corridor. As the granary is known from historical documentation to have been a large building, it is unlikely that any disturbance caused by construction of the road could have removed all traces of it, meaning that it is more likely that the actual terminus of the wall was further south and outside of the limit of excavation.

Immediately beneath the lower course of bricks in the northern section of wall [409] was a posthole [416], that relates to the earliest timber version of the boundary fence (Figure 4-67). The posthole

measured approximately 150 mm square, and was approximately 200 mm in depth, and was filled with a light brown sandy silt, with frequent inclusions of decayed wood.



Figure 4-64 Northeast facing view along surviving length of wall [409].



Figure 4-65 Northwest facing view showing northern portion of wall [409].



Figure 4-66 Northwest facing view of southern portion of wall [409].



Figure 4-67 Northwest facing view showing cut of posthole [416] beneath the line of wall [409] (removed).

Evidence of the subsequent conversion from trackway to formalised road alignment consisted of the red cobbled surface [402], that was comparable with deposit [304] in Area 3i and, as with in the other area, potholes in the road were filled throughout its life with a silty sand deposit [413] with inclusions of crushed bricks or a grey-brown sandy silt [414] (Figure 4-68 and Figure 4-69). As previously noted, several services had been excavated through the study area that cut both the natural sand [415], the wall [409], and rectangular feature [407]. However, excavation of one of the service cuts, trench [405], did not identify any service present within the feature. Instead, the cut [405] measured 450 mm across and consisted of sharply defined, vertical edges (Figure 4-70). It was approximately 120 mm deep with a flat base. The fill consisted simply of redeposited natural and compacted sand [406]. The purpose of the rectangular feature [407] cut by the service trench [405] was difficult to determine. The feature was clearly defined on the surface, measuring approximately 900 mm long and 600 mm wide (Figure 4-71). However, the internal deposit, a black-grey sandy silt [408], was only a maximum of 5 mm thick.

As with Area 3i, the current road surface [400] was laid either directly onto the underlying natural sand [415], or a thin, <50–100 mm layer of blue metal bedding [401]. Maintenance of the road resulted in grading works being undertaken that impacted both underlying archaeological deposits and the natural sand, resulting in the presence of milling lines identified throughout the excavation.



Figure 4-68 West facing view showing cross-section through deposit [413].



Figure 4-69 East facing section through road repair deposit [414] showing underlying natural sand.



Figure 4-70 West facing view showing service cuts [403] on the right and [405] on the left, with service cut [403] cutting the wall [409] in the distance.



Figure 4-71 North facing view showing service cut [405] in foreground cutting rectangular feature [407]. Note milling lines from modern grading.



Figure 4-72 Post-excavation, north facing view showing section through trench [405], and thin deposit [407].



Figure 4-73 North facing view, showing brick footings [409] (at left) present immediately beneath bitumen road surface [400] and blue metal deposit [401].

4.5.4 AREA 3iii

As the location of Area 3iii incorporated the roundabout that formed the intersection of George Street and Bridge Street, it was not possible to undertake any archaeological excavations within the active road corridor during the 2016 test excavations. As such, archaeological potential in Area 3iii was predicated on the known presence of early nineteenth century archaeological remains in test pits SA 25 and SA 26 and the presumed similarity in disturbance history along George Street.

Proposed works in Area 3iii were limited to grading works to remove the existing asphalt road surface and the roundabout and minor excavation to a depth of no more than 100 mm from the existing surface. These works were undertaken while the road was partially closed at night.

The results of the investigations in Area 3iii highlighted levels of disturbance within the road corridor that were more significant than those within the other sections of George Street examined during works. This was presumably due to a combination of prior construction works having occurred at the intersection to achieve a suitable gradient for the roads, and the lack of any defined historical occupation in this area beyond its use as open land and a roadway.



Figure 4-74 Northwest facing view across the Bridge Street/George Street intersection showing depth of excavation at completion of works in Area 3iii. Note the limit of the Macadam roadbed (right) along Bridge Street (foreground), discussed further below.



Figure 4-75 View showing completion of works on south-bound lane, looking north.

4.6 Area 4

The DSS anticipated that Area 4 may contain '[f]ragmentary remains of mid-to-late-nineteenth century occupation at the southern end of area only' and '[l]ittle likelihood of *in situ* archaeological materials due to past disturbance'. However, results from Area 1, immediately east of Area 4, suggested that levels of disturbance were higher than anticipated, and this was borne out by initial archaeological monitoring undertaken within Area 4. Where the oviform drain was identified in Area 1, projections of the drain had indicated that it was likely construction of the Bridge Street cutting in the 1930s required excavation works to a depth that would have resulted in the complete destruction of the drain within the road alignment. As such, it was determined that construction of the Bridge Street road cutting had removed all archaeological material in Area 4.



Figure 4-76 **Location of Area 4.**

Archaeological investigations associated with the initial groundworks within Area 4 confirmed the disturbed nature of the road corridor and the apparent loss of all archaeological materials within it. On 11 June 2020, trenching works were being undertaken at a depth of approximately 1.5 m below the depth of the former Bridge Street cutting to allow for installation of two watermain and one recycled watermain. The AAJV was notified on 11 June 2020 that brick fragments had been identified in the bucket of the mechanical excavator and work had immediately ceased in accordance with the project's Unexpected Finds Procedure (UFP).



Figure 4-77 West facing view showing condition of trench upon arrival at site following activation of the UFP. Note brick fragments circled in red.

An archaeological investigation and recording of the item were undertaken between 12 June 2020 and 18 June 2020, and uncovered a length of 7.5 m of the oviform drain, that had been effectively bisected horizontally by the excavation of the Bridge Street cutting in the 1930s (Figure 4-78).



Figure 4-78 West facing view showing exposed length of oviform drain [404].

Construction of the drain was essentially similar to that of the previously recorded sections, with an internal width of 900 mm in comparison to an internal measurement of 970 mm in the previously investigated northern section, suggesting that the drain widened as it continued downslope. As previously identified, the drain brickwork [404] consisted of a shallow inverted segmental arch forming the base (the invert). It appeared that the entire section of drain was a single skin of bricks, with the invert laid in stretcher bond. The sides were laid using English bond; however, the stretcher courses present in the complete section of drain were missing from all except the northern-most part of the eastern wall (Figure 4-79).

Whereas the walls on the first-identified section of the oviform drain were straight-battered with a receding slope, the side walls of the newly identified section were almost vertical. One structural element was noted which had not been seen elsewhere along the drain, and this related to several bricks which were keyed into the main drain at a right angle (Figure 4-80Figure 4-81 and Figure 4-81). The feature consisted of two courses of bricks bonded with shell mortar, laid directly on to the sand which was used to fill the cut of the drain. The purpose of these bricks is unknown, but it is assumed that it was potentially conceived of functioning as an engaged pier to provide structural support to the side during the construction process or following its completion.



Figure 4-79 Northeast facing view showing the north section with arch of the drain truncated by the Bridge Street cutting.



Figure 4-80 Northwest facing view showing vertical (external) section of drain and keyed-in brick feature.



Figure 4-81 Vertical view showing brick side-wall and keyed-in brick feature.

Due to the limited size of the impact footprint to the east and construction of the later road cutting having completely truncated all evidence to the west, it was not possible to determine the full width of the construction trench excavated for the building of the oviform drain. However, unlike the section of drain

in Area 1, where the construction trench was simply refilled with the sand excavated from the trench, in this part of the drain, a thin deposit of clay [405] was packed against the eastern side of the drain. The remainder of the construction trench was then backfilled with clay and redeposited sand [406] (Figure 4-82).



Figure 4-82 South facing view of section showing mottled clay [405] overlying natural sand.

As identified from the results of the supplemental works in Area 1, the oviform drain was likely to have been operational until the 1870s, when the drain was damaged during the construction of the earlier road alignment and filled with cobbles (see Part 4.3). While water would have been able to pass through the blockage, the slowed flow caused a build-up of silt in the drain. By the time the drain was damaged beyond repair by the 1930s construction of the Bridge Street cutting, 550 mm of silt [408] had built up at the northern end of the drain, although the silt only extended approximately 5 m uphill (southwards) from the northern section before disappearing, and it was not present at the southern section.

It appears that when the oviform drain was identified during the construction of the road cutting, the workers only removed as much of the structure as was necessary to achieve the required depth, filling the drain with the demolition rubble [409], and capping it with a thin layer of clay [403]. The road cutting was then filled with various layers of blue metal and asphalt that formed the Bridge Street road surface (Figure 4-83).



Figure 4-83 Southwest facing view showing south section. Note rubble filling the drain below layers associated with construction of the Bridge Street roadbed.

By the completion of the archaeological investigations, a length of 7.42 m of drain had been exposed, that corresponded with the width required for construction of the watermain plus an adjacent council recycled water main (Figure 4-84 and Figure 4-85). Ultimately, a solution was determined whereby the watermain would be able to rise over the oviform drain without impacting it, and the drain was covered with geofabric and clean sand and reburied.



Figure 4-84 Southwest facing view looking along the length of exposed drain.



Figure 4-85 North facing view showing the length of exposed drain. Note the remnant section of arch forming the upper part of the eastern wall at right.

4.7 Area 5

Area 5 was included in the DSS as a precaution in case there was an unanticipated requirement to excavate within the area that was identified as potentially containing archaeological remains associated with the punt house. However, there has been no requirement to undertake any works in this area as part of the construction process.



Figure 4-86 Location of Area 5.

4.8 Northern side of the river

4.8.1 SQUATTERS ARMS INN

Three features potentially associated with the Squatters Arms Inn and public house were recovered within the study area (Figure 4-87). The Squatters Arms was operated on the north side of the Hawkesbury River by Robert Smith, who converted a cottage constructed c.1816 to an inn after he purchased the property in 1822. The building was subsequently allowed to fall into a state of disrepair and had collapsed by the 1840s. A second iteration of the inn was constructed by John Cunningham and his son and opened in 1846. The building was a long, rectangular structure with six or seven rooms and operated until it was damaged by flooding in 1867. After the flood the building was used as a stable, though it eventually became ruinous and was demolished by 1915.

No sealed artefact deposits associated with the Squatters Arms public house and inn were recovered during archaeological investigations to further assist with phasing and identification of activity areas.



Figure 4-87 Overview of three features (back to front, [604], [603] and [601]) likely associated with the Squatters Arms.

4.8.1.1 BRICK FOOTINGS [600] AND [603]

During excavations within the road reserve of Freemans Road two sandstock brick footings [603] and [604] were identified (Figure 4-88). The west footing [604] was constructed of recycled sandstock bricks (240 x 100 x 75 mm) and pale grey sand mortar. The footing was 350 mm wide and preserved to a length of 1,650 mm. The north end of the footing was cut by a large watermain and another service disturbed its south end. The footing was orientated north to south. The east footing [603] was located approximately 5 m away. It consisted of a linear-alignment oriented northwest-to-southeast that extended for a length of 1,560 mm (Figure 4-89). Only the base courses of the footings survived (65 mm high), and they were laid two courses wide, with one course laid stretcher and one laid header, resulting in footings 380 mm wide. The footings were cut into natural brown sandy silt, with no bedding or packing deposits at the base of the footings. As a result of disturbance to the surrounding area, no construction trench was evident, and the central portion of the footing alignment was robbed-out.

Brick footing [603] was constructed of sandstock bricks, some featuring shallow cigar-shaped frogs while others lacked frogs altogether. The bricks measured approximately 240 mm long, 115 mm wide, and 65 mm thick, though there was some irregularity to their shape and size, with the edges and surfaces being not quite flat or straight. The footing [603] was also bonded with white sand and lime mortar.

Interestingly, the two sets of brick footings recorded for the Squatters Arms are not on a consistent alignment or 90° angle with one another, suggesting that they represent separate structures, as well as separate phases of occupation and use.



Figure 4-88 Location of west sandstock brick footing within Freemans Reach Road reserve.



Figure 4-89 West sandstock brick footing [604], looking north.



Figure 4-90 Eastern sandstock brick footings [603], view to north.



Figure 4-91 Eastern sandstock brick footings [603], view to northwest.

4.8.1.2 FORMED CONCRETE FEATURE [601]

A formed concrete structure or base [601] was recovered immediately east of brick footings [603] (Figure 4-92 and Figure 4-93). The structure measured 1,400 mm long and 1,000 mm wide and survived to a height of 470 mm. Crushed sandstock bricks and coarse bluestone inclusions were used as aggregate in the concrete used to construct the feature. The interior of the structure provided evidence of having been timber formed, with imprints of timber grain and planks evident on the interior surface (Figure 4-94). The exterior surface of the structure was more roughly formed (Figure 4-95).

The interior of the structure had formed channels approximately 30 mm wide along the edges of the floor, with post-base marks at some of the corners suggesting there may have been an associated timber framed structure within the concrete feature. The northeast corner of the structure contained a rectangular hole 280 mm by 240 mm in size, and 170 mm deep, with a small, raised platform at the

center (Figure 4-96). No associated drainage features were recovered, and the base of the hole was concreted.

Concrete feature [601] contained a deposit of demolition rubble [602], including a thick charcoal lens and timber plank. Given the depth and solid construction of the feature, as well as potential evidence of timber shelving, it may have served as a cold room or small cellar associated with late-nineteenth century use of the site as part of a farmstead, following flooding of the Squatters Arms in 1867. Alternately, given the void and evidence of charcoal staining around the base and walls, it may have been used to smoke or cure meat.



Figure 4-92 View to southeast of formed concrete feature [601].



Figure 4-93 View to northeast of concrete feature [601].



Figure 4-94 Interior elevation of concrete feature [601] showing evidence of timber formwork.



Figure 4-95 External elevation of concrete feature [601] showing coarser forming techniques.



Figure 4-96 Interior view of concrete feature [601] showing evidence of timber formwork.

4.8.2 PUMP HOUSE

During earthmoving works for the construction of the new bridge abutments on the northern riverbank, structural remains of a former pump house were identified (Appendix 1, Drawing No. 24 and 25). The remains consisted of a smoothed concrete floor [1512] laid over a compacted, silty clay fill [1513]; a concrete pump base [1514] and associated drainage channel [1515] (Figure 4-97). The exposed footprint of the pumphouse measured 3.1 x 3.4 m. The concrete surface was cracked with damaged eastern and southern edges. Two postholes [1519] and [1521] identified on the northern edge of the floor surface were the only surviving evidence of a timber frame.

The pump house first appears on a 1956 aerial image of Windsor (Figure 4-98). It was likely used for irrigation of the turf fields located on the higher flats of the northern riverbank.



Figure 4-97 View west showing the remains of a former pump house located on the north river bank.



Figure 4-98 A 1956 aerial image showing the location of the pumphouse (NSW Spatial Services).

4.8.3 JETTY

Further excavations along the north riverbank exposed part of a timber structure that was associated with the former jetty. Due to its location at the base of the unstable sand bank, the timber remains were photographically recorded from a safe distance (Figure 4-99 and Figure 4-100).



Figure 4-99 View looking west showing remnant timber frame of the former jetty.



Figure 4-100 Remains of former jetty – detail.

4.8.4 ARTEFACT ASSEMBLAGE – NORTH RIVER SIDE

A domestic rubbish dump was exposed during the reinstatement of the turf area located immediately north of the President Turf Supplies building, that stands at the eastern side of the intersection of Wilberforce and Freemans Reach Roads (Figure 4-101 and Figure 4-102). The area was used as the ancillary location for temporary storage of stockpiles during the construction phase of the project. As part of the rehabilitation process, some light earthmoving works were undertaken to remove stockpiles and level the ground. These works resulted in the unexpected discovery of the rubbish dump contained within a thick layer of uniform, dark grey-brown humic soil used for farming (Extent Heritage 2021).

The rubbish dump comprising mixed domestic artefacts was found at an approximate depth of 1.3 m below current ground (BCG). The extent of the location was approximately 2 x 2 m. No other features or artefacts were identified in the surrounding area. The artefacts generally consisted of fragments of domestic glass and ceramic, animal bone, a few metal objects, window glass, and a small fragment of a bright orange sandstock brick (Figure 4-103).

The artefact assemblage included 105 artefacts, three of which were complete: a clear glass bottle with embossed inscription, a brown glass beer stubby bottle, and a horseshoe. The assemblage is predominantly of nineteenth century origin together with a modern glass stubby beer bottle and a Coca Cola bottle. The nineteenth century artefacts included black glass alcohol bottle bases; fragments of salt glazed stout bottles; a Rockingham tea pot (1826–1842), blue, green, and brown transfer printed table ware, fragments of a clay smoking pipe with a rolled rim decoration and fragments of glass condiment bottles. A small complete medicine vial made of clear glass bearing the embossed maker's mark 'Powell / Black Friars' can be dated to the late nineteenth and early twentieth centuries. The assemblage also included fragments of thick window glass.

Based on the nature of the assemblage and its location it is reasonable to conclude that it was a rubbish dump associated with the former Squatters Arms Inn and later domestic use of the site. The location of the dump is shown in Figure 4-104.



Figure 4-101 View looking southwest showing the fenced off location of the rubbish dump post excavation.



Figure 4-102 Artefacts at the location of discovery (Source: Georgiou 2021).

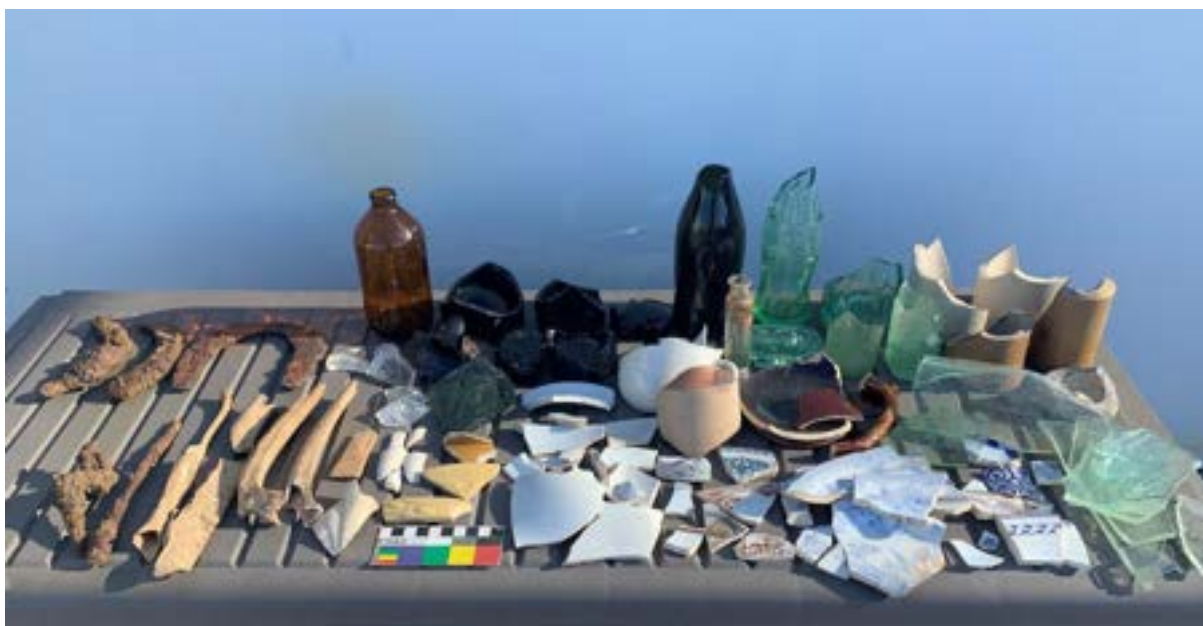


Figure 4-103 Wilberforce Road artefact assemblage after washing.



Figure 4-104 Indicative location of features identified on the north river side. The President Turf Supplies building is marked with a blue arrow (Source: Google Earth with Extent additions).

4.9 Southern side of the river

4.9.1 MACADAM ROADBED

In May 2020 resurfacing of the lower portion of Bridge Street (southern approach) was monitored. The exposure revealed part of the post-1930 concrete roadbed as well as small portions of the earlier Macadam road formation. The latter consisted of the basal rubble course of the road formation that had been subsequently levelled by later phases of road milling. Immediately adjacent to the western kerb two sets of gutter blocks were exposed (Figure 4-105 and Figure 4-106). Both were constructed in hammer-dressed sandstone and may have been installed for both drainage and as shoulder edging for the Macadam roadbed. One set consisted of a single row of long blocks while the second consisted of three rows of smaller blocks. The change in technique may reflect two different stages of work or changes made in response to changes in local conditions. The line of guttering conforms closely with the line of the existing kerb, suggesting that the work was undertaken in the early-1920s following the re-decking program for the bridge.



Figure 4-105 Bridge Street upgrade showing extent of exposed long gutter blocks, looking south.



Figure 4-106 Detail of short gutter blocks. .



Figure 4-107 Detail of Macadam roadbed beneath the current asphalt surface mixed with later concrete bedding.

Macadam roadbed was also identified during trenching works on two further occasions: on Macquarie Street, to the immediate west of its intersection with Bridge Street, and along the western edge of the Bridge Street road corridor between the intersection with George Street and Macquarie Street (Figure 4-108). In both instances, the roadbed was recorded and left *in situ*, with a layer of geofabric placed over the paving before the required cabling was laid.

The use of the Macadam road construction technique was commonly undertaken on heavily trafficked roads until the 1930s. The Windsor district saw several phases of road reconstruction undertaken by NSW Main Roads in the 1920s.



Figure 4-108 South facing view of Macadam roadbed identified during nightworks on the northbound shoulder land of Bridge Street.

4.9.2 RETAINING WALL ON THE TERRACE

A portion of the sandstone retaining wall and terracotta pipes were exposed during hand digging of the pavement footing on the southern side of The Terrace (Figure 4-109). The sandstone wall and terracotta pipes were retained *in situ* by placing 100 mm sand, geofabric, and another layer of 100 mm sand before placing the concrete reinforce pavement footing. The protection measures and concrete reinforce pavement footing would provide lateral force on the sandstone wall and terracotta pipes. The locations of the remains are shown in Figure 4-110.



Figure 4-109 Vitreous ceramic pipe and part of the sandstone retaining wall in The Terrace.

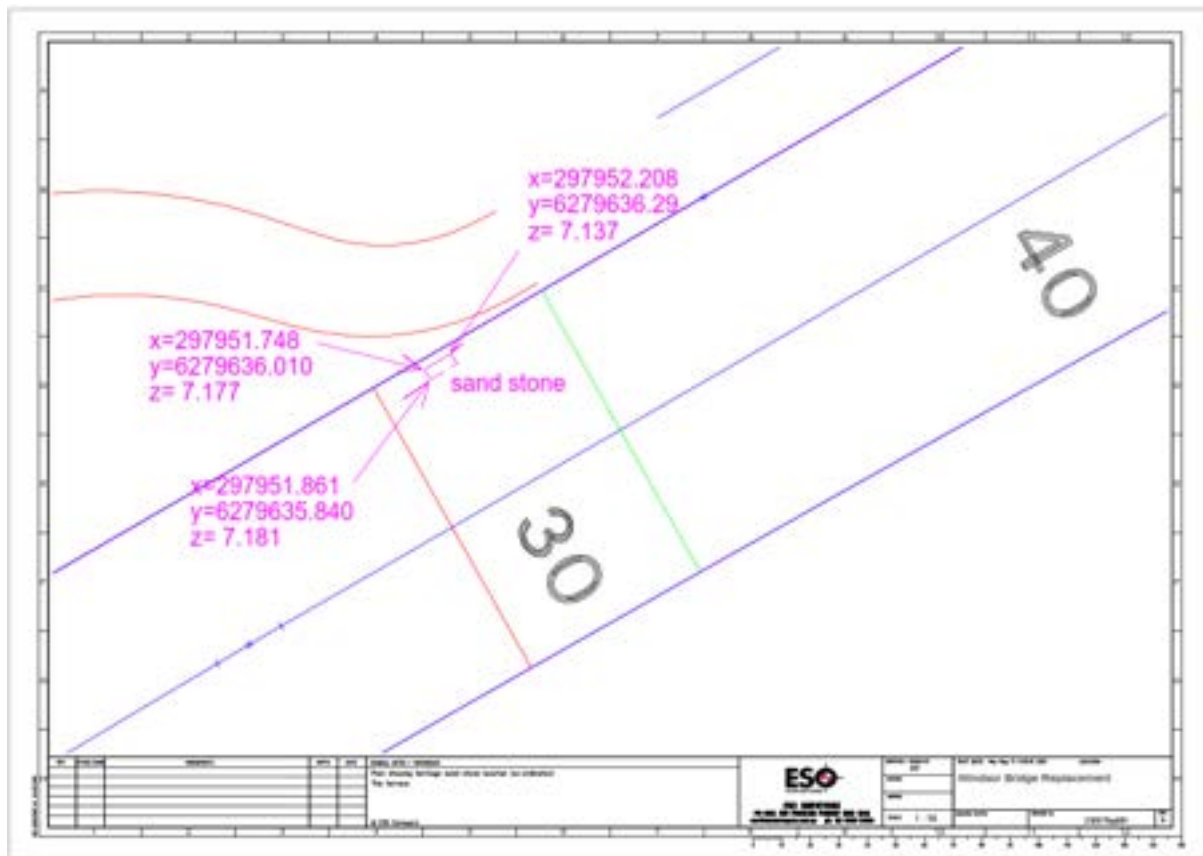


Figure 4-110 Location of the terracotta pipe and sandstone retaining wall.

The AAJV was notified on 3 March 2020 of the unexpected identification of a sandstone feature while undertaking trenching works along the northern side of The Terrace. The associated archaeological investigations identified a total length of 7 m of a substantial sandstone wall, that continued eastwards beyond the limit of excavation (Figure 4-111). The wall consisted of two rows of shaped sandstone blocks, varying from rectangular to square, interspersed with rectangular blocks laid lengthwise across the wall, with rectangular blocks averaging 430 mm by 160 mm by 120 mm. The wall was built using patent cement mortar to secure the blocks, and it is presumed that the northern face represented the outer wall of the retaining wall. It is also likely that the identified remains formed the top of the wall, as three holes had been formed into the upper face of the blocks at regular intervals along the northern side of the wall; two of these contained iron posts that had been secured into the holes (see Figure 4-114). It is likely that these held a fence or crash barrier that was secured into the masonry of the wall. The western end of the wall ended abruptly, with a continuation of four smaller stones abutting the wall while sitting on the same soil as that which contained the wall itself (Figure 4-115). A sondage was excavated against the wall to determine its depth which identified at least five courses present continuing beyond a depth of 1.5 m (Figure 4-116). It was not possible to enter the narrow trench at this depth or to continue excavation due to safety concerns.



Figure 4-111 Northeast facing view of wall.



Figure 4-112 East facing view along wall.



Figure 4-113 Detail of north face of wall.



Figure 4-114 Detail of metal bolt inserted into the upper face of the wall.



Figure 4-115 North facing view showing abrupt western end of wall, with additional stones laid on underlying silt to the west.



Figure 4-116 View showing sondage excavated against northern face of the wall, looking east.

In terms of interpretation, the wall was likely constructed as the original retaining wall for The Terrace, and was constructed in the early twentieth century, as it is not visible on either maps or photographs dating from the late nineteenth century.¹⁰² However, the wall and road are clearly shown on a photograph dating from 1920, that also shows the guardrail present along the top of the wall (Figure 4-177). A suggestion was made by the Heritage Advisory Committee of Hawkesbury Council that the stonework for the wall could represent the reuse of stones from the former Windsor brewery that was abandoned following the 1867 flood.¹⁰³ This is based on a contemporary newspaper account of a council meeting where it was considered that the foundations could be purchased cheaply.¹⁰⁴ Alternatively, the Heritage Advisory Committee also suggested that the stonework could have come from the former punt house located within Area 5.¹⁰⁵ However, later newspaper accounts indicate that the stone was instead sourced and quarried locally.¹⁰⁶

¹⁰² AAJV 2016, 27 and 28.

¹⁰³ Hawkesbury Council, *pers. comm.*, 9 March 2020.

¹⁰⁴ 'PUNT HILL', *Windsor and Richmond Gazette*, Saturday 26 September 1903, 4.

¹⁰⁵ Hawkesbury Council, *pers. comm.*, 9 March 2020.

¹⁰⁶ 'WINDSOR BOROUGH COUNCIL', 'PUNT HILL', *Windsor and Richmond Gazette*, Saturday 2 April 1904, 1.



Figure 4-117 View south along Windsor Bridge facing Thompson Square. No date, but c.1920 (Source: Kurrajong-Comleroy Historical Society Photo Collection, Item #120118).

4.9.3 TREE REMOVAL – THOMPSON SQUARE

On 5 June 2020 the initial phase of monitoring the removal of a tree stump at the southeast corner of Thompson Square, immediately north of the George Street roundabout, was undertaken (Figure 4-118). A mechanical excavator cut a trench approximately 800 mm wide and between 1,000 mm and 1,500 mm deep around the stump. The entire trench measured approximately 5.9 m east-west and 3.8 m north-south. The stratigraphical sequence consisted of 450 mm of grey-brown silty loam overlaying 150 mm of grey / buff sand clay that graded into the underlying red / brown sandy clay (Figure 4-120).

Artefacts were present in the upper deposit only and consisted primarily of twentieth century plastic artefacts, although some sandstock brick fragments were present. These fragments however had a patent cement adhering to them indicating their reuse in either the late nineteenth or twentieth century prior to later disposal. Works were completed on 10 June 2020 following removal of roots and a scrape-back of the entire disturbed area to determine if concealed features were present. The final extent of excavation was approximately 6 m north by 4 m east-west. No other features, structural elements, or deposits were identified. The exposed sequence consisted of topsoil dressing associated with the formation and use of the park overlying remnant A2 horizon developed on residual clays derived from the Wianamatta formation.



Figure 4-118 Tree stump during preparation for removal, looking southeast.



Figure 4-119 Tree stump during removal, looking southeast.



Figure 4-120 Soil profile beneath the tree stump.



Figure 4-121 Site following removal of stump and roots, looking north.

4.9.4 REMNANT YARD AREA OF THE FORMER PUNT HOUSE

During installation of the new kerb and a service in The Lower Terrace, sandstock brick rubble was identified by the contractors on site. Archaeological inspection identified a line of loose sandstock bricks retained in the northern section of the excavation zone. Further investigation of the area identified several features and a small number of artefacts that could be attributed to the original Terrace sealed road and the yard area of the former punt house. The road elements included the asphalt surface and sandstone kerbstones of the lower Terrace (Figure 4-122). The lower soil horizons provided evidence of yard soils (Figure 4-123), a small stake hole, a handful of historical artefacts such as shell, nails, and fragments of glass and ceramic, as well as Aboriginal lithics. There was also evidence of the laundry washing blue that was used for whitening and brightening of washing (Figure 4-124). These features were retained *in situ* and protected by geofabric prior to backfilling.

Archaeological monitoring of vacuuming of the trench for a power cable to service a new light pole was undertaken in the area immediately to the south of the Punt house yard remains (Figure 4-125). The service trench measured 100 mm wide and 600 mm deep. A slim machine cut timber post was identified in a dark brown-grey alluvial soil with striations of light brown sand (Figure 4-126).

The post was painted in white and had a wedged base suggesting that it was either the post of a picket fence or a survey marker. The pit for the new light pole measured 700 mm wide and 1.4 m deep. No archaeological features were identified during excavation other than an oval wooden hand brush without bristles.



Figure 4-122 View of archaeological remains identified during service installation on the lower Terrace, looking west.



Figure 4-123 Features associated with yard area of the former Punt House.



Figure 4-124 Remnant washing blue.



Figure 4-125 Trench excavated for a power cable and pit for new light pole, looking northeast.



Figure 4-126 Timber post identified in the power cable trench.

4.9.5 TIMBER BOARDS – SOUTHERN BRIDGE APPROACH

In June 2020 a series of timber boards previously exposed and recorded in May located near the southern bridge approach were removed and monitored (Figure 4-127). The timberwork is likely to be associated with the works compound located in this area during 1921 during the raising of the bridge deck. The timbers were 70 mm to 100 mm thick and sat directly on the sandy silt substrate—no other structural elements were identified. To ensure that no earlier features were being masked by the substrate the area was scraped by machine. The underlying material consisted of a gravel varying between 20 mm and 40 mm in diameter bonded with a red clay (Figure 4-129). No traces of asphalt were found suggesting that this was the unsealed road surface in use up to the resurfacing in the early 1930s. No further investigation was undertaken beneath the road surface.



Figure 4-127 Timber boards *in situ*, looking north.



Figure 4-128 Timber boards following removal and scrape across site, looking southwest.



Figure 4-129 Detail of surviving patch of gravel roadbed.

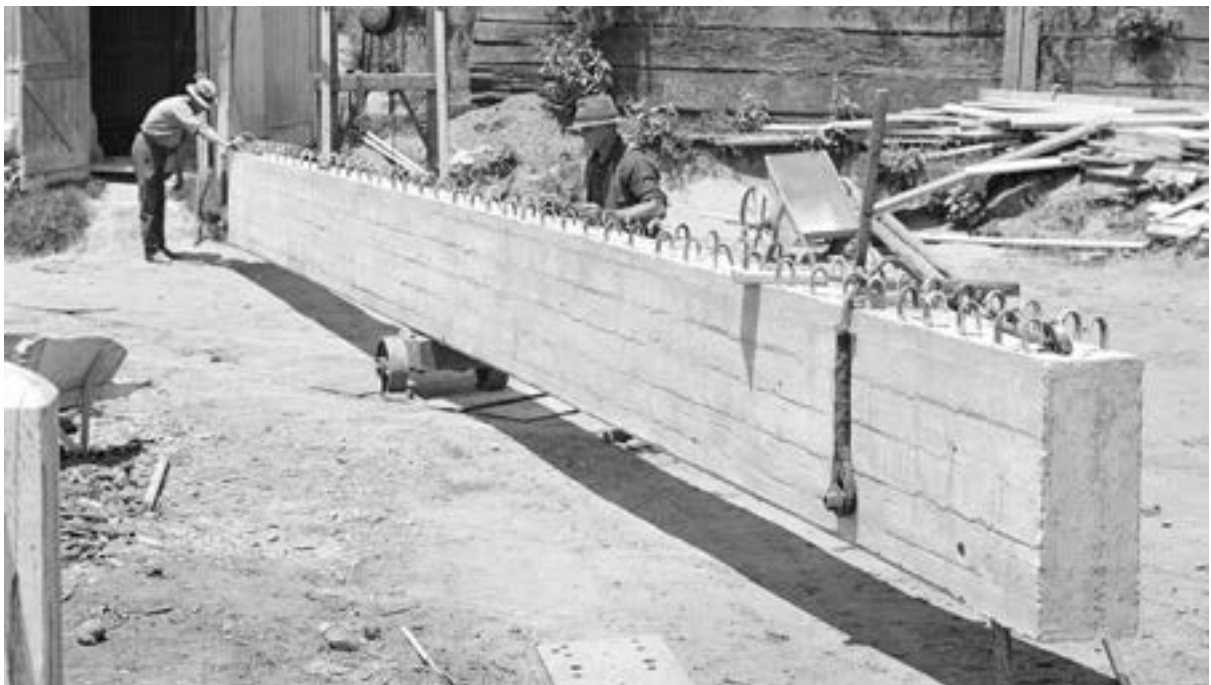


Figure 4-130 Detail of image Windsor Bridge, 28 November 1921. Works area, south bank, showing timber planking in use (Source: SRNSW NRS-4481-4-88-[AF00184629] Department of Public Works).

Table 3. Overview of historical archaeological phases identified during salvage excavations.

Historical phase	Area	Known historical activity	Archaeological evidence identified	Key contexts identified
Phase 1: The Natural landscape	1a	Natural aeolian/alluvial landforms	Presence of truncated natural aeolian sand soil profile	1415
	2i		Presence of sandy aeolian and alluvial deposits below modern disturbance	2207
	2ii		Presence of compacted clay deposit below modern disturbance	2207
	3		Presence of compacted clay deposit below modern disturbance	331
	4		Presence of compacted clay deposit below modern disturbance	410
	North Bank			
Phase 2: The Green Hills settlement (1794–1814)	1	General use of the area during the early years of occupation.	None	
	2i		Thin occupational deposits containing evidence of shell and mortar potentially relating to early occupation of the Government Domain	2221, 2224, 2225, 2229
			Potential evidence of early vegetation removal and thin occupational deposits on edges of the Government Domain	2218, 2502, 2503
	2ii		None	
	3		None	
	4		None	
	North Bank			
Phase 3: The Howe and McGrath drainage system (1814–1816)	1a	Construction and backfilling of drainage system	Drainage system, construction trenches and backfill material identified	1427, 1428, 1444, 1451, 1452, 1453, 1454, 1455, 1466, 1467, 1470, 1471, 1472, 1480, 1485, 1486, 1489, 1498, 1499, 1500, 1501, 1503, 1505
			Bulk fill material identified at northern end of area over barrel drain.	
	2i		Remnants of box drains present below former road surface.	2234, 2235, 2241, 2240, 2242
	2ii		None	
	3		None	

Historical phase	Area	Known historical activity	Archaeological evidence identified	Key contexts identified
	4		Remnants of barrel drain	404
	North Bank			
Phase 4: The mid-19 th century (1816–1874)	1a	Early road alignments to the foreshore area and use of the Government Domain	Infill of the barrel drain and construction of early roads	1497, 1412
	2i		Various occupational deposits and structural elements associated with Government Domain	2219, 2220, 2221, 2224, 2225, 5030
	2ii		None	
	3		Wall of Government Domain and postholes present along current fence line	310, 311, 313, 314, 319, 333, 334, 335, 343, 344, 345, 346, 347, 348, 349, 5004, 5005, 5006, 5007
	4		None	
	North Bank			
Phase 5: Windsor Bridge and associated roads (1874–1934)	1a	Windsor Bridge constructed and punt hill road realigned to cutting to the north in 1874	Realigned road cutting, basic surfacing, and post and rail fencing identified	1403, 1404, 1405, 1406, 1423, 1430, 1434, 1435, 1436, 1438, 1439, 1440, 1441, 1477, 1478, 1479, 1536
			Concrete casting area	
	2i		Stone kerbing	2228
	2ii		None	
	3		Various iterations of road surfaces	306, 307
	4		None	
	North Bank			
Phase 6: The modern era (1934–2018)	1a	Construction of the Bridge Street cutting, repair works to the bridge, and other modern impacts.	Capping layer present across the area associated with construction of Bridge Street cutting	1536
	2i		None	
	2ii		None	
	3		None	
	4		Demolition of the oviform drain to obtain ground level required for the Bridge Street cutting	403, 409

Historical phase	Area	Known historical activity	Archaeological evidence identified	Key contexts identified
	North Bank			

5 ARTEFACT ANALYSIS

5.1 Introduction

As part of the archaeological salvage excavation carried out by AAJV a significant archaeological assemblage of 5,676 objects was recovered during works. The assemblage was washed and sorted by fabric type during post-excavation processing. A separate report was submitted by Cosmos Archaeology to provide results on the underwater test excavations and surveys completed as part of the overall Windsor Project (Cosmos Archaeology 2017).

This section provides an overview of the assemblage; the methods used for recording; and preliminary analysis results for the selected assemblages. Additionally, this report addresses the significance of the assemblage as a whole and provides recommendations for its future care and research.

5.2 Assemblage overview

The sampled WBRP Collection consisted of a total of 1,324 individual artefacts, with an approximate combined weight of 63 kilograms (Table 4). As is typical in historical archaeology, the majority of this assemblage comprised ceramic and glass. These fabric categories were followed by a combination of all Metals and Miscellaneous artefacts (n=185; 6,531g).

Table 4. WBRP Collection, by class.

Class	NISP ¹⁰⁷	%	Weight (g)	%
Ceramics	573	43.4%	20,680	32.8%
Glass	350	26.4%	30,014	47.6%
Clay Pipes	21	1.6%	50.3	0.1%
Metal Fasteners & Pins	84	6.3%	911	1.5%
Metals & Miscellaneous	101	7.6%	5,620	8.9%
Plastic & Rubber	1	0.1%	0.2	0%
Bone	117	8.8%	5,245.3	8.3%
Shell	77	5.8%	494	0.8%
Totals	1,324	100%	63,014.8g	100%

¹⁰⁷ Number of Individual Specimens present

5.2.1 ON-SITE ARTEFACT DISCARD AND RETENTION

The following materials were not collected during the excavation phase, although their presence was recorded on the excavation context sheets:

- Items manufactured in the last 75 years, except where those items were unique, significant or added to the understanding and interpretation of the site.
- Building materials, such as bricks, dressed stone, building timber, pipe, mortar, plaster, paving, etc. Where appropriate, these items were photographed, and a sample retained.
- Hazardous materials.

In addition, a three-tier significance assessment system informed the on-site artefact retention processes for all artefact-bearing deposits. This assessment was based on the integrity of the deposits, their significance, and their research potential. As the significance of deposits may not be apparent at the time of excavation (or may change as excavation proceeds), these assessments were regularly reviewed and refined. The three-tier significance assessment system was as follows:

- Low Significance: Disturbed, imported fill or modern demolition contexts with a limited research potential. Non-diagnostic pieces of metal, glass, modern electrical items and building materials were not collected by the excavation team. Instead, the presence of this material was recorded in the field notes. With exception of the above, all other materials were collected, bagged and labelled for assessment by the Artefact Manager.
- Medium Significance: Moderately disturbed contexts or those with a questionable integrity and a moderate research potential, such as the more recent or intrusive fill of some postholes and trenches and earlier demolition deposits. Non-diagnostic pieces of metal, glass, modern electrical items and building materials will not be collected by the excavation team but the presence of this material will be recorded in the field notes. All other materials will be collected, bagged and labelled for assessment by the Artefact Manager.
- High significance: In situ deposits with a high research potential, such as cesspit fills, occupational deposits, sub-floor layers, some earlier or intact posthole fills and yard deposits. The excavation team will collect all materials. Deposits may be sieved at the discretion of the Excavation Director.

The overall condition of the WBRP Collection was heavily fragmented, with artefacts typically representing <30% of their original object. The exceptions were contexts [1412] and [1488], where the sampled assemblages contained a notable quantity of more complete and/or refitted objects—and in the case of Ceramics, three examples of table service matched sets. At the time of delivery, the Collection had been previously washed, and appropriately packed in a dry condition.

5.3 Ceramics

5.3.1 METHODOLOGY

Ceramics comprised a major category of artefacts, with a total count (NISP) of 573 objects, representing a minimum (MNV) of 134 individual vessels, and total weight of 20,680g (excluding clay pipes, see below Section 2.6.2 'Metals, Miscellaneous, Architecture & Tools'). This Ceramic assemblage ranged from decorative goods, domestic tablewares, food preparation and storage vessels, to household architectural and industrial artefacts. Taken together, the Ceramics provided a snapshot of material life in colonial Sydney.

As part of initial processing, the Ceramic assemblage was sampled by Extent in preparation for post-excavation finds analysis. This management strategy allowed for a specialist focus on diagnostic body

sherds¹⁰⁸, and identification of date-sensitive ‘types.’ Analysis and discussion of the Ceramics is limited to the artefacts selected for post-excavation specialist finds analysis.

Artefacts were processed in context groups, by object type, diagnostic features, and function identification. The Number of Individual Specimen Present (NISP) reflected a count of *all* ceramic fragments within the total collection (n=573), including those recovered from both stratified and unstratified contexts. In contrast, the Minimum Number of Vessel (MNV) calculations were estimated *within* their specific numbered context (MNV=134), with ‘unstratified’ artefacts (U/S) clustered together as a unique context. In other words, no attempt was made to cross-fit elements across different context units.

Fragments were typically bagged separately by their unique catalogue number. In one case, where several (different) ceramic artefacts had been accidentally clustered under one catalogue number, these objects were kept associated as a ‘group’ linked to their original unique catalogue number, with multiple identification data points recorded within the digital catalogue. This instance of a ‘multiple entry’ within a single catalogue number was also recorded within the catalogue notes.

Maximum length, width, and (where relevant) diameter measurements were taken in millimetres for every ceramic artefact, and weights recorded to the nearest gram. When available, date ranges were established based on the available combination of material type, maker’s marks, paper label, or embossing that indicated pottery maker and/or vessel contents. Objects were classified by ‘Activity’, ‘Function’, and ‘Subfunction’ using their general material type, morphology, embossing (when present), colour, overall shape, and method of manufacture. Additionally, objects were classified by ‘Ware Type’. To promote future comparative values, this formal Ceramic Type Series was drawn from Penny Crook’s previous reports for Extent Heritage (Crook 2019, 15; see also Crook and Murray 2006).

A range of key resources were used to identify ceramics. *An Archaeological Guide to British Ceramics in Australia* (Brooks 2005) provided a basic guide. *The Encyclopaedia of British Pottery and Porcelain Marks* (Godden 1991) was supplemented by Steve Birks online index of ceramic trademarks from The Staffordshire Potteries (Birks 2023). Where possible, transfer-printed patterns were identified through The Transferware Collectors’ Club Database (TCC Collector’s Club 2023) and Patricia Samford’s online index of Printed Underglaze Earthenware (Samford 2016). Various unpublished artefact reports provided comparative data for identification and analysis (Crook 2019; Ward 2005; Ward 2006). These resources were supplemented by *The Dictionary of Blue and White Printed Pottery, 1780-1880, Volumes 1 and 2* (Coysh and Henrywood 1982; Coysh and Henrywood 1989). For bottles, identifications and dating were referenced to *Thirsty Work* (Jones 2009) and *Antique Bottle Collecting in Australia* (Vader and Murray 1975).

5.3.2 DATING

Over 93.7% of the core assemblage (n=537) had one or more dateable diagnostic features. These included manufacturers’ marks (see Table 2.8), known dates of pattern manufacture or popularity (see Table 6), and decoration or glaze type. Most of these date ranges were established as *terminus ante quem* (TAQ) or *terminus post quem* (TPQ), with dates that spanned several decades. Only 13 ceramic sherds had a date range of thirty years or less.

The earliest class were creamwares and early edgewares (n=11; 108g) that ranged from 1760 to 1834 (see Brooks 2005). Pearlwares (n=102; 1,972.2g) were approximately dated from 1780 to 1830. The largest group of sherd types included various forms of Whiteware (1820+), and later twentieth century wares (n=322; 7,415.2g) (Miller et al. 2000). The most modern artefact in the Ceramic assemblage was

¹⁰⁸ The term ‘sherd’ refers specifically to pottery fragments. The term ‘shard’ is used for specifically glass fragments.

a relief-moulded whiteware jug pedestal base, identified by its black transfer-print counterfeit mark for E & C Challinor, Fenton, Staffordshire, and dated from 1950 onwards (WBRHS181751).

Similar to the Coin and Glass assemblages, the Ceramics assemblage clustered into two general date groups. The earlier constituted approximately 23% (n=131; 2,220.2g) of the overall assemblage, and included creamwares, pearlwares, porcelains, and Chinese export wares—ceramics produced before 1850. Conversely, the latter group spanned from 1860–c.1920, and included manufactured industrial slipwares, decal printed wares, and all commercially branded products—specifically patent medicines, ginger beers, and stout beers. Although nominally a smaller ratio of the overall Ceramic assemblage (n=18; 1,689.8g), this group also included the rapidly increasing proportion of Whitewares deposited after the 1830s. Therefore, this later group formed a larger overall component of the Ceramic assemblage.

5.3.3 WARE TYPES

The Ceramic assemblage was characterized by its wide diversity of recovered types (Table 5). In most cases, a high sherd count did not correlate with a high number of overall vessels. This difference resulted from two factors: the retrieval of highly fragmented vessels (high NISP) that produced numerous cross-mends (low MNV); and/or the recovery of artefacts (NISP) from unstratified (U/S) deposits, that did not undergo MNV analysis. As a result, Ware Types are here discussed in relation to both NISP and MNV data points.

Table 5. Ceramic Assemblage, Ware Types (WBRP Collection).

Type	NISP	%	MNV	%
Banded Ware	2	0.35%	2	1.5%
Chinese Blue-and-White Porcelain	47	8.2%	13	9.7%
Chinese HP Porcelain	1	0.17%	1	0.75%
Edgeware	6	1%	2	1.5%
Gilt Earthenware	184	32.1%	9	6.7%
Glazed Earthenware	62	10.8%	18	13.4%
HP Earthenware Polychrome	5	0.7%	2	1.5%
HP Porcellaneous	1	0.17%	0	0%
Industrial Porcelain	1	0.17%	0	0%
Industrial Slip	21	3.66%	9	6.7%

Lead Glaze Ware	17	3%	3	2.2%
Porcelain	2	0.35%	1	0.75%
Porcelain Moulded	2	0.35%	1	0.75%
Porcellaneous	11	2%	5	3.7%
Relief-decorated Earthenware	33	5.8%	7	5.2%
Relief-decorated Stoneware	4	0.7%	0	0%
Rockingham Ware	2	0.35%	1	0.75%
Salt-glazed Stoneware	23	4%	8	6%
Sewerage Pipe	1	0.17%	1	0.75%
Sponge Print Ware	3	0.52%	2	1.5%
Sprigged Porcellaneous	2	0.35%	1	0.75%
Terracotta	2	0.35%	2	1.5%
TP Earthenware	122	21.5%	37	27.7%
TP Flow	7	1.2%	3	2.2%
TP Porcellaneous	6	1%	2	1.5%
Unglazed Ware	1	0.17%	1	0.75%
Yellow Ware	4	0.7%	2	1.5%
Unknown	1	0.17%	1	0.75%
Totals	573	100%	134	100%

A total of 28 Ceramic Ware Types were identified across the WBRP Collection. Unsurprisingly, Transfer-print Earthenware (including TP Flow) formed the most significant component, with 129 sherds (22.7%) representing approximately one-third of the minimum estimated vessels (MNV=40). Although the basic count of Gilt Earthenware sherds was larger (n=184, 32.1%), they either cross-mended or were

recovered from U/S deposits. As a result, they actually represented a smaller proportion of the overall minimum vessels (MNV=9, 6.7%). The third largest group was Glazed Earthenware, with 62 sherds (10.8%) constituting a minimum of 18 vessels (13.4%).

An overview of key Ceramic Ware Types is presented below.

5.3.3.1 REFINED EARTHENWARES

Representing over 83% of total Ceramic category, Refined Earthenwares were distinguished by their finely sifted clay fabric. Consisting of 476 sherds, the assemblage weighed 12,528g. Its dominance of Ceramic Type Wares was typical for the historical archaeology of urban sites across Australia.

Transfer-printed (TP) Earthenwares

This Ceramic assemblage consisted of both TP Earthenware and TP Flow. A total of 20 transfer-printed patterns were identified. Given the highly fragmentary nature of this collection, only six patterns could be specifically identified by their formal name, manufacturer, and/or commercial contents (Table 2.3).

By sherd count, two identified patterns dominated the Ceramic assemblage (Figure 5-1 and Figure 5-2). Both were recovered from stratified deposit [1488]. Since their fragments could be substantially cross-mended, the two pattern groups were probably the remnants of two different matched sets, each of which yielded an MNV estimate of six original vessels.

- A group of teawares, hollow ware (n=25, MNV=6,271g). Blue transfer-printed pearlware, likely matched set (WBRHS181637 & WBRHS181665). Recovered from stratified deposit [1488]. 'Chinese Raftman & Ruins', manufactured by Thomas Rathbone & Co., Portobello Potteries, Edinburgh, Scotland 1809–1834. Pattern identified by the "castle gate & towers" scene on the rim and base interior (Haggerty 2019, 15–6).



Figure 5-1 “Chinese Raftman & Ruins” Left: 3x small bowl (WBRHS181665) Right: 3x large bowl (WBRHS181637)

- A group of teawares, hollow ware (n=36, MNV=6, 252g). Blue transfer-printed pearlware, likely matched set (WBRHS181574 & WBRHS181630). Recovered from stratified deposit [1488]. ‘Sheepshearer’ or ‘Sheep Shearer II’, manufactured by Enoch Wood & Sons, Burslem Staffordshire, 1818–1846. Pattern identified by the ‘cottage in woods’ scene on interior base, and “Wild Rose” style border. Transferware Collector’s Club, Pattern #1006.



Figure 5-2 “Sheepshearer” Left: 3x Exterior, Upper right: 2x Interior rim, Lower right: 2x Interior base (WBRHS181574)

A wider range of common Ceramic patterns were also found in small numbers across the assemblage. These included ‘Asiatic Pheasant’, ‘Fibre’, ‘Marble’, ‘Rhine-style’, ‘Two Temples’, ‘Wild Rose’, and ‘Willow’. Produced by various Staffordshire potteries, these patterns are typical throughout Australian nineteenth century archaeological sites.

Other patterns could be clustered under common decorative types, but not specifically identified. These included: Chain style, Chinoiserie, Dots & Crosses, Floral, Gothic Revival style, and Greek Key style.

Finally, one fragment of ‘Child Ware’ was recovered from context [1412] (Brooks 2005, 48–9). A black transfer-printed flatware, it depicted a classroom scene with children signing a ‘Band of Hope’ temperance pledge under a framed sign reading ‘...THE WAY HE SHOULD GO’ (Figure 5-3) (WBRHS181669). Founded in Leeds during 1847, the Band of Hope was a pre-eminent British temperance society associated with the Nonconformist movement from mid-century onwards. Band of Hope ‘Child Ware’ was produced from 1850 by a variety of Staffordshire pottery houses, and depicted a range of educational and biblical themes, including scenes of classroom instruction, Sunday School gates, and David fighting Goliath. This specific WBRP Collection example was based on an engraved illustration from the front page of the first edition of *Band of Hope Review and Children’s Friend*, an evangelical magazine produced by Thomas Bywater Smithies, and published by Partridge & Co. from 1851 (Partridge 1851; Cooke 2012). In its original format (Figure 5-3 inset), the framed sign displayed the biblical quote ‘Train up a child in the way he should go’ (Proverbs 22:6).



Figure 5-3 Upper: 'Gothic Revival' Pattern (WBRHS181749), Lower: 'Child Ware' Pattern (WBRHS181669)

Table 6. List of Transfer-printed Earthenware Patterns

Pattern Name	Manufacturer	From	To	NISP
Asiatic Pheasants	Various	1840		3
Chain Pattern				4 (2)
Child Ware (Morality Scene)	Various, <i>Band of Hope</i> temperance scene	1851		1
Chinese Raftman Ruins	Thomas Rathbone & Co., Portobello, Scotland	1809	1838	25 (6)
Chinoiserie			1870	3

Company Name	Isaac Josephson / Edward Row & Co., Sydney	1866	c.1921	2
Company Name	S. Maw, Son & Thompson, London	1870	1901	1
Dots & Crosses				3
Counterfeit Maker's Mark	E & C Challinor, Fenton, England (Counterfeit)	1950		1
Fibre		1800		1
Floral				15
Gothic Revival style		1820	1870	2
Greek Key style				2
Marble		1821		6 (2)
Naval Scene (War of 1812)	Bentley, Wear & Bourne, Shelton, England	1815	1823	1
Rhine style	Various			2
Sheepshearer	Enoch Wood & Sons, Burslem, England	1818	1846	36 (6)
Two Temples	Various	1800		1
Unidentified				9
Wild Rose				2
Willow	Various	1790		9
Total				129

Please Note: only significant MNVs recorded in parentheses.

A last group of TP Earthenware were identified by their transfer-printed label or design motif:

- Two jar lids, patent medicine, 1866-c.1921 (n=2; MNV=2; 19.5g). Black transfer-printed whiteware, commercially branded, partial text remains (WBRHS181578 & WBRHS181738). Full text: 'JOSEPHSON'S AUSTRALIAN OINTMENT, SYDNEY, N.S.W./ FOR ALL SORES, OLD WOUNDS, BURNS, SUNBURNS, CHAFING, CHAPPED HANDS &C &c.' and grey star shape behind text. Isaac Josephson patent, Sydney, 1866. Produced and distributed by Edward Row & Company, Wholesale Pharmacists, Sydney, 1855–c.1921 (*The Chemist & Druggists Catalogue*, March 15, 1883, 102) (Figure 5-4).
- Jar lid, patent medicine (smelling salts?), 1870-1901 (n=1; MNV=1; 8.7g). Black transfer-printed whiteware, commercially branded, partial text remains (WBRHS181559). Full text: 'S Maw, Son & Thompson, 7-12 Aldersgate, London'. Medical & surgical supplier, TAQ dated to retirement of Thompson in 1901, and company subsequently renamed (Science Museum Group Collections, UK). (Figure 5-4).



Figure 5-4 Left: Patent Medicine Jar Lid (WBRHS181559), Right: 2x Ointment Jar Lids (WBRHS181578 & 181738)

- Decorative jug, 1815–1823 (n=1; MNV=1; 6.6g). Black overglaze transfer-printed bisque earthenware, naval scene (WBRHS181657). Bentley, Wear & Bourne (fine engravers), Shelton, Staffordshire. The design house was known for producing commemorative jugs in bisque earthenware and creamware, with bulbous body shape, and gold gilt banding on the rim, foot & handle. These jugs displayed intricate naval battle scenes associated with the American / English War of 1812. <http://printedbritishpotteryandporcelain.com> (Figure 5-5).



Figure 5-5 “Bentley, Wear & Bourne” Jug with Engraved Naval Scene (WBRHS181657)

- Jug pedestal base, 1950+ (n=1; MNV=1,335g). Relief-moulded whiteware with ‘chain’ pattern on pedestal, plus rough unfinished cast mould seams on both sides (WBRHS181751). Black transfer-printed counterfeit mark on base for E & C Challinor, Fenton, Staffordshire. Mark distinguished by simplicity of the royal arms, and ‘smiling’ rampant lion. Known counterfeit mark found on modern mass-produced ironstone jugs. <http://www.thepotteries.org/allpotters/263.htm> (Figure 5-6).



Figure 5-6 Jug Pedestal Base, Inset Detail of ‘Counterfeit Mark’ (WBRHS181751)

Edgewares & Relief-decorated Earthenwares

Six fragments of Edgware (51.3g), also known as shell-edge or feather ware, were found within the WBRP Collection. These were, as is typically the case, from plates. Their specific edge patterns fell into three date categories (Brooks 2005. 41), with four sherds dating to the early nineteenth century, and two sherds produced during mid-century:

- Two early 'Even scallop impressed straight lines' style, dated 1809–1831. One blue transfer-print (WBRHS181934), one green transfer-print (WBRHS181966) (Figure 5-7), both recovered from unstratified deposits.
- Two early 'Even scallop impressed bud' style, dated 1813–1834. Both blue transfer-prints and recovered from unstratified deposits (WBRHS181984 & WBRHS181993) (Figure 5-7).
- Two later 'Unscalloped Impressed' style, dated 1841–1857. Both blue transfer-prints. One recovered from context [1488] (WBRHS181531), and one recovered from context [1508] (WBRHS181789).



Figure 5-7 Edgeworks, Left: Blue 'bud style' (WBRHS181984), Centre: Green 'straight lines' (WBRHS181966), Right: Blue 'bud style' (WBRHS181993)

Various Relief-decorated ceramics were recovered from stratified and unstratified deposits (n=33; 2,254g). The assemblage included both pearlwares (n=12; 960.3g) and whitewares (n=21; 1,294.1g). Vessels appeared in a range of forms, including flatwares (n=17; 1,434.9g), hollow wares (n=8; 167.9g), chamber pots (n=5; 520.9g), a jug (n=1; 58g), and a teaware lid (n=1; 28.7g). The most common moulded rim patterns were floral variations, ribbon or vine with grapes, repeating scrolls, and repeating leaves. The assemblage also contained a minimum of one whiteware 'Wheat Pattern' platter (n=4; 435.8g) (WBRHS181652 & WBRHS181780). Internationally popular, the "Wheat Pattern" was manufactured by various potteries from 1859 onwards and is commonly recovered from late-nineteenth to mid-twentieth century sites (Sussman 1985). Two other notable artefacts were present:

- Chamber pot, whiteware, moulded rim, 1890+ (n=4; 425.9g). Partial black transfer-printed maker's mark on base (WBRHS181584). Full text: 'IRONSTONE... / Royal Arms with Lion Rampant / J. & G. MEAKIN / HANLEY/ ENGLAND' http://www.thepotteries.org/mark/m/meakin_jg.html.
- Possible architectural fitting or household ceramic (n=1; 44g). Whiteware, moulded knob shape with decorative moulded concentric dot relief pattern. Central square hole for spindle attachment (WBRHS181745). Possible doorknob, or segment of a lamp stand (Figure 5-8).



Figure 5-8 Architectural Ceramics, Left: Stoneware insulator (WBRHS181428), Right: Earthenware knob (WBRHS181745)

Glazed Earthenwares & Yellow Wares

Glazed earthenware included undecorated wares, and undecorated fragments of larger decorated vessels. This assemblage contained: creamware (n=6; 74g), pearlware (n=4; 243.4g), and whiteware (n=52; 1,280.8g). Yellow ware was small component of assemblage (n=4; 394g).

Industrial Slip, Gilt Earthenwares & Hand-painted (HP) Earthenwares

This category contained a range of Ware Types. These included: 'Banded Ware' (n=2; 17.8g), Hand-painted poly-chrome earthenware (n=5; 102.9g), 'Rockingham Ware' (n=2; 62g), and 'Sponge Print Ware' (n=3; 21.5g). This last category included a pearlware lid finial moulded into a floral shape and decorated by hand-painted blue sponge (WBRHS181944).

The Gilt Earthenware category dominated this Ware Type (n=184; 3,316.7g). Recovered primarily from context [1488], the assemblage contained a clustered set of tablewares (n=179; 3,279.5g). Since this artefact group consisted of approximately matched platters, plates, and saucers, its presence suggested the deposition of a single matched tableware service set (Figure 5-9).



Figure 5-9 Gilt Tableware Set, Left: 2x Platter (WBRHS181264), Upper right: Plate (WBRHS181231), Lower right: 2x Tureen (WBRHS181097)

Bone China and Porcelains

This fabric category represented a small, but wide-ranging group of ceramics (n=25; 718.1g). Ware Types included: HP Porcellaneous, Industrial Porcelain, Porcelain, Porcelain Moulded, Porcellaneous, and TP Porcellaneous. This last type included an example of ‘Chinese Dragon’ style blue transfer-print (n=2; 11g) (WBRHS181762). This specific *chinoiserie* design could be linked to Hanley, Staffordshire, c.1810 onwards (Figure 5-10).

This category mostly consisted of various teawares, although one toiletries jar and one decorative household vase or jug were also present. Other significant artefacts included:

- Toy doll, clear glazed bone china (Porcelain Moulded), context [1412], 95% complete (n=1; 10g). ‘Frozen Charlotte’ doll style, dated 1850-1920. (WBRHS181950). [https://en.wikipedia.org/wiki/Frozen_Charlotte_\(doll\)](https://en.wikipedia.org/wiki/Frozen_Charlotte_(doll)) (Figure 5-10).



Figure 5-10 Left: ‘Chinese Dragon’ Teaware (WBRHS181762), Right: ‘Frozen Charlotte’ Doll (WBRHS181950)

- ‘Chelsea Porcelain’ (Sprigged Porcellaneous) teawares (n=2; 30g). Light blue lead glazed grapevine sprig over clear glazed body (WBRHS181556 & WBRHS181811), post-1820 (Brooks 2005, 43).
- Architectural tile (Industrial Porcelain), rectangular, brown lead glazed (n=1; 65.1g). Moulded face with banded rim and stylized floral interior, chamfered corners (WBRHS181940).

5.3.3.2 STONEWARES

This category included salt-glazed, industrial slip, and relief-decorated stonewares. The first two categories primarily consisted of food or household storage bottles. Of the three recovered blacking polish bottles, two were fully intact (WBRHS181201). Their original red, yellow, and black coloured labels read ‘Real Japan Blacking made by Day and Martin. 97 High Holborn, London’ that identifies their production from 1805–1869. Approximately 132 mm high, and 62 mm diameter, these bottles were recovered from context [1412] (Figure 5-11). The assemblage contained salt-glazed and industrial slipped ginger beer bottles (n=9). These included two with manufacturer’s marks, both recovered from unstratified deposits:

- Ginger beer bottle, salt-glazed, 1866–1919 (n=5; 411g). Maker's mark (mostly intact), stamped on body above base: 'CONLON & / BROUGHTON STREET / GLEBE' (WBRHS181480) (Figure 5-11).
- Ginger beer bottle, salt-glazed, c.1842–1870 (n=1; 411g). Maker's mark (mostly intact), stamped on body above base: 'T. FIELD / POTTER / [S]YDNEY' (WBRHS181596) (Jones 2009, 53) (Figure 5-11).



Figure 5-11 Stoneware Bottles. Left & Inset: 2x 'Day & Martin' Blacking (WBRHS181201), Centre left: Stout (WBRHS181694), Centre right: 'T. Field' Ginger Beer (WBRHS181596), Right: 'Conlon' Ginger Beer (WBRHS181480), Front: 2x 'Penny Ink' Wells (WBRHS181632).

Stout bottles (n=8) were all industrial slipped, with one example displaying a partial maker's mark stamped and overglazed on the body above base: 'PO... / GLA... / POT...' (WBRHS181570). This fragment was probably the maker stamp for 'Port Dundas, Glasgow, Pottery Co.' as manufactured by James Miller, Glasgow. Amongst the most common type of stout/porter bottles in NSW, the company produced these wares between 1866 and 1923 (Williamson 1999). Ultimately, all were dated to the period after 1850 (Brooks 2005, 28).

Ink bottles (n=6) were found in both salt-glazed and industrial slip variations, with two examples of the latter showing remains of a pouring lip. All were recovered from either context [1497] (n=1), or [1412] (n=5). The assemblage contained two intact examples of the iconic salt-glazed 'Penny ink well' style bottle (weights = 104.3g & 116g). Commonly recovered from historical sites, these small bottles were mass-produced from c.1860–c.1910 (WBRHS181632) (Figure 5-11).

The assemblage also contained a large salt-glazed food storage jar (WBRHS181624), and a single body fragment of a brown marble slipped hollow teaware (WBRHS181994). One example of Relief-decorated Stoneware was recovered. Found within unstratified deposits, it consisted of four fragments (53g) that partially cross-mended into a decorative household flowerpot (WBRHS181591). Its body had chamfered corners, and an exterior relief moulded large floral pattern. The exterior had been further decorated with an irregular polychrome mix of blue, green, and white lead glaze. Finally, the WBRP Collection included a heavy (291g) stoneware electrical insulator (WBRHS181428). Recovered from unstratified deposits, it had been moulded into a rough circular / hollow spool shape and included two remnant ferrous lengths of its original metal wiring. It was probably associated with the town's early electrification works (see above Figure 5-8).

5.3.3.3 CHINESE EXPORT WARES

Approximately 8.4% of the Ceramic assemblage was Chinese export porcelain. It consisted of 48 individual fragments (864.2 g). Those recovered from stratified deposits yielded a minimum count of 14 vessels. The artefacts were overwhelmingly 'Canton' patterns, a mass-produced export ware characterised by its heavy blue hand-painted and formulaic landscape scenes filled with boats, bridges, water, islands, pavilions, trees, and mountains (Masden and White 2011). The Windsor porcelains displayed a full range of these shared motifs. Three common pattern-types could be provisionally identified – 'Fitzhugh' (n=4), 'Lotus, Lingzhi and Spiral' (n=1), and 'Well & Tree' (n=1). Chinese export wares are common throughout Australian historical sites and have been dated from c.1760 to c.1850 (Staniforth and Nash 1998, 4; Herbert and Schiffer 1975) (Figure 5-12).

One possible example of 'Imari' ware (3.7g) appeared in the ceramics sampled for context [1488]. Initially produced in Japan from the mid-seventeenth century, these brightly coloured polychrome porcelains were copied by Chinese and European potteries from the mid-eighteenth century. More recently, the international popularity of late-nineteenth century 'Japonism' designs caused a second wave of production for Imari wares (Shimura 2008). The one example from the WBRP Collection may have been associated with this later period (WBRHS181333) (Figure 5-12).



Figure 5-12 Chinese Export Wares. Upper left: 'Well & Tree' (WBRHS181397), Bottom left: 'Lotus, Lingzhi & Spiral' (WBRHS181391), Lower centre: 'Imari' (WBRHS181333), Right: 4x 'Fitzhugh' (WBRHS181415)

The assemblage contained twice as many hollow ware forms (n=32; 679.6g) than flatware forms (n=16; 184.6g). This was typical for Australian domestic sites, where Chinese exports frequently appeared as tea sets or serving bowls.

5.3.3.4 COARSE WARES

The final Ware Types represented approximately 3.7% of the overall Ceramic category (n=21; 4,771g). A limited assemblage, it consisted of single clear lead glazed earthenware Sewerage Pipe (n=1; 59.6g), a small sherd of an unglazed earthenware food storage bowl (n=1; 26g), and 2 terracotta gardenwares (259.7g).

Lead Glazed Earthenware formed the most significant Ware Type within Coarse Wares. A total of 17 artefacts were recovered, with a substantial total weight of 4,426g. Since these ceramics were mostly

recovered from unstratified deposits, their estimated vessel count was artificially low (MNV=3). While none were marked, all were likely to be of local colonial production (Kelloway and Birmingham 2010). This local Australian industry started with clay tobacco pipes, with William Cluer manufacturing them in Sydney from 1804. By 1804, Thomas Ball was producing a range of pottery vessels (Casey 1999). Other early manufacturers of utilitarian and serving vessels included Jonathan Leak and John Moreton (Crook 2019). The WBRP Collection primarily consisted of large food storage jars or ‘crock’ (n=8), with one decorated by a red slip exterior (WBRHS181642). Only one small example (n=2; 8g) represented food preparation activities—a rim fragment from a lead glazed bowl. By weight, the Lead Glaze assemblage was dominated by a single artefact, a large food storage bowl (n=6; 2,518g). Handmade, its exterior was slip banded with a brown lead glaze. It had two lug handles decorated by an incised fern pattern. Since its interior was unglazed, it would have provided storage for dry goods (WBRHS181452).

5.3.4 CONTEXT ANALYSIS

Stratified Deposits

The overall Ceramic assemblage contained artefacts from 18 stratified contexts (Table 7, Table 8, Table 9). Together, these stratified deposits contained 439 ceramic artefacts by count (76.6%), 134 minimum vessels (100%), and 11,304g (54.7%) of ceramic weight. Eight types of ‘Activities’ were present, that could be further divided into ‘Subtypes’: Building (one sub-type), Food Preparation (two sub-types), Food Service (18 sub-types), Food Storage (six sub-types), Household (six sub-types), Medical (one sub-type), Toiletries (five sub-types), and Unknown (one sub-type).

Table 7. Ceramic Assemblage, Functional Types (Stratified Deposits)

Context	Activity	Function	NISP	MNV	Weight (g)
[1229]	Food Service	Bowl	1	1	5.2
[1366]	Food Service	Flatware	1	1	2.6
	Household	Pot	1	1	22.7
	Unknown	Hollow ware	3	1	6.9
[1374]	Food Service	Hollow ware	1	1	0.5
		Flatware	1	1	1.5
		Unknown	1	0	2.2
	Food Storage	Bottle	1	1	23.3
[1411]	Food Preparation	Bowl	1	1	19.3

[1412]	See Table 2.5		60	43	5,274.9
[1420]	Food Service	Saucer	1	1	3
[1422]	Food Service	Plate	1	1	5
		Platter	1	1	5
		Teaware	1	1	16
	Food Storage	Bowl	1	1	5
[1427]	Food Service	Bowl	1	1	26
		Plate	1	1	7
		Teaware	2	2	4
		Flatware	2	1	5
	Toiletries	Jar	1	1	6
[1433]	Food Service	Bowl	1	1	10.5
		Platter	4	1	21.7
		Teaware	1	1	1.9
		Flatware	4	3	10.4
	Food Storage	Ginger beer bottle	1	1	15
	Toiletries	Chamber pot	3	1	5.1
[1453]	Food Service	Bowl	1	1	3.1
		Unknown	1	1	2.3
[1456]	Food Storage	Jar	1	1	165
[1488]	See Table 2.6		312	40	5,317.4

[1497]	Building	Pipe	1	1	59.6
	Food Service	Bowl	1	1	20.1
		Hollow ware	1	1	2.9
	Food Storage	Bottle	2	1	25.3
	Household	Bottle	1	1	6.9
[1508]	Food Service	Bowl	3	1	11.9
		Plate	6	4	33.5
		Hollow ware	1	1	1.4
		Flatware	1	1	4.3
[1555]	Food Storage	Jar	1	1	61
[1590]	Toiletries	Jug/Chamber pot	2	1	36
[1599]	Food Service	Saucer	1	1	4.4
		Plate	2	2	15.8
		Teaware	1	1	2.1
		Flatware	1	1	1.7
	Food Preparation	Bowl	1	1	4.3
[1607]	Food Service	Flatware	1	1	20.1
Totals			439	134	11,304.8g

Table 8. Ceramic Assemblage, Functional Types (Context [1412])

Context	Activity	Function	NISP	MNV	Weight (g)

[1412]	Food Preparation	Bowl	5	2	456
		Hollow ware	1	1	27
	Food Service	Drainer	2	1	16
		Saucer	1	1	58
		Plate	1	1	11
		Platter	5	3	521
		Jug	2	2	393
		Lid	1	1	6
		Teaware	9	6	102
		Flat ware	2	2	21
	Food Storage	Stout bottle	1	1	703
		Teaware	1	1	53
		Large storage jar	6	3	675.1
		Ginger beer bottle	4	2	383
	Household	Blacking bottle	2	2	447
		Ink bottle	5	4	639.8
		Figurine (toy)	1	1	10
		Flower saucer	1	1	237
		Household fitting	1	1	44
	Medical	Jar lid	1	1	7

Toiletries	Washbowl/Chamber pot	1	1	267
Unknown	Bottle	2	1	198
Totals		60	43	5,274.9g

Table 9. Ceramic Assemblage, Functional Types (Context [1488])

Context	Activity	Function	NISP	MNV	Weight (g)
[1488]	Food Preparation	Bowl	8	2	405.6
	Food Service	Bowl	44	6	1091.1
		Saucer	3	2	26.2
		Plate	79	5	689.6
		Platter	92	2	2,207.1
		Handle	1	0	3.3
		Tureen	5	2	232.4
		Egg cup	2	1	21.7
		Teaware	65	16	487.7
		Hollow ware	1	1	3.7
		Flatware	10	1	103.2
	Household	Figurine (Vase?)	1	1	21.1
	Unknown	Unknown	1	1	24.7
Totals			312	40	5,317.4g

The dominant and most diverse activity category was Food Service, with a minimum of 88 vessels (n=370; 6,219.1g) appearing across 14 stratigraphic contexts. Sub-type concentrations followed a typical pattern for historic urban sites. Flat tablewares were the greatest sub-type, with 222 artefacts representing a minimum of 39 vessels, and 3,782.1g weight. Teawares (of various forms) were also present in notable concentration (n=78; MNV=26; 609.7g). For both of these Food Service sub-types, their high recovery rate reflected the bulk deposition in [1488] of matched ceramic sets. Hollow tablewares constituted the third most common sub-type within the stratified deposits (n=55; MNV=15; 1,150.4g).

Food Storage represented the second greatest activity, with 14 minimum vessels (n=18; 2,134.7g) recovered from eight contexts. Food Preparation came third within stratified deposits, with seven vessels (n=16; 912.2g) recovered from four contexts. Apart from food-related categories, Household activities were represented by a minimum of 12 vessels (n=13; 1,428.5g), with a combination of blacking polish and ink bottles forming over 65% of the activity category (n=8; MNV=7; 1,093.7g). The only identified 'Toy' within the WBRP Collection, a 'Frozen Charlotte' style porcelain doll (WBRHS181950), was identified under Household activities (Figure 5-10). Toiletries constituted eight minimum vessels (n=12; 314.1g)—primarily represented by either chamber pots or fragments of decorated jug/washbowl sets. Finally, both Building and Medical activity categories were represented by a single artefact: one sewerage pipe (n=1; 59.6g) and one jar lid (n=1; 7g).

Unstratified (U/S) Deposits

These generally followed similar functional patterns (Table 10). The overall Ceramic assemblage contained a total of 134 artefacts by count (23.4%), with a total weight of 9,375.2g (45.3%). Seven types of 'Activities' were present, with further 'Subtypes' identified within these categories: Building (two sub-types), Food Preparation (one sub-type), Food Service (nine sub-types), Food Storage (four sub-types), Household (five sub-types), Medical (one sub-type), and Toiletries (three sub-types).

Table 10. Ceramic Assemblage, Functional Types (Unstratified Deposits)

Context	Activity	Function	NISP	Weight (g)
[U/S]	Building	Insulator	1	291
		Architectural tile	1	65.1
	Food preparation	Bowl	3	78
	Food service	Bowl	9	170.9
		Saucer	7	135.1
		Plate	14	325.8
		Platter	9	1,094.8

	Jug	1	32
	Lid	1	28.7
	Teaware	23	272.2
	Hollow ware	2	30.6
	Flatware	7	90.1
Food storage	Ginger beer bottle	6	822
	Stout beer bottle	7	715.7
	Large Storage bowl	6	2,518
	Large Storage jar	5	1,662
Household	Blacking polish bottle	1	11.6
	Candlestick	1	21.4
	Figurine (decorative jug)	1	6.6
	Household fitting	1	14.2
	Pot (decorative)	4	53
Medical	Jar lid, S.Maw, Son & Thompson	1	8.7
	Jar lid, Edward Row & Co.	1	12.5
Toiletries	Jug/Chamber pot	14	805.3
	Jar lid (unmarked)	1	33
	Unknown	7	76.9
Totals		134	9,375.2

Food Service also dominated this assemblage (n=73; 2,180.2g). Proportions of sub-type categories mirrored those of the stratified deposits, with Flat tablewares in greatest concentration (n=37; 1,645.8g), followed by Teaware (n=23; 272.2g), and then Hollow tablewares (n=11; 201.5g). Food Storage was the second most common Activity category (n=24; 5,717.7g), with its heavy overall weight reflecting the number of identified drink bottles (n=13) and large storage vessels (n=11). The Food Preparation category (n=3; 78g) was replaced by Toiletries in third place (n=15; 838.3g). With the exception of one small jar lid (3.3g), Toiletries consisted primarily of either chamber pots or jug/washbowl sets. The Household category dropped in proportion (n=8; 106.8g), although it represented a similarly diverse range of specific sub-types. Similar to the stratified contexts, very few Building materials had been recovered (n=2; 356.1g). And both of the medical artefacts were branded lids for medical products (S. Maw, Son & Thompson smelling salts; Edward Row & Company ointment).

5.3.5 CERAMIC MAKERS

A minimum of 15 vessels within the Ceramic assemblage could be identified by either pottery maker, or product manufacturer (**Table 11**). Dates for these ceramic artefacts were established through a combination of maker's marks and stylistic elements. For example, the figurine fragment (WBRHS181657) was identified as a Bentley, Wear & Bourne commemorative jug because of its finely engraved transfer-print of an iconic naval scene from the British/American War of 1812. Although the majority of the collection was linked to either Sydney or the Staffordshire potteries (England), the assemblage also contained ceramics produced in London and the Portobello potteries (Scotland).

Table 11. List of Known Pottery and Product Makers

Type	Maker/Distributor	Function	Date Range	CatID
Refined earthenware	Enoch Wood & Sons	Teaware	1818–1846	WBRHS181574
	Enoch Wood & Sons	Teaware	1818–1846	WBRHS181630
	J & G Meakin, Hanley	Chamber pot	1890	WBRHS181584
	S. Maw, Son & Thompson	Lid	1870–1901	WBRHS181559
	Thomas Rathbone & Co	Bowl	1809–1838	WBRHS181637
	Thomas Rathbone & Co	Teaware	1809–1838	WBRHS181665
	Possible Staffordshire	Minton, Flatware	1835	WBRHS181641

	Isaac Josephson/Edward Row & Co	Lid	1866– c.1921	WBRHS181578
	Isaac Josephson/Edward Row & Co	Lid	1866– c.1921	WBRHS181738
Stoneware	Conlon & Co	Ginger beer	1866– 1919	WBRHS181480
	Day & Martin	Blacking polish	1805– 1869	WBRHS181201
	Port Dundas, Glasgow Pottery Co	Stout/Porter	1866– 1923	WBRHS181570
	Thomas Field	Ginger beer	1842– 1870	WBRHS181596
Bisque earthenware	Bentley, Wear & Bourne (engravers)	Figurine	1815– 1823	WBRHS181657
Porcelain	Job Meigh, Hanley (?)	Teaware	1810	WBRHS181762

5.4 Glass

5.4.1 METHODOLOGY

As part of initial processing, the Glass assemblage was sampled by Extent in preparation for post-excavation finds analysis. This management strategy allowed for a specialist focus on diagnostic body shards, and identification of date-sensitive ‘types.’ Analysis and discussion of the Glass assemblage is limited to the artefacts selected for post-excavation specialist finds analysis.

Like ceramics, glass artefacts were processed in context groups, by object type, diagnostic features, and function identification. The NISP reflected a count of *all* glass fragments within the total collection (n=350), including those recovered from both stratified and unstratified contexts. In contrast, the MNV calculations were estimated *within* their specific numbered context (MNV=208), with all “Unstratified” artefacts (U/S) clustered together as a unique context. In other words, no attempt was made to cross-fit elements across different context units.

Fragments were typically bagged separately by their unique catalogue number. For cases where several (different) glass artefacts had been accidentally clustered under one catalogue number, these objects were kept associated as a ‘group’ linked to their original unique catalogue number, with multiple identification data points recorded within the digital catalogue. All instances of these ‘multiple entries’ within a single catalogue number were also recorded within the catalogue notes.

Maximum length, width, and (where relevant) diameter measurements were taken in millimetres for every glass artefact, and weights were estimated to the nearest gram. When available, date ranges were established based on a combination of glass maker's marks or embossing that indicated distributor and/or contents. Otherwise, dates were estimated based on the manufacture marks present on the rim, neck, body, and/or base of each artefact. Window glass was dated by thickness (see Boow 1991, 111). Objects were classified by 'Activity', 'Function', and 'Subfunction' using their general morphology, embossing (when present), colour, overall shape, and method of manufacture.

Key references for glass identification included the *Parks Canada Glass Glossary* (Jones and Sullivan 1989), *Early Australian Commercial Glass* (Boow 1991), and *Thirsty Work* (Jones 2009), in addition to specialist publications (Corley 1987; Cuffley 1973; Fike 1987; Fisher and Stanton 2001; Jones 1985; Vader and Murray 1975) and artefact reports (Harris 2010, 2019). Extensive reference was also made to on-line resources, including various Australian, British, and American industry and regional history websites, and the BLA/SHA Historic Glass Bottle Identification & Information Website (<https://sha.org/bottle/index.htm>).

5.4.2 GLASS ANALYSIS

Using a combination of 'Activity' and 'Subfunction' catalogue fields, the following glass categories were established: Cordial/Ginger beer, Soda/Mineral water, Wine/Champagne, Wine/Beer, Gin/Bitters, Liquor, Food, Medicine, Toiletries, Household, Tableware, Window glass, and Unknown (Table 12). The overall Glass Collection contained a total count (NISP) of 350 objects, representing a minimum (MNV) of 208 vessels, and total weight of 30,014g. Similar to the Coin and Ceramic assemblages, while the majority of the objects dated from the mid-nineteenth through early twentieth centuries, the Glass Assemblage also contained artefacts dated before 1840. These distinctive objects consisted of 15 (n=18) Tableware (tumblers and stemware, Figure 5-20 and Figure 5-21), and three (n=3) Wine/Champagne bottles (Figure 5-14).

Table 12. Glass Assemblage, Functional Types (WBRP Collection)

Type	NISP	%	MNV	%	Weight (g)
Cordial/Ginger beer	16	4.6%	12	5.8%	3,303
Soda/Mineral water	21	6%	18	8.7%	3,158
Wine/Champagne	57	16.3%	24	11.5%	5,271
Wine/Beer	78	22.3%	44	21%	7,651
Gin/Bitters	17	5%	10	4.8%	1,057
Liquor	11	3.1%	7	3.3%	1,045
Food	47	13.4%	26	12.5%	2,678
Medicine	34	9.7%	29	14%	2,237
Toiletries	8	2.3%	4	2%	243
Household	4	1%	4	2%	365
Tableware	20	5.7%	16	7.7%	1,575
Window glass	16	4.6%	0	0	133
Unknown	21	6%	14	6.7%	1,298
Totals	350	100%	208	100%	30,014 g

While all bottle types may have been recycled or reused for various different contents (Boow 1991, 24; Carney 1998, 1999; Woof 2019), for these discussions they will be described by the most commonly known use.

5.4.2.1 BEVERAGE BOTTLES: ALCOHOL

Just under half of the overall Glass assemblage was comprised of bottles associated with alcohol consumption (n=163, 46.6%; MNV=85, 40.8%) (Table 2.9). Cylindrical Wine/Beer bottles dominated this artefact category, with n=78 individual objects, representing a minimum of 44 vessels. These primarily consisted of two types of bottles, associated with two different manufacture periods. Olive glass bottles (n=52, MNV=30) overwhelmingly consisted of bottle bases (n=48), a pattern that demonstrated post-excavation sampling of the WBRP Collection. These bases indicated various nineteenth century manufacture techniques, including post-bottom, Rickett's type push-up, wooden cone with metal cap, plain wooden cone, and sand pontil push-up. One base (WBRHS181324) contained an embossed maker's mark for the South Australian Glass Bottle Factory (Adelaide), tightly dated to 1890–1896 (Boow 1991, 181). Two neck / finishes exhibited a typical down tooled flat sided string rim, and one was a hand tooled packer finish.

Amber glass beer bottles constituted the second type present within the Wine/Beer category (n=26, MNV=14). All machine-made, they were dated by a combination of manufacture type and maker's marks to the period 1920–1970+. Of the four bottles manufactured by the Australian Glass Manufacturers company, three were distributed by the NSW Bottle Company Pty. Ltd., and had their manufacture dates embossed on their bases: WBRHS181399 (1945), WBRHS181278 (1950), WBRHS181321 (1959). Finally, one complete Carlton United Breweries (Penrith) bottle was recovered from unstratified deposits (TP019, Spit 2). Embossed with the 'CUB' logo, it had an external screw finish, a baffle plate base, and dated to 1970+ (WBRHS181198). One example of a green beer bottle

(WBRHS181364) was recovered from unstratified deposits. A complete vessel, it had been produced by Australian Glass Manufacturers. Since its maker's mark was embossed on the base as a set of letters 'AGM' rather than the familiar trademark symbol, the bottle could be specifically dated to 1923–1930 (Boow 1991. 176). Its body was embossed with the name and 'rampant horse' logo of Tooth & Co. Ltd. and indicated its contents had been produced at their Kent Brewery of Sydney (Figure 5-13).



Figure 5-13 Left: 'Tooth & Co. Ltd.' Beer Bottle (WBRHS181364), Right: Apéritifs/Liquor Bottle (WBRHS181249)



Figure 5-14 Early Wine / Champagne Bottles. Left: (WBRHS181320), Right: (WBRHS181301)

Wine/Champagne appeared in both high quantity (n=57) and minimum vessels count (MNV=24). Although examples of three-piece and two-piece moulding were present (one of each), the majority (n=54, MNV=21) were turn moulded. This manufacturing technique created a seam-free body, and commonly used from c.1870–c.1920 (Boow 1991, 51). Five of these bottles held their original copper wire closure. Similar to the Coin and Ceramic tableware assemblages, the Wine / Champagne category was one of the few Windsor assemblages to include pre-1840s artefacts. These three early bottles were characterised by a hand-blown asymmetrical body (where present), and asymmetrical push-up base with a large uneven mamelon. Although the two olive bottles (WBRHS181301, WBRHS181320) both had hand tooled champagne finishes with sloped rims (Figure 5-14), the aqua bottle finish consisted of a crude irregularly shaped applied string rim around a sheared / cracked-off bore (WBRHS181197). All three bottles demonstrated a heavy exterior patina.

Gin/Bitters containers appeared less frequently, representing approximately 5% of the overall Glass collection (n=17, MNV=10). All but one bottle was manufactured by two-piece mould, generally dated to 1860–1920. The exception was a dip moulded base with an embossed star pattern, a feature that dated it to 1860–1870 according to the SHA Bottle Identification website. Two bases displayed cup-bottom moulding. The bottles were all square in shape, and three had chamfered corners. All six finishes present were down tooled. Refit from five shards, one embossed bottle was identified as 'AROMATIC SCHNAPPS / [UDOLPHO] WOLFE', a ubiquitous example of imported gin produced from 1848–1902 in Schiedam, Netherlands (WBRHS181239) and locally produced and retailed in Australia until the mid-1980s.

Representing approximately 3% of the Glass collection (n=11, MNV=7), liquor bottles were identified by a combination of finish type and body shape. Four were mouth blown with grooved ring finishes and appeared in both olive (n=3) and aqua (n=1) variants. One amber 'Benedictine' style bottle was present. Characterised by its long straight neck and two-part grooved finish with V-tooled string rim, this distinctive type of bottle typically contained an imported French herbal liqueur popular over the later nineteenth century (WBRHS181215). Two late nineteenth century decorative liqueur bottles appeared within the Glass assemblage. Refit from five shards, one partial apéritifs / liqueur bottle was recovered from unstratified deposits (WBRHS181249). Press moulded by a tapered plunger, it had a flat, smooth 15 mm thick base with no seams. Its colourless glass body was decorated by an alternating series of smooth edged impressed vertical lines and circles (Figure 5-13). (Boow 1991, 84-88). The second decorative bottle was also a late nineteenth century colourless glass apéritifs / liquor bottle (WBRHS181294). Decagonal in body shape, it consisted of a press moulded, smooth 18 mm thick base, with a concave circular indent.

5.4.2.2 BEVERAGE BOTTLES: CORDIAL & SODA/MINERAL WATER

Non-alcoholic beverages constituted a smaller proportion of the beverage bottle assemblage (see Table 2.9 Glass Assemblage). Drawing from a combination of Cordial, Ginger beer, and Soda / Mineral water bottles, this category contained 10.6% of the overall Glass artefacts (n=37), and 14.4% of the minimum vessels (MNV=30). Three types of commercially branded product makers appeared within the Cordial assemblage: Noon's, Wilce's, and Coca Cola, in addition to one unidentified London-based company (Figure 5-15).

A total of four Noon's Cordials bottles were found within this assemblage and identified by their embossed bodies. Operating locally in Windsor, Noon's Cordials traded from 1913–1970. All three of the cordial bottles were machine-made in a two-piece mould with separate bottom plate (Figure 5-16). Two of these bottles were further embossed on their base plate with the Australian Glass Manufacturers (AGM) logo, indicating a general date range of 1930–1970. The fourth Noon's example was a complete ginger beer bottle (WBRHS181387) (Figure 5-16). This amber bottle was machine-made in a two-piece mould. Its separate bottom plate was also embossed with the AGM logo, and 'IS 1379'. As identified by

its embossed body, the bottle originally contained ginger beer, a soft drink produced by Noon's Cordials in Windsor from 1939 (*Windsor and Richmond Gazette*, 1 September 1939, 4). A last bottle embossed with the AGM logo was produced for the NSW Bottle Company Pty. Ltd. A machine-made aqua bottle with cup bottom mould, it held unknown contents, and its base embossing dated it to 1942.

One complete example of a Wilce's Cordial and Soft Drink bottle was present. Like the Noon's bottles it was machine-made in a two-part mould with separate bottom plate. Although this factory operated in Newtown, Sydney from 1883–1964 (Jones 2009, 978), the bottle's colourless body and crown finish suggested a twentieth century date of manufacture. One complete Coca-Cola bottle appeared within the Glass assemblage. Likely manufactured in the company's Sydney factory, the specific shape of its iconic logo dated it to 1941+ (WBRHS181232) (Figure 5-16).

A final bottle was the only labelled vessel within the Glass assemblage (WBRHS181110). Most likely a cordial bottle, it was refit from two shards, machine-made in a two-part mould with cup bottom base, and heavily patinaed. Located on the body, the remnant label read: '[...]LLONS / [LO]NDON S.E.' in black print, within a polychrome red, brown, black, and white frame (Figure 5-15). Printed labels generally replaced bottle embossing from 1910 onwards, and both the lettering and frame suggested an 'Art Deco' style popular over the 1910s–1930s.



Figure 5-15 Cordial Bottle with Polychrome Label, Unknown Maker (WBRHS181110)

A minimum total of 18 (n=21) Soda/Mineral water bottles were recovered. Their shapes included torpedo (n=6), ovoid (n=1), cylindrical (n=4), unknown (n=3, blob top & neck), and Hamilton-type or 'tenpin' (n=7)—a modified egg-shaped variant with flat resting base (Vader and Murray 1978, 25). Primarily manufactured in a two-piece mould, the bottle colours generally included aqua, light blue, olive, and colourless. Where present, bottles were hand-finished with blob tops (n=6) or machine-made crown finishes (n=3). Three types of commercially branded product makers appeared within the Soda/Mineral water assemblage: Summons & Co., Newling & Walker, and Hume & Pegrum.



Figure 5-16 Cordial & Soda/Mineral Bottles. Upper row: 'Noon's' (WBRHS181387), 'Coca-Cola' (WBRHS181232), 'Noon's' (WBRHS181290), Left: 'Newling & Walker' (WBRHS181283), Right: 'Summons & Co', cobalt variant (WBRHS181186)

The one Summons & Co. bottle was a particularly rare variant and was recovered from stratified deposit [1412] (WBRHS181186). A complete Hamilton-type 'tenpin' bottle, it was coloured a dark cobalt blue. Although worn, its body embossing identified it as a Summons & Co. bottle and included the company's distinctive Kangaroo logo. A Sydney-based producer, Summons & Co. operated from 1874–1883 (Jones 2009, 861 and 864 Figures 5 and 7; Harris 2019). Although commonly produced in aqua and olive colours, the bottle's rare dark cobalt blue glass was specified in the original 1878 design registration (Figure 5-16).

Two additional companies appeared within the Glass assemblage. One complete Newling & Walker aqua coloured two-part mould torpedo bottle (WBRHS181283) had been produced in Parramatta between 1875–1906 (Jones 2009, 558–567; Harris 2019) (Figure 5-16). And a minimum total of four bottles (n=5) had been produced by Hume & Pegrum, a company based in Chippendale, Sydney from 1875–1896 (Jones 2009, 396–398).

In summary, while Soda/Mineral water bottles suggested a late nineteenth century manufacture, the Cordial/Ginger beer assemblage offered a later twentieth century range. As specialty vessels, perhaps the Soda/Mineral water bottles were returned and reused by their companies, thereby prolonging their active use-life into the early twentieth century.

5.4.2.3 FOOD & CONDIMENTS

Constituting the second largest component of the Glass assemblage, the Food & Condiments category included bottles and jars originally containing: Milk, Oil/Vinegar, Pickles/Preserves, and Sauces/Condiments. Representing 13.4% of Glass by shard count (n=47), and 12.5% by minimum vessels (MNV=26), the Food & Condiments category incorporated the greatest variety of container types within the Glass assemblage. This group of containers primarily post-dated 1845 when the British excise on clear glass was lifted, resulting in lighter-green and colourless glass becoming cheaper (Boow 1991; Carney 1999). Taking advantage of developments in mould-blowing, glass makers designed and registered more special-purpose bottles in distinctive embossed, ribbed, fluted, and panelled styles.

Milk was represented by only one partial bottle, a colourless rim / neck fragment machine-made in a two-piece mould. Dated from 1940–1960, the remnant bottle had small triangular grips moulded into its finish to provide a seal for its foil cap (Boow 1991, 71, Figure 68).

Oil & Vinegar containers appeared in greater number and variety. Representing a minimum of eight vessels (n=15), this category primarily consisted of machine-made glass stoppers, and mould blown bottles in either aqua or colourless glass. They were identified by a combination of their tapered body, their decoratively shaped bodies, and/or their hand-tooled stopper finish (see WBRHS181307, Figure 5-18). While the assemblage mostly dated to the late nineteenth century, one colourless octagonal shaped bottle displayed an embossed AGM logo, that dated it to 1930+.

The Pickles & Preserves category held a minimum of four wide mouthed jars (n=7), and one complete wide mouthed jar stopper (WBRHS181392). The food containers were all made from aqua coloured glass, cylindrical in shape, and upper bottle fragments (rim, neck and/or shoulder). Their hand-tooled rims consisted of three stopper finishes, one patent finish, and one cap seat finish with a flat top and down tooled site. The shape of this latter rim indicated it was originally a fruit jar. The specific purpose of the other jars could not be determined. The one complete jar stopper was mould-blown with an interior pontil scar. Its top was a diameter of 60 mm and shaped with a large circular depression. It was 22 mm high and tapered down to a 40 mm diameter base. The assemblage was all manufactured before 1930, with the fruit jar specifically produced from 1885–1930 (Jones and Sullivan 1989, 153).

Sauces & Condiments formed the largest proportion of the Food category (n=23, MNV=11). It consisted of both machine-made glass stoppers, and two-piece moulded bottles with post bottom base plates. The majority of this assemblage was aqua-coloured and dated from 1850–1920 (Boow 1991: 116). As with the Oil/Vinegar category, the one exception was a tapered colourless bottle embossed with the AGM logo, and therefore dated to 1930+. Club sauce containers formed the greatest proportion of this category, appearing as both bottle stoppers (n=2, MNV=2), and glass bottles (n=9, MNV=4). Square bodied bottles (MNV=3) consisted of one green coloured vessel with patent finish, and two aqua coloured square bottles (n=8) with chamfered corners and patent finish. A final aqua coloured fragment displayed a moulded rib pattern on its body, and embossed star pattern on its round base.

Four types of commercially branded product makers appeared within the Food & Condiments assemblage: Pick-Me-Up Co. Ltd, Champion & Co., George Whybrow, and Lea & Perrins.

Two base/body fragments (MNV=1) of a Pick-Me-Up Co. Ltd. bottle were recovered from unstratified deposits. A colourless, machine-made tapered bottle, it had been made by Australian Glass Manufacturers for the Pick-Me-Up Condiment Company, that produced tomato sauce, relishes, pickles, and chutneys at their Newtown, Sydney factory from c.1900–c.1970. The embossed Pick-Me-Up brand and AGM logo suggested the bottle was manufactured between 1930 and c.1940, when printed labels generally replaced embossed branding.

The other 3 branded Food & Condiments products were all English imports. Five fragments of ‘Champion’s Vinegar’ bottle shards (MNV=1) were recovered from stratified deposit [1412]. Identified by its distinctive shape, this aqua coloured bottle consisted of a two-piece moulded hexagonal lower body with cup-bottom base (72 mm diameter), rib fluted neck and upper body, neck rings, and stopper finish (intact example available in the City of Parramatta’s Heritage Centre online website). Established in London by James Bigwood & Son, Champion & Co. mass produced vinegar from c.1868–1907. From the 1870s, they operated as particularly large exporters to the Australian market.

Context [1412] also contained two complete “Lea & Perrins” branded artefacts: an embossed glass stopper (WBRHS181204), and a complete bottle (WBRHS181238). An iconic club sauce produced in Worcestershire, England from 1840 (Jones & Sullivan 1989, 152), it is commonly found on Australian

historic archaeological sites. Finally, unstratified deposits also contained two rim / neck fragments that each held a 'club sauce' style glass stoppers embossed 'GEORGE WHYBROW'. An English company, George Whybrow produced club sauce condiments from 1825–1899.

5.4.2.4 MEDICINE & TOILETRIES

Consisting of Apothecary, Castor oil, Malt extract, Pill, and Toiletry bottles, this category contained 12% of the overall Glass artefacts (n=42), and 16% of the minimum vessels (MNV=33). Apothecary bottles and jars constituted the largest component of this category (n=28, MNV=25). Although one complete bottle was press moulded, the main assemblage had been machine-made in either a blown mould or two-piece mould. They appeared in a variety of shapes, primarily cylindrical or panelled, although rectangular and square chamfered bottles appeared in addition to octagonal, ovoid, tapered, and triangular bottles were also present. The assemblage contained one example of a pill bottle, and one example of a veterinary medicine (see discussion below under commercially branded bottles). Two examples of medical equipment were recovered. One was a small colourless glass dropper (WBRHS181312), with a hollow round body and bead finish. It was stored and possibly associated with (WBRHS181346), a small colourless medicine bottle with patent finish (see below discussions). The second was a polished base, 'drawn stem', and tapered conical bowl of a stemware drinking glass (WBRHS181210) (Figure 5-17). Recovered from context [1412], it was a small (42 mm base diameter) free blown glass measure identified by the regular horizontal graduated incisions along its bowl exterior. Used for dispensing liquid medicines, it had been manufactured before 1920. Finally, the assemblage generally dated to 1850–1920, although a few branded outliers did appear.



Figure 5-17 Left: Medicine bottle, AGM (WBRHS181346), Centre left: Medicine Dropper (WBRHS181312), Centre right: Graduated Medicine Dispenser (WBRHS181210), Right: Pill Bottle, cobalt (WBRHS181217)

Three castor oil bottle fragments were recovered from context [1412] (N=3, MNV=1). Identified by their dark cobalt blue colour, long neck, and hand-tooled double oil / mineral finish, they dated from 1850–1920. One malt extract bottle was recovered from stratified deposit [1412]. Dated by its later nineteenth century manufacture type, it was olive coloured, two-piece moulded, with a hand-tooled wide mouth patent finish, and heavy patina. It had a remnant lead cap seal, stamped '[T]HE' '[M]AL[T] EXTRACT' 'LIMITED'. Toiletries were represented by a minimum of four vessels (n=8), all recovered from unstratified deposits. Three consisted of identical colourless, mould-blown base fragments, with

outward tapered bodies and flat small diameter bases. The fourth was a complete example of 'Barry's Tricopherous' hair oil (WBRHS181214), as discussed below under commercially branded bottles (Figure 5-19).

Three examples of commercially branded glass manufacturers appeared within the Medicine & Toiletries assemblage: Australian Glass Manufacturers (AGM); Davey & Moore Ltd.; and Molineaux, Webb & Co.

- A complete two-piece mould, colourless medicine bottle with patent finish, recovered from U/S deposits (WBRHS181346). Small cylindrical vessel, 94 mm height x 25 mm base diameter. Base embossed with AGM logo, therefore dated to 1930+. Possibly associated with a colourless glass dropper, hollow round body with bead finish (WBRHS181312). Combination suggested the bottle contained a liquid medicine (Figure 5-17).
- An aqua coloured base/body fragment, two-piece mould with post bottom base, recovered from [1412] (WBRHS181402). Large cylindrical vessel, 105 mm base diameter. Base embossed with "D & M". Manufactured by Davey & Moore Ltd. of Brimsdown, Middlesex, England. Company manufactured laboratory, pharmaceutical, and medical glasswares under the tradename 'Davisil'. Maker's mark dated the bottle to c.1900+
- A complete press moulded bottle with post bottom base, recovered from [1383] (WBRHS181147). Aqua coloured, triangular tapered body with flat chamfers. Hand finished neck and hand-tooled patent finish. Diamond registration embossed on base: RD, Class III, 15 Oct 1865, Manufacturer Parcel 4. Manufactured by Molineaux, Webb & Co. Glassworks, Manchester, England. Design patent registered 15 October 1865 (Figure 5-18).



Figure 5-18 Upper: 'Molineaux, Webb & Co' bottle, inset diamond registration mark (WBRHS181147), Lower: Oil / Vinegar bottle (WBRHS181307)

Five examples of commercially branded product manufacturers appeared within the Medicine & Toiletries assemblage: Alexander C. Barry; A. J. White Ltd.; J. Pottier; Lanman & Kemp; and Vicks VapoRub.

- A complete aqua coloured toiletries bottle, recovered from U/S deposits (WBRHS181214). Rectangular with flat chamfers, two-piece mould, post bottom base, and down-tooled finish. Body embossed with 'BARRY'S / TRICOPHEROUS FOR THE SKIN AND HAIR / NEW YORK / DIRECTIONS IN THE PAMPHLET' and base with '7'. Product manufactured from 1840–1870 by Alexander C. Barry of New York, USA. Popular alcohol-based hair oil (Harris 2019) (Figure 5-19).
- A complete aqua coloured medicine bottle, recovered from U/S deposits (WBRHS181130). Panelled sides, two-piece mould, bottom plate base, and patent finish. Body side panels embossed with 'A.J. WHITE / LONDON' and dated 1884–1927. Bottle contained 'Mother Seigel's Syrup' (dyspepsia remedy). Originally established 1867 in New York, A.J. White relocated his factory in 1884 to new headquarters on Farringdon Road, London, and traded as A.J. White, Ltd. Sydney production branch established 1880, and entire company sold in 1927. (Corley 1987, 119–120) (Figure 5-19).
- A complete aqua coloured veterinary medicine bottle, recovered from U/S deposits (WBRHS181405). Ovoid body, two-piece mould, bottom plate base, and hand-tooled bead finish. Heavy patina, and remnant cork inside the bottle. Body embossed with 'J. POTTIE' surrounded by decorative ribbon. Veterinary product produced by John Pottie, established 1860 in Sydney. (Fisher and Stanton 2001) (Figure 5-19).



Figure 5-19 Commercially Branded Bottles. Upper left: 'J. Pottie' Bottle (WBRHS181405), Upper right: 'Barry's Tricopherous' Bottle (WBRHS181214), Lower left: 'Hauthways' Bottle (WBRHS181419), Lower right: 'A.J. White Bottle' (WBRHS181130)

- An aqua coloured pill bottle, rim/neck/body fragment, recovered from [1412] (WBRHS181229). Panelled sides, two-piece mould, and bead finish. Body embossed with 'BRIS[TOLS PILLS] / VEGETALES / PILDO[RAS DE BRISTOL]'. Product manufactured from 1861–1920 by Lanman & Kemp, Wholesale Druggists of New York, USA. (Fike 1987. 201).
- A complete colourless jar, recovered from U/S deposits (WBRHS181144). Two-piece mould, base plate, and machine-moulded external thread. Base embossed 'VAPO RUB'. Product manufactured by Vicks as a medical ointment. Bottle type dated from 1930–1970.

5.4.2.5 HOUSEHOLD

A small assemblage, the Household category consisted of two Blacking polish bottles, one Hand lamp base fragment, and one Vase base fragment. Press moulded from opaque white 'milk' glass, the hand

lamp artefact (WBRHS181655) was identified by its irregular shape as the base fragment of a freestanding kerosene oil Hand lamp. Recovered from U/S deposits, it dated from 1850–1930 (Cuffley 1973, 60–65). The ‘bud’ style tapered vase consisted of a base / body press moulded colourless glass fragment, with pressed glass commonly appearing after 1870 (Boow 1991. 88; Jones and Sullivan 1989, 34). Recovered from [1412], its exterior body was 12 mm thick and had decorative triangular ribbing. It tapered down to a 25 mm thick base, with a flat ground resting point and high concave base interior (WBRHS181216).

Two blacking polish bottles were recovered from [1412].

- A complete aqua coloured square bottle with chamfers, recovered from [1412] (WBRHS181419). Two-piece mould, with cup bottom, and patent finish. Body embossed with ‘HAUTHAWAYS / PEERLESS GLOSS’, and base with ‘2’. Product manufactured from 1852–1920 by Hawthaways of Boston, USA (Figure 5-19).
- A base/body fragment of aqua coloured square bottle with chamfers, recovered from [1412]. Frank Miller & Sons (WBRHS181396). Two-piece mould, with cup bottom. Body embossed with ‘[FRANK] / [MILLER]S / [CROWN] / Crown symbol / [DRESSING] / NEW YORK / USA’. Product manufactured from 1875–1895 by Frank Miller & Sons of New York, USA.

5.4.2.6 TABLEWARE

Primarily collected from [1488], the few objects within this category were all diagnostic (n=20, MNV=16). This pattern suggested heavy sampling had occurred. Similar to the Coin, Ceramic, and Glass Wine/Champagne assemblages, Glass Tableware was one of the few Windsor assemblages to include pre-1840s artefacts.

Collected from stratified deposits, the remaining Tableware had all been mould blown by hand and therefore manufactured during the early nineteenth century (Jones and Smith 1985, 35, 47). One colourless base / stem fragment had been collected from [1412]. This stemware artefact had a cylindrical bowl, and smooth polished pontil mark on its base (WBRHS181252). Context [1488] contained a minimum of eight stemware drinking glasses (n=11) collected as a group sample (WBRHS181357). They were all colourless, with unfinished pontil base marks. Five had bucket style bowls, three had ball knops, and two had annular knops (Jones and Sullivan 1989, 140). Their remnant dimensions roughly matched across the assemblage (Figure 5-20).



Figure 5-20 Stemwares. Left: 3x Ball Knops, right: 2x Annular Knops (WBRHS181357)

A group sample of six tumblers (n=6) had also been collected from [1488] (WBRHS181375). Consisting of base / body fragments, they were all colourless and cylindrical. While four had unfinished pontil base marks, two had smooth polished bases. Their remnant dimensions roughly matched across the assemblage (Figure 5-21). Finally, U/S deposits contained two colourless tumbler fragments (MNV=1) that refit into a tapered base (WBRHS181129). Press-moulded, this type of machine manufacture dated them to 1870+ (Jones and Sullivan 1989, 35).



Figure 5-21 Tumblers (WBRHS181375)

5.4.2.7 WINDOW

Representing a sample of 16 fragments (133g), two types of window glass appeared within the collection. Manufactured with a thickness below 2.8 mm, crown glass fragments constituted 78g (59%) of the assemblage, and dated before 1870 (Boow 1991, 111). One large sample from [1412] accounted for 70g of this crown glass, with the remainder collected from U/S deposits. The remaining assemblage (55g, 41%) was press-moulded with stippled indents on one surface. Dated after 1890 (Boow 1991, 111), these shards were 3–4 mm thick, and appeared in contexts [1411], [1412], [1427], and [1592], in addition to U/S deposits.

5.4.3 CONTEXT ANALYSIS

Stratified Deposits

Seventeen contexts were identified within the overall Glass Assemblage (Table 2.10). Together, these stratified deposits contained 191 glass artefacts by count (54.6%), 111 minimum vessels (53.3%), and 15,047g (50%) of glass weight. Wine/Beer was the glass category most commonly present, appearing in seven stratified contexts. This was followed by Food (four), Wine/Champagne (three), and Medicine (three).

Table 13. Glass Assemblage, Functional Types (Stratified Deposits)

Context	Type	NISP	MNV	Weight (g)
[1229]	Wine/Champagne	1	1	3
[1366]	Wine/Beer	1	1	10
[1374]	Wine/Champagne/Beer	3	1	33
[1383]	Medicine	1	1	267
[1411]	Food	2	1	23
	Window glass	0	0	4
	Wine/Champagne	2	1	128
[1412]	Cordial/Ginger beer	8	5	1,050
	Food	28	11	1,580
	Gin/Bitters	9	3	569
	Household	3	3	347
	Liquor	4	4	746
	Medicine	17	14	1,061
	Soda/Mineral water	15	12	2,552
	Tableware	1	1	34
	Window glass	2	0	73
	Wine/Champagne	21	7	1,650
	Wine/Beer	11	10	1,601
	Unknown	9	7	808
[1419]	Wine/Beer	1	1	67
[1422]	Food	1	1	9
[1427]	Medicine	1	1	1
	Soda/Mineral water	1	1	5
	Window glass	2	0	18
	Wine/Beer	1	1	6
[1433]	Wine/Beer	19	2	439
[1446]	Cordial/Ginger beer	1	1	13
[1488]	Tableware	17	14	1,446
[1497]	Wine/Beer	1	1	24
[1508]	Unknown	1	1	2
[1590]	Food	1	1	81
	Wine/Beer	2	1	249
	Unknown	1	1	65
[1592]	Window glass	2	0	17
[1599]	Gin/Bitters	1	1	66
Totals		191	111	15,047g

Within stratified deposits, context [1412] dominated the overall collection. It contained 128 glass artefacts by count (67%), 77 minimum vessels (69.3%), and 12,071g of shards (80%). Since the Windsor glass collection had been heavily sampled, it is not possible to determine whether this concentration reflected a different field sampling strategy for [1412], or an actual maximum in the excavated glass artefacts. Regardless, [1412] was the only context to contain the full range of bottle types within the Medicine category, with all examples of Castor oil (n=3), Malt extract (n=1), and Pill bottles (n=1) appearing within this specific assemblage.

By way of contrast, the second largest assemblage recovered from stratified deposits appeared within context [1488], and only consisted of glass tableware (n=17, MNV=14, 1,446g). Representing the third largest stratified assemblage, context [1590] contained only 3 vessels (n=4, 395g), with 63% of that weight consisting of two Wine/Beer bottle fragments. Overall, the distribution of this glass assemblage across stratified deposits suggested the presence of an artefact sampling strategy, rather than an actual depositional pattern.

Unstratified (U/S) Deposits

By weight (45.4%), minimum vessel count (MNV=46.6%), and weight (50%), unstratified deposits (U/S) roughly accounted for the other half of the Glass assemblage. Further, these deposits contained the greatest diversity of artefact types (Table 14).

Table 14. Glass Assemblage, Functional Types (Unstratified Deposits)

Context	Type	NISP	MNV	Weight (g)
[U/S]	Cordial/Ginger beer	7	6	2,240
	Food	15	11	899
	Gin/Bitters	7	6	422
	Household	1	1	18
	Liquor	7	3	299
	Medicine	13	11	712
	Soda/Mineral water	5	4	539
	Tableware	2	1	95
	Toiletries	8	4	243
	Window glass	9	0	21
	Wine/Beer	41	27	5,285
	Wine/Champagne	30	14	3,427
	Unknown	14	9	767
Totals		159	97	14,967g

Notably, these U/S deposits contained the only fragment of a hand lamp (Household), the only pressed glass example of Tableware, and the only milk bottle fragment (Food). Alcohol bottles constituted 63% of the U/S assemblage (n=85; MNV=50; 9,433g). At 18.6%, non-alcoholic beverages formed the second greatest type (n=12; MNV=10; 2,779g). Finally, the Medicine and Food assemblages were roughly similar in counts and weights, with the two categories both representing the third most common vessel type within the Glass assemblage.

5.4.4 GLASS MANUFACTURERS & DISTRIBUTORS

Approximately 13% (MNV=27) of the Glass assemblage could be identified by commercial brand indicating the product manufacturer and/or distributor (

Table 15 and Table 16). Dates for these glass containers were established by combination of embossed

Manufacturer	MNV	Location	Date Range	names, maker's marks, and other stylistic elements. For example, the Coca Cola bottle was dated to 1941+ based upon the specific design of its iconic logo. Although the majority of the collection had been manufactured in Sydney, imported English bottles were
Australian Glass Manufacturer	14	Sydney	1920–1970	
Davey & Moore Ltd.	1	England	1900+	
Glass Containers Ltd.	1	Penrith, NSW	1970+	
Molineaux, Web & Co.	1	Manchester, UK	Oct 1865	
South Australian Glass Bottle Factory	1	Adelaide	1890–1896	
Unknown (small triangle base mark)	1	Unknown	1860–1895	

also present.

Table 15. List of Known Manufacturers.

Manufacturer	MNV	Location	Date Range
Australian Glass Manufacturer	14	Sydney	1920–1970
Davey & Moore Ltd.	1	England	1900+
Glass Containers Ltd.	1	Penrith, NSW	1970+
Molineaux, Web & Co.	1	Manchester, UK	Oct 1865
South Australian Glass Bottle Factory	1	Adelaide	1890–1896
Unknown (small triangle base mark)	1	Unknown	1860–1895

Table 16. List of Known Products.

Product Maker	Type	MNV	Location	Date Range
A. J. White	Medicine	1	London	1884-1927
Alexander C. Barry	Toiletry	1	New York	1851–1920
Carlton & United Breweries	Wine/Beer	1	Penrith, NSW	1970+
Champion & Co.	Food	1	London	1868–1907
Coca Cola	Cordial	1	Sydney	1941+
Frank Miller & Sons	Household	1	New York	1875–1895
George Whybrow	Food	2	England	1825–1899
Hauthaways	Household	1	Boston	1852–1920
Hume & Pegrum	Soda/Mineral water	4	Sydney	1875–1896
John Pottie	Medicine	1	Sydney	1860+
Lanman & Kemp	Medicine	1	New York	1861–1920
Lea & Perrins	Food	2	England	1840+
Newling & Walker	Soda/Mineral water	1	Parramatta, NSW	1876–1906
Noon's Cordials	Cordial	4	Windsor, NSW	1913–1970
Pick-Me-Up Co. Ltd.	Food	1	Sydney	1930–1960
Summons & Co.	Soda/Mineral water	1	Sydney	1882–1930
Tooth & Co. Ltd.	Wine/Beer	1	Sydney	1923–1930
Udolpho Wolfe	Gin/Bitters	1	Netherlands	1848–1902
Vicks	Medicine	1	USA	1930–1970
Wilce's Cordial and Soft Drink	Cordial	1	Sydney	1920–1960

Similarly, although the collection primarily contained Sydney (and regional) products, imports included English food condiments, American household products and medicines, and Dutch gin.

5.5 Bone

5.5.1 METHODOLOGY

All recovered animal bone fragments were identified through macroscopic comparisons with images available through standard texts (Filius and Blake 2015; Heinzlmann 2019; Schmid 1972). Additional on-line resources included: <https://boneidentification.com/>, <https://animaldiversity.org/>, and <https://sketchfab.com/vetanatMunich/models>. In line with best practice recommendations (Driver 1992), fragments were first identified to the bone element, and then to the appropriate taxonomic level. While the majority of bone fragments were identified to the taxonomic level of genus, the close anatomical similarity of sheep (*Ovis*) and goat (*Capra*) did not support this level of differentiation. Therefore, these bone artefacts (NISP=55) were all identified under the genus “*Ovis*,” with an explicit caveat that this assemblage may contain some “*Capra*” fragments.

Fragments were typically bagged separately by their unique catalogue number. For cases where several (different) faunal elements had been accidentally clustered under one catalogue number, these bone fragments were individually bagged within their larger original bag and thereby kept associated as a 'group' linked to their original unique catalogue number. All instances of these 'subdivisions' within a single catalogue number were recorded within the catalogue notes.

Maximum length and width measurements (in millimetres) were taken for every bone element, and weights were estimated to the nearest gram. Where possible, butchering marks were identified, with a general description of their location(s) and tool used. Examples of juvenile animals were also identified by the presence of an unfused epiphyseal plate at an articulation zone of the faunal element.

The Number of Individual Species Present (NISP) reflected a count of *all* bone fragments within the total collection (n=117), including those recovered from both stratified and unstratified contexts. In contrast, the Minimum Number of Individual (MNI) calculations were only applied to bone fragments recovered from the stratified deposits. They were estimated *within* their own specific numbered context. In other words, no attempt was made to cross-fit elements across different context units.

5.5.2 ANIMAL BONE ANALYSIS

A total of 117 bone fragments were analysed across a combination of identified contexts (n=13) and unstratified deposits. By overall weight (5245.3g) the faunal collection was split roughly evenly across the stratigraphic contexts (2,587g) and unstratified deposits (2658.3g). Seven taxonomic genera were identified within the assemblage (see Table 17). Within this bone collection, 111 fragments were identified to their genus level, representing an overall identification rate of 95%. The vast majority of these bone artefacts had at least one characteristic element. There was a general absence of small undiagnostic bone fragments. And smaller species (birds, fish, rodents, etc.) were largely absent. Therefore, the overall high rate of taxonomic identification may have reflected bone sampling strategies applied during excavations.

Table 17. Faunal Assemblage, Species Type (WBRP Collection). Please Note: Genus category 'Ovis' may also contain fragments of 'Capra'.

Genus (Common Name)	Total NISP	Total Weight (g)
Bos (cow)	47	2,942
Canis (dog)	2	26
Ovis (sheep)	55	1,469
Equus (horse)	3	765
Lepus (rabbit)	1	2
Gallus (chicken)	2	10
Sus (pig)	1	4
Indeterminate	6	27.3
Totals	117	5,245.3

When calculated by raw NISP, the most common species was sheep/goat (Ovis n=55). Cattle was the second common species (Bos n=47). All other animal species were minimally present, represented by three or less bone artefacts. When examined by weight, cattle were the dominant species, at almost 3kg (56%) of the total collection. Nevertheless, this result was likely due to the larger size and weight of cattle bones, as sheep/goat constituted a greater number of overall bone fragments, and almost 1.5kg (28%) of the assemblage despite their substantially smaller size.

The other animal species were recovered from both stratified and unstratified deposits, with the exception of two. The only instance of rabbit was a proximal right tibia fragment from context [1599] (WBRHS181500), and one pig left canine appeared within unstratified deposits (WBRHS181725).

Non-dietary animals contributed to a small number of fragments within the collection. Dog remains consisted of two bone artefacts: a partial rib neck/body recovered from context [1422] (WBRHS181423), and right midshaft fragment of mandible and teeth (three x Premolars and two x Molars) from unstratified deposits. Horses were represented by three bone artefacts: a left distal femur from context [1412] (WBRHS181522), a half-section of cranial vertebrae from unstratified deposits (WBRHS181587), and a segment of left anterior Os Coxae (hip), also from unstratified deposits (WBRHS181689). This last bone element displayed evidence of butchering in the form of hacksaw marks through the shaft of the associated ilium fragment. This evidence suggested processing of the carcass for dog food, as further discussed in a later section of this report.

Thirteen contexts were identified within the overall faunal assemblage (Table 15). Together, these stratified deposits contained a NISP count of 70 individual fragments, and combined weight of 2,587g. Representing a total MNI estimate of 25, these stratified contexts primarily consisted of 1–2 animals, typically sheep (present in ten contexts) and cattle (present in seven contexts).

Three stratigraphic deposits appeared significant in terms of both their MNI calculations and diversity of taxonomic genera. Containing an MNI of four animals (NISP=9), context [1412] constituted almost 50% of the overall weight of this faunal collection (1,279g). However, this high weight reflected the large size of the elements present, in addition to their number count (n=9). In addition to two cows and a sheep, context [1412] also contained the left distal femur of a horse (WBRHS181522). Context [1599] held the second largest weight of bone (315g), across a total NISP count of 13 fragments. With an MNI of five animals, this context included three sheep, a cow, and the right proximal tibia of a rabbit (WBRHS181500)—the only example of rabbit identified within the entire assemblage. Finally, context [1497] contained a weight of 117g across one indeterminate bone fragment, and an MNI of three animals: a cow, a sheep, and the right distal femur of a chicken (WBRHS181622)—one of only two examples of chicken to appear within the faunal collection.

Two other contexts held significant weights. Context [1488] weighed 215g, spread across eight sheep bone fragments (MNI=2). Containing a total count of six cow and sheep bone fragments (MNI=2), context [1508] weighed 134g. The high weights of both contexts were primarily due to the large size of their individual bone artefacts. Finally, although context [1433] contained an NISP count of 16, these were bone shatter from a single cow rib shaft.

Table 18. Faunal Assemblage (Stratified Deposits)

Context	Genus	NISP	MNI	Weight (g)
[1366]	Bos (cow)	1	1	120
	Indeterminate	1	0	12
[1412]	Bos	5	2	633
	Equus (horse)	1	1	453
	Ovis (sheep)	3	1	193
[1420]	Bos	1	1	27
[1422]	Canis (dog)	1	1	2
	Ovis	3	1	109
[1427]	Ovis	2	1	66
[1433]	Bos	16	1	59
[1453]	Ovis	1	1	22
[1488]	Ovis	8	2	215
[1497]	Bos	1	1	72
	Gallus (chicken)	1	1	2
	Ovis	2	1	28
	Indeterminate	1	0	15
[1508]	Bos	4	1	91
	Ovis	2	1	43

[1555]	Ovis	2	1	97
[1599]	Bos	2	1	168
	Lepus (rabbit)	1	1	2
	Ovis	10	3	145
[1607]	Ovis	1	1	13
Totals		70	25	2,587

Within the unstratified deposits, a total of six taxonomic genera were identified, in addition to indeterminate fragments (Table 16). This assemblage represented a combined weight of 2,658.3g across an NISP count of 47 individual elements. It is worth noting that the weight of 0.3g resulted from a single bag of tiny bone fragments (n=4) that had entered the catalogue (WBRHS181646) and been subsequently discarded. Since this item was one of very few examples of small undiagnostic bone within the entire collection, its unusual presence suggested that a faunal sampling strategy had been employed during site excavations.

By weight, cow dominated the unstratified collection (67%), followed by sheep (20%). Nevertheless, a greater NISP count of sheep were present (45%), as opposed to cow (36%). The overall pattern suggests a faunal collection biased towards sheep, with the weight differential primarily created by differences in mammal size.

Table 19. Faunal Assemblage (Unstratified Deposits).

Genus (Common Name)	Total NISP	Total Weight (g)
Bos (cow)	17	1,772
Canis (dog)	1	24
Ovis (sheep)	21	538
Equus (horse)	2	312
Gallus (chicken)	1	8
Sus (pig)	1	4
Indeterminate	4	0.3
Totals	47	2,658.3

5.5.3 FOODWAYS & BUTCHERING ANALYSIS

Across the faunal collection (n=117), the general skeletal element group could be determined for 109 bone fragments. There appeared to be a trend towards appendicular (57%, n=62) versus axial (45%, n=49) skeletal elements. This pattern appeared most strongly within the stratigraphic contexts, where appendicular elements constituted 62% (n=42) of the overall skeletal groups (n=68).

The overall collection primarily consisted of sheep and cattle. It was roughly balanced between frontal/fore (n=22) and rear/anterior (n=26) skeletal elements, in addition to metapodial elements (n=10). The latter were clustered together because of uncertainty identifying them with carpal versus tarsal zones.

Sheep dominated the major frontal elements, including all fragments of radius/ulna (n=6) and humerus (n=2). Of the scapula (n=14), ten fragments were sheep and four were cow. Anterior bone fragments contained a greater range of animal genera across the three major skeletal elements. Eight fragments of Os Coxae (hip) were identified, consisting of four sheep, three cows, and one horse. The ten femur artefacts consisted of two sheep, six cow, one horse, and one chicken. Tibia fragments contained slightly more sheep (n=5) than cow (n=2), and also included one rabbit. Metapodials primarily consisted of sheep (n=8) rather than cow (n=2). In summary, while cow was an important component of these bone fragments (n=17), sheep appeared in greater quantity (n=37) throughout the combined assemblage of major frontal and anterior skeletal elements.

Butchering marks were present within overall faunal collection. Three types of marks (hacksaw, knife, and possible gunshot) were identified on a total of 46 bone artefacts—or approximately 40% of the total collection (n=117). Demonstrating the primary method of processing, 94% (n=43) of the butchery assemblage displayed the characteristic parallel striations created by a hacksaw. Cows and sheep with hacksaw marks were equally represented in terms of both number count and nature of depositional context. For cows, nine fragments were recovered from stratigraphic contexts, and twelve from unstratified (n=21). Similarly, for sheep, nine fragments were identified in stratigraphic contexts, and

eleven from unstratified (n=20). Two additional bone fragments displayed evidence for hacksaw processing. Context [1497] contained an indeterminate long bone midshaft segment of a medium sized mammal with saw marks through both its proximal and distal ends (WBRHS181605). The final example of hacksaw marks appeared on the left *Os Coxae* (hip) of a horse—specifically through the shaft of its ilium (WBRHS181689). Since horse was not commonly a part of human diets within established historic period towns, this unstratified fragment may have represented either a slaughter of unwanted draught animals, or the remains of food prepared for local domestic dogs.

Knife cuts formed a second type of butchery mark within the faunal collection. Context [1453] contained an anterior fragment of sheep scapula cut across its shaft (WBRHS181512). Two metapodial fragments collected from context [1488] displayed knife cuts across their midshafts (WBRHS181510—part of a bag of bone artefacts accidentally grouped under the same catalogue entry number). Finally, the right radius of one sheep recovered from unstratified deposits displayed an unusual mark possibly linked to butchery practices (WBRHS181677). It consisted of a regular oval shaped hole located halfway along the midshaft. Its clean edge was encircled by dark black staining, and possibly represented the impact of a gunshot along (rather than through) the frontal leg. A whole bone element, the presence of an unfused epiphyseal plate at its distal articulation indicated the sheep was probably of juvenile age.

5.6 Shell

5.6.1 METHODOLOGY

Shell artefacts were identified using a range of malacological resources including Huber (2010; 2015), Lamprell and Whitehead (1992) and Lamprell and Healy (1998). The remains were conservatively identified to the lowest taxonomic level possible following the methods of Szabó (2009, 186). Specimens were only identified to a taxonomic rank if they possessed enough distinguishable features to be classified to that level. If a specimen only had characteristics that could identify it to a higher level, it was classified as such. This resulted in some bivalves (specifically *Ostreidae* and *Arcidae*) being identified to a higher taxonomic level. This method ensured that species were not misidentified and minimised the potential of a distorted representation of some species or genera. It therefore provided a more accurate representation of the assemblage.

Shell remains were identified as either gastropod or bivalve. Specimens that could not be classified beyond gastropod or bivalve were identified as indeterminate fragments of their class. Following identification, the shell assemblage was quantified using a number of measures. The Number of Identified Specimens (NISP) was determined by calculating the total number of individual fragments of an identified taxonomic group. The Minimum Number of Individuals (MNI) was calculated following the approach of Harris et al. (2015). MNI is typically calculated by preselecting one non-repetitive element (NRE) for the mollusc class being examined and counting it. Each of the identified taxonomic groups were also measured in weight (g). Due to a range of taphonomic processes and individual species morphology, weight does not always provide an accurate indication of taxonomic abundance (Szabó 2009, 187). However, when used in combination with other quantification measures, it can possess a comparative value.

5.6.2 SHELL ANALYSIS

A total NISP count of 77 shell specimens were identified and analysed within the assemblage. Representing a total MNI of 23, and approximately 494g, this shell was recovered from unstratified deposits and a combination of eight separate contexts: [1411], [1412], [1422], [1427], [1433], [1508], [1592], and [1599]. Four shells were identified from the class *Gastropoda*, with a total weight of approximately 22g. A total count of 63 shells (NISP) were identified from the *Bivalvia* class, representing an MNI count of 19, and approximately 450g. Ten (NISP) shell fragments of indeterminate identification (MNI = 0; 23g) were also recovered from unstratified deposits.

The assemblage contained only two species of bivalve. *Saccostrea cucullata* (Sydney Rock Oyster) was the most abundant, with a total NISP value of 44, MNI = 14, and approximate total weight of 407g. Its dominance within the overall collection suggested the species had been specifically targeted during molluscan harvesting. The second bivalve present was the estuarine species *Andara trapezia* (Sydney cockle, which is a coastal species), recovered with a total NISP of 19, MNI = 5, and approximate weight of 44g. The greatest concentration of bivalves was recovered from context [1508], specifically eight *Saccostrea cucullata* shells (NISP and MNI) that weighed 132g. This assemblage was followed by a mix of both *Saccostrea sp.* and *Andara sp.* recovered from context [1412], with a total combined NISP = 6, MNI = 3, and weight of 68g. A similar and smaller mix of both bivalve species appeared within context [1592] (combined NISP = 3, MNI = 1, 7g). Finally, although only registering an MNI = 1, context [1599] contained 69g of *Saccostrea cucullata* (NISP = 3).

Two different species of the gastropod class appeared within the assemblage. Two individual examples of *Pyrazus ebeninus* (Hercules club mud whelk) were identified: one (NISP and MNI = 1, 5g) was recovered from context [1427] (WBRHS181541), and the other (NISP and MNI = 1, 14g) from an unstratified deposit. The assemblage also included two examples (NISP and MNI = 2, 2g) of *Batillaria australis*, a sea snail species endemic to Australia. Both of these shells appeared in unstratified deposits.

Much of the assemblage had been subjected to post-depositional taphonomic processes, with 62% of the collection (by NISP) recovered as fragments rather than whole shells, and a worm bore hole present in the one *Pyrazus ebeninus* shell from context [1427]. Despite these taphonomic processes having an impact on the identification and quantification of the overall shell assemblage, enough material survived to produce sufficient and reliable analysis data. There was no evidence of burning or calcining noted during the analysis of the shell collection.

5.7 Metals, Miscellaneous & Architectural/Tools

5.7.1 METHODOLOGY

As a composite collection of assemblages, these groups were variously defined by their fabric and/or function. The major categories for analysis consisted of: Clay Pipes, Clothing and Personal Items, Coins, Equestrian Artefacts, Food Preparation and Storage, and Architectural/Tools (Metals). Although largely undiagnostic, they did cluster around the late-nineteenth through early twentieth century period. The overall assemblage also contained a number of coins, a possible decorative box lid, and a Pelham Bit bridle fragment associated with early twentieth century Federation through the Inter-War Period.

5.7.1 CLAY TOBACCO PIPES

Consisting of a minimum count of 16 clay tobacco pipes (NISP=21, 50.3g), the overall assemblage was dominated by undecorated pipe stem fragments. These were recovered from a range of archaeological contexts and unstratified deposits. One unmarked upright-style bowl and stem fragment was recovered from context [1351] (WBRHS181473). The remainder of unmarked stem fragments were collected from contexts [1229], [1374], [1422], [1427], [1453], [1488], [1590], and [1599].

Four artefacts within this assemblage retained diagnostic markings, all collected from unstratified deposits.

- A marked pipe consisting of two refitted elements: a small, unmarked bowl fragment, and an 80% complete stem, spur and bowl (WBRHS181193). Recovered from unstratified deposits, it was an Irish navy 'dudeen' style pipe, characterised by its upright bowl with rouletted rim (80

mm length, 45 mm height, 24 mm diameter, 14.4g weight). Its stem was imprinted 'CORK'. While these Irish-themed pipes were commonly produced by Scottish-based factories, they have been roughly associated with the 1860s through 1870s (Gojak and Stuart 1999, 45, and Figure 7). Spur markings indicated manufacture by William White, who operated in Glasgow during the period 1806–1955 (Figure 5-22).



Figure 5-22 Clay tobacco pipe, William White (WBRHS181193)

- A burnt stem fragment (41 mm length, 1.9g weight) imprinted 'McDOUGALL. GLASG...' (LHS) '...URNS CUTTY PIPE' (RHS) (WBRHS181514). Representing a popular 'Burns Cutty' style pipe, it had been manufactured in Glasgow by Duncan McDougall, a mass-production company that distributed globally from 1849–1967 (Wilson and Kelly 1987).
- A stem (30 mm length, 1.9g weight) imprinted 'SMOKE CONQ...' (LHS) '... CONQUEROR' (RHS) (WBRHS181525). The 'Smoke Conqueror' style pipe was produced by a wide range of British manufacturers from c.1869–1930s.
- A stem and bowl attachment (28 mm length, 3.4g weight) embossed 'PENF...' (LHS) '...ER' (RHS), both surrounded by a beaded border (WBRHS181924). The pipe was associated with Edwin Penfold, a Sydney distributor who operated from 1855–1890.

5.7.2 CLOTHING & PERSONAL ITEMS

This artefact category included objects associated with dress, sewing, and personal accessories. It contained: a small circular box lid (match or pill container), a thimble, buttons / closures, and an umbrella / parasol. Together they suggested a late-nineteenth through Interwar depositional period.

5.7.2.1 CIRCULAR BOX LID

Context [1412] contained a distinctive composite metal artefact (Figure 5-23). A press-stamped round lid, it displayed the insignia of the Prince of Wales in moulded relief (WBRHS181435). Consisting of three ostrich feathers within a crown, the emblem was centred within a red painted concave background and encircled by a relief moulded edge (30 mm diameter, 4 mm high, 3g weight). A small, thin, and decorated artefact, its upper element was missing. It also retained a simple clip closure at its base. If

the missing section were a small hinge, this artefact may have been the lid closure of a small circular box. Although it may have contained pills or matches, the Prince of Wales insignia possibly associated it with the stamped trademark of the Newton Wilson brand of sewing machines, manufactured in Britain from 1857 (Figure 5-23 inset). If so, this box may have held replacement needles or customised fittings for a Newton Wilson machine.



Figure 5-23 Circular Box Lid, facing and reverse. Inset, Newton Wilson trademark (WBRHS181435)

5.7.2.2 THIMBLE

One copper alloy thimble (22 mm height, 5g weight) was recovered from Area 1 West Ridge unstratified / surface find (WBRHS181373). It tapered from a base diameter of 15 mm to a head diameter of 11 mm. It had been manufactured through the English 'deep-drawn' technique, with its head and body mechanically stamped on a turning lathe (Hill 1995). Ending with an undecorated rim, its simplicity of manufacture and high copper content suggested manufacture during the late nineteenth century (Read 2018).

5.7.2.3 BUTTONS & CLOSURES

Six copper alloy buttons were recovered during excavations.

- Copper alloy round 4-hole sew-through 'trouser' button with central recessed well ('sinkie'), context [1590]. Decorative crosshatch rouletted present on the rim (17 mm diameter, 1g weight) (WBRHS181754) (Figure 5-24).
- Two copper alloy round 4-hole sew-through 'trouser' buttons with central recessed well ('sinkie'), and remnant 'japanning' black enamel present, context [1590]. These artefacts appeared in two sizes: smaller (15 mm diameter, 1g weight), and larger (17 mm diameter, 1g weight). Since both buttons had obscured text imprinted on their rim, they were possibly associated with the same item of clothing (WBRHS181709). The presence of remnant enamel

and imprinted text suggested British manufacture over the mid-nineteenth/mid-twentieth century (Lindberg 1999; Iacono 1996) (Figure 5-24).

- Copper alloy round 4-hole sew-through button, context [BB19, spit 1]. Rim indicated by rouletted line on interior face (15 mm diameter, 4g weight) (WBRHS181361). This button likely dated to the early / mid-nineteenth century (Figure 5-24).
- Copper alloy loop shank button, context [1406]. Dome shaped head with remnant gold gilt and decorative incised star pattern (12 mm diameter, 1g weight) (WBRHS181194) (Figure 5-24).
- Copper alloy loop shank button, only head present, highly oxidized, context [1412]. Flat undecorated head (17 mm diameter, 2g weight). Possible military uniform button. (WBRHS181489).



Figure 5-24 Buttons & Closures. Left: loop shank button (WBRHS181194), Centre left: 2 x 4-hole ‘sinkies’ (WBRHS181709), Upper centre right: 4-hole ‘sinkie’ (WBRHS181754), Lower centre right: 4-hole ‘sinkie’ (WBRHS181361), Right: clasp fastener (WBRHS181367)

It is highly remarkable that the *entire* button assemblage consisted of these buttons—in other words, no bone, iron, glass, or porcelain buttons appeared within the project collections.

Three additional closures were recovered:

- Copper alloy clasp for ribbon or fabric, recovered from Area 1 West Ridge surface finds (36 mm length, 31 mm width, 4g weight). Clothing fastener, probably the rear clasp of a waist coat or fitted outer coat (WBRHS181367) (Figure 5-24).
- Copper alloy eyelet, context [KK09, spit 1]. Boot eyelet with tooled grip fitting (7 mm diameter, 1g weight) (WBRHS181349).
- Copper alloy stud fastener, context [1497]. Possible use with leather or heavy cloth fabric (8 mm diameter, 6 mm thick, 1g weight) (WBRHS181639).

5.7.2.4 UMBRELLA/PARASOL

Various fragments of an umbrella (or parasol) were recovered from Area 1 West Ridge surface finds (WBRHS181335). These consisted of a round copper alloy oxidized shaft runner with tooled grip fitting and rolled rim (15 mm diameter, 11 mm length, 18g weight), in addition to five iron fragments of the umbrella frame 'stretcher' segments. These artefacts were too heavily oxidized to take any meaningful measurements.

5.7.2.5 COINS

A total of nine coins were archaeologically recovered (Figure 5-25). As a collection, they represented two distinct periods of site occupation: the early nineteenth century (located in the Oviform Drain trench backfill), and 1920s–1960s (general site deposition).

- Two copper farthings dated 1799, recovered from Oviform Drain trench backfill (each 23 mm diameter, 6g weight). Obverse: 'GEORGIUS III DEI GRATIA REX 1799' around portrait of King; Reverse: 'BRITANNIA 1 FARTHING' (WBRHS181108, WBRHS181355).
- A copper penny dated 1921, recovered from context [1420] (30 mm diameter, 9g weight), highly oxidized. Obverse: 'GEORGIVS V.D.G ...'; Reverse: 'COMMONWEALTH OF AUSTRALIA' around central 'ONE PENNY 1921' (WBRHS181380).
- A copper penny dated 1933, recovered from context [1419] (30 mm diameter, 9g weight), highly oxidized. Obverse: 'GEORGIVS V.D.G BRITT OMN: REX F.D.IND:IMP' around portrait of King George V with crown; Reverse: 'COMMONWEALTH OF AUSTRALIA' around central 'ONE PENNY 1933' (WBRHS181116).
- A copper cent dated 1966, recovered from context [1411] (16 mm diameter, 2g weight), highly oxidized. Obverse: 'ELIZABETH II AUSTRALIA' around portrait of Queen Elizabeth II with crown; Reverse: '1' with obscured sugar glider (WBRHS181117).
- A silver sixpence dated 1928, unstratified (19 mm diameter, 2g weight). Obverse: 'GEORGIVS V D.G.BRITT: OMN: REX F.D.IND:IMP' around portrait of King George V with crown; Reverse: 'SIXPENCE 1928' around crest of the Commonwealth of Australia (WBRHS181374).
- A copper half penny dated 1932, recovered from Area 1 West Ridge unstratified (25 mm diameter, 5g weight), highly oxidized. Obverse: 'GEORGIVS V.D.G BRITT OMN REX F.D.IND:IMP' around King George V with crown; Reverse: 'COMMONWEALTH OF AUSTRALIA' around central 'ONE HALF PENNY 1932' (WBRHS181109).
- A silver florin (two shillings) dated 1936, unstratified (28 mm diameter, 11g weight). Obverse: 'GEORGIVS V.D.G BRITT OMN: REX F.D.IND:IMP' around King George V with crown; Reverse: 'ONE FLORIN TWO SHILLINGS 1936' around crest of the Commonwealth of Australia (WBRHS181118).
- A silver florin dated 1944, unstratified (28 mm diameter, 11g weight). Obverse: 'GEORGIVS VI D:G: BR: OMN: REX F:D:IND:IMP.' around King George VI; Reverse: 'FLO*RIN 1944 AUSTRALIA' around Arms of the Commonwealth of Australia (WBRHS181368).



Figure 5-25 Coins, Obverse & Reverse. Left: (WBRHS181355, WBRHS181108), Centre left: (WBRHS181109, WBRHS181380, WBRHS181116), Centre right: (WBRHS181117, WBRHS181374), Right: (WBRHS181368, WBRHS181118)

5.7.3 EQUESTRIAN ARTEFACTS

The equestrian assemblage appeared to generally correlate with a late nineteenth through mid-twentieth century period of site use. It contained one bridle piece associated with Australian mobilisation before and during the Great War.

5.7.3.1 HORSESHOES

A total of seven horseshoes were recovered during excavations. All hand forged, they appeared in combination of contexts: [1412], [1600], [TP LL25 Spit 3], Area 1 West Ridge surface finds, and general unstratified deposits. Overall, both complete and fragmentary examples appeared to represent two size categories (Figure 5-26). Light Horseshoes (n=4) were approximately 130 mm length, 26 mm width, 12 mm thick, and less than 200g weight. Draught Horseshoes (n=3) were larger, approximately 150 mm length, 31 mm width, 20 mm thick, and 850g weight (complete). All examples were highly oxidized.



Figure 5-26 Horseshoes, Left: (WBRHS181340), Right: (WBRHS181140)

5.7.3.2 PELHAM BIT

During excavations, one half of an iron Pelham Bit was recovered from unstratified deposits (WBRHS181266). Highly oxidized, its dimensions were: 180 length, 135 width, 100g weight (Figure 5-27). Following establishment of the Hawkesbury Squadron of the NSW Lancers on 1 October 1900, the Windsor Half-Squadron became a new local military presence, with 'Mr. Fred Cupitt's tender for erecting orderly rooms for the Windsor Half-Squadron of Lancers' soon accepted (*The Windsor and Richmond Gazette*, 31 August 1901, 3). Their issued equipment included the Pelham Bit, a type of angle cheek curb bit used by the Australian Light Horse, as it was designed to accommodate a generic range of horses' mouths. Reorganised into the 7th (NSW Lancers) Australian Light Horse Brigade in 1912, the Windsor Half-Squadron served in the Gallipoli campaign of the Great War (Australian Light Horse Studies Centre 2008).



Figure 5-27 Pelham Bit (WBRHS181266)

5.7.3.3 CARRIAGE BOLTS

Excavations recovered four carriage bolts. One was highly oxidized iron (WBRHS181714, context [1509]) and only represented a mid-shaft fragment. The three intact steel bolts were approximately 13–15 mm length, and 170–220g weight (WBRHS181413, WBRHS181262, WBRHS181137). They all had screw-thread fittings, and domed heads of approximately 175–210 mm diameter. One of the unstratified examples (WBRHS181413) included an attached square steel washer.

5.7.4 FOOD PREPARATION & STORAGE

5.7.4.1 CUTLERY & FLATWARE (METAL)

Four fragmentary items of cutlery and flatware were recovered during excavations:

- One copper alloy spoon (80 mm length, 43 mm width, 1 mm thick, 13g weight). Recovered from context [1427] the fragment consisted of the mid-section of a spoon—specifically a partial bowl,

shoulder, and partial handle. Made of thin pressed metal, it did not display a maker's mark (WBRHS181417).

- One iron fork, highly oxidized (97 mm length, 20 mm width, 3 mm thick, 23g weight). It was recovered from context [1497]. Since the artefact included two sturdy tines, it possibly represented the remains of a carving fork (WBRHS181662).
- One iron handle, highly oxidized (137 mm length, 23 mm width, 4 mm thick, 23g weight). Recovered from context [1509], it was identified by its remnant shape. This indeterminate artefact could have come from either a large serving spoon, or the interior tang of a bone handled carving knife (WBRHS181766).
- One beige coloured plastic knife fragment (40 mm length, 15 mm width). Recovered from context [1453]. Cast moulded with a rounded tip and upper side of the blade. Serrated edge on the thin lower side of the blade. Likely dated post-1970 (WBRHS181288).

5.7.4.2 FOOD STORAGE (METAL)

Food storage consisted of both closures and containers. A total of three aluminium ring pull type cans were recovered, dated from the 1960s through the 1980s (Maxwell 1993). These were represented by a ring pull loop from context [1466] (WBRHS181348), in addition to a complete ring pull (WBRHS181362), and the lid of a ring pull can (ring pull removed, 70 mm diameter, 9g weight) from context [1427]. They did not refit, and therefore represented two separate cans. Closures also included two twentieth century crown seal bottle caps, recovered from context [1411] (30 mm diameter, 4g weight) (WBRHS181685) and Area 1 West Ridge surface finds (34 mm diameter, 4g weight) (WBRHS181394).

Two round iron food containers were recovered, both highly oxidized. Four fragments (43g weight) were collected from Area 1 West Ridge surface finds (WBRHS181722). Additionally, two fragments of a round can were recovered from the Box Drain (East of shaft). They refit into a container with a total diameter of 70 mm and 65g weight (WBRHS181196).

5.7.5 ARCHITECTURAL/TOOLS (METAL)

This category consisted of two artefact groups: Fasteners (nails, screws, nuts, washers, and brackets) and Tools. The metal assemblage also contained 1077g (n=46) of 'Indeterminate' artefacts—defined as objects that were unidentifiable by both activity and function. The vast majority of these were highly oxidized. Unidentified Ferrous Objects' (UFOs), constituted 84% of the overall assemblage by weight (907g). Although a concentration of these iron objects was recovered from the Area 1 West Ridge Surface Finds (unstratified), they also appeared in contexts [1411], [1412], [1422], [1433], [1488], [1497], and [D35 Spit 5], in addition to other unstratified deposits.

One Indeterminate artefact from the Area 1 West Ridge Surface Finds (WBRHS181101) appeared to be the remains of a round bar attachment with large oval loop end (145 mm length, 10 mm diameter, 100g weight), and probably represented a structural fastener of unknown origin. The assemblage also contained Indeterminate tin, aluminium, lead, and copper alloy objects (one of each).

Finally, two separate lengths of woven copper alloy wires were recovered. While the thin 3-strand length recovered from context [1427] was probably remnant electrical wiring (WBRHS181275), the heavier copper wire artefact recovered from unstratified context [TP019 Spit 2] consisted of seven thick bore woven wires bound at the end by a copper alloy fitted tube (WBRHS181202).

5.7.5.1 FASTENERS

A range of fastener types were archaeologically recovered. These Architectural/Structural objects included 54 (MNI) iron common nails, two lath nails, one clasp nail, two common screws, one flange nut, and one washer (Table 20). A heavily oxidized structural bracket was also recovered.

Table 20. Fasteners Assemblage (Architectural/Structural)

	Context	MNI	NISP	Weight (g)
Common Nails	[1406]	2	2	9
	[1411]	2	2	15
	[1412]	7	7	48
	[1422]	2	3	5
	[1427]	3	3	11
	[1453]	2	2	11
	[1459]	3	6	17
	[1509]	1	1	5
	[1590]	3	3	8
	[1599]	1	5	53
	U/S	28	43	242
Total		54	77	424
Lath Nails	[1427]	1	1	9
	U/S	1	1	7
Clasp Nail	[1488]	1	1	17
Common Screw	[1412]	1	1	15
	[1488]	1	1	3

Flange Nut	[1488]	1	1	43
Washer	U/S	1	1	393
Totals		61	84	911

Although the majority were recovered from unstratified deposits, there was a cluster of nails and a screw recovered from context [1412]. Context [1488] also contained a screw, in addition to the only clasp nail and flange nut. All carriage bolts were included under the Equestrian category.

Nail types (Table 18) were dominated by wrought nails (MNI=36), specifically rosehead nails with either chisel or pointed ends (MNI=30). Drawn wire nails were the second most common variety (MNI=10), followed by machine-made nails (MNI=5), and cut nails (MNI=3). This collection profile was typical for a late nineteenth-early twentieth century archaeological site (Varman 1993). See the following table for more detailed breakdown of the nail types.

Table 21. Nail assemblage, manufacturer type (based on Varman 1993)

	Type	MNI
Wrought Nails	Rose, Chisel – Very Long (>80 mm)	2
	– Long (40-80 mm)	14
	– Short (<40 mm)	4
	Rose, Pointed – Long (40-80 mm)	5
	– Short (<40 mm)	1
	Rose, Head Only	4
	Die	2
	Flat, Pointed (Spike?)	1
	Flat, Pointed, Short	1
	Point, End Only	2
	Total	36
Cut Nails	Brad, Pointed	2
	Rose, Head Only	1
	Total	3
Drawn-Wire Nails	Flat, Pointed	3
	Rose, Pointed	7
	Total	10
Machine Made Nails	Clasp Nail	1

	Round, Pointed	1
	Round, Pointed Spike (180 mm)	1
	Lath Nail	2
	Total	5
Indeterminate	Unidentified Manufacture	3
Final Total		7 (457g)

The final artefact within the 'Fastenings' assemblage was a composite metal bracket mount was recovered from context [1509] (68 mm length, 49 mm width, 116g weight). It consisted of two parts: an L-shaped, square copper alloy flat mount with four small nail holes, attached to an unidentifiable highly oxidized iron object (WBRHS181720). The overall artefact appeared to be a type of structural fastener.

5.7.5.2 TOOLS (METAL)

Two identifiable tools were archaeologically recovered from the Area 1 West Bridge surface deposits (unstratified):

- One iron collar for a shovel or spade (13 mm length, 40 mm width, 56g weight). Circular and tapered, it was highly oxidized (WBRHS181171).
- One iron common hammer head (150 mm length, 115 mm width, 540g weight). This hammer type is characterised by its short head, curved claw, and weight category (400–570g). Heavily oxidized, the hammer was cast in one piece, including side grips that mounted onto a handle (missing) by two rivets (present) (WBRHS181125) (Figure 5-28).



Figure 5-28 Hammer Head (WBRHS181125)

5.8 Response to Research Design

5.8.1 DATING PATTERNS

The WBRP Collection appeared to represent two distinctive periods of site use. The earliest evidence consisted of two George III copper farthings, both dated to 1799. Other examples of early artefacts included a minimum set of 15 mould blown and hand finished glass table vessels (stemware and tumblers), in addition to three hand blown asymmetrical wine / champagne bottles, all produced before 1840. The Ceramic assemblage contained a significant minority of pre-1830s creamware, and early edgware. Additionally, a group of early transfer-print patterns could be identified. These included a decorative naval jug manufactured from 1815–1823, and two early named patterns, each discarded in a matched set of teaware: ‘Chinese Raftman & Ruins’ (1809–1834), and ‘Sheepshearer’ (1818–1846). These early assemblages could be associated with the initial settlement and governmental uses of the Thompson Square over the early Victorian period.

A second later period of site use could be identified across the various Artefact classes. This change associated the artefact assemblages of this later cluster with the private business and civic activities that characterised Thompson Square from the 1850s. All dated examples of Clay Pipes were made after the mid-nineteenth century. Metals contained numerous modern drawn-wire and machine-made nails. It also included a Pelham Bit, a type of Australian Light Horse bridle linked to the Windsor Half-Squadron (NSW Lancers), locally based from 1900 through the Great War. A rapidly increasing amount of whiteware, industrial slips, and yellow ware characterised the later Ceramic assemblage, in addition to ‘decal’ decorated fragments and one Staffordshire counterfeit marked vessel dated from the 1950s onwards. Commercially branded products from both the Ceramic and Glass assemblages dated to the late nineteenth through early twentieth century period. And finally, other than the two early copper farthings, the Coin assemblage all dated from 1921 to 1966, with a distinct cluster around the 1920s–1930s.

It should be noted that this report relates to the analysis of the artefacts recovered from the terrestrial archaeological excavations only and does not include a comparison with what was found during the maritime archaeological excavations by Cosmos Archaeology. Such a comparison was out of scope for the AAJV but remains a potential avenue for future research into the archaeology of early Windsor.

5.8.2 COLONIAL TRADE & LOCAL INDUSTRIES

The WBRP Collection represented a typical assemblage for an Australian urban site from the early nineteenth through mid-twentieth centuries. Ceramics were primarily of British origin, particularly Staffordshire creamware, edgware, and pearlware ceramics, in addition to the increasing bulk of later nineteenth and twentieth century whitewares. These tablewares were supplemented with Chinese export porcelains. Since they appeared in Western vessel forms, these imported tablewares did not necessarily represent the presence of Asian foodways. As expected, the Glass assemblage demonstrated an early presence of European continental wines, and Dutch gin. From the 1850s onwards, local residents enjoyed imported British food condiments and vinegars, in addition to a diverse range of specialist perfume, personal toiletries, and medicines imported from both Britain and North America.

In terms of early regional production industries, small amount of lead glazed earthenwares were present in the form of large storage jars (or ‘crock’). These were likely of local colonial production, as Sydney had its own potteries in operation from 1804 onwards. From mid-century, the amount and proportion of Sydney manufactured products increased, with examples clustered around beverages (ginger beer, soda waters, cordials, and tonics), alcohol (beer and tonics), food condiments, medicines (including veterinary products), and household goods (blacking polish, ink bottles).

In addition to these food and household industries, possible evidence of local equestrian and/or military activity was recovered. This assemblage included: hand forged horseshoes, representing two different size classes; steel carriage bolts; and horse skeletal elements (one with evidence of secondary butchering for dog food). This assemblage also contained highly oxidized remnants of a Pelham bit, potentially associated with the Australian Light Horse unit, and dated to the early twentieth century.

5.8.3 DIET PATTERNS

Artefactual evidence indicated generic diet patterns typical for nineteenth century Australian urban sites. Shell remains primarily consisted of Sydney rock oyster, or Sydney cockle, indicating their presence in the local diet. Faunal remains were dominated by sheep, followed by cow. There was a very small presence of pig, rabbit, and chicken, suggesting that they were not part of the regular diet. Three skeletal elements of horse were recovered. Although not human food, this horse assemblage did include one large pelvis fragment with evidence of hacksaw marks through its main shaft, suggesting secondary use as dog food.

Table service vessels were the largest group within the Ceramic assemblage, with flat and hollow tablewares in roughly balanced proportions. Teawares were also strongly represented, both as individual artefacts and matched early nineteenth century sets. After 1860, food storage vessels in both the Ceramic and Glass assemblages were dominated by commercially branded beverage bottles, mostly associated with locally produced drinks brought to Thompson Square or sold from local shops and inn houses. Metal food storage remains were also primarily linked to beverages and consisted of twentieth century ring pull loops and bottle caps. Only four remnant examples of table cutlery were recovered, and one was a tiny modern plastic knife fragment. Taken together, this artefact profile suggested an emphasis on consumption activities, rather than the preparation or longer-term storage of foods.

5.8.4 CIVIC SQUARE OR RUBBISH TIP (1850-TWENTIETH CENTURY)

Although the overall nature of the later WBRP Collection was ambiguous, it most likely accumulated from neighbourhood garbage deposition, rather than more organised civic garden activities within Thompson Square. On one hand very little building/architectural debris had been retained, that suggested an absence of demolition and general dumping activities. Nevertheless, the Collection held a low frequency of 'personal items' (buttons, clothing fasteners, clay pipes, sewing pins, or jewellery), and children's toys were largely absent—with the notable exception of the single 'Frozen Charlotte' style doll. Thus, there was limited material evidence for the study area as an outdoor civic garden. The recovery of matched early teawares and later gilt-edged tableware sets suggested a sequence of mid-nineteenth century dumping events, as did the wide range of discarded post-1860s commercial beverage and food condiment bottles. These artefact dumps may have linked back to the inns and private houses that surrounded Thompson Square. Finally, the high frequency of personal toiletries (particularly medicine bottles, chamber pots, and jug/washing bowls) offered an unlikely signature of public gardens or a civic square. Ultimately, because of pre-analysis sampling of the WBRP Collection, it is difficult to determine the overall nature of the Thompson Square study area with any certainty.

As the assemblage cannot generally be provenanced to individual sources, with the exception of one area associated with the Punt House, the collection has limited ability to answer questions relating to the dates of use and deposition of the artefacts, the social context of the owner / consumer or connection with other objects. This limits its research value but highlights the illustrative and display value of specific items in communicating life in Windsor.

5.9 Statement of significance

The following statement of significance employs the NSW heritage assessment criteria.

The archaeological artefact assemblage recovered during the Windsor Bridge Replacement Project is a significant collection of relics from Windsor's colonial past. The artefact assemblages recovered from both phases of site investigation (Area 1 and Areas 1A, 2, 3, 4 and 5) when combined, constitute a small collection (5,676 items). The objects forming the collection were recovered primarily from fill deposits that did not provide substantive information regarding the use and development of specific places within the study area. This is particularly so with objects recovered from the second phase of investigation in Areas 1A, 2, 3, 4 and 5. The objects recovered during the first phase of investigation (Area 1) were again mostly recovered from fill deposits. In Area 1 the fill deposits with significant artefact assemblages were stratigraphically secure and dated to Phase 2 (1794-1814) and Phase 3 (1814-1816) of the site's development (1,784 items). As such, the assemblages from Area 1 provide a good indication of the material culture of the Green Hills/Windsor district during the first generation of British occupation. The significance of the assemblage from Area 1 lies in value as a comparative collection that is securely dated to the period between 1794 and 1816. As such the combined collections constitute a good representative example of material culture within the colony of New South Wales in the period before 1820 (Criterion a, g).

Items of trade and manufacture recovered from Areas 1A, 2, 3 4 and 5 demonstrate the shift from a reliance upon imported goods (British ceramics and glassware, Chinese export porcelains) to locally manufactured products, including lead glazed wares, medicines, soft drinks and beers (Criterion a, e). However, as these artefacts were recovered primarily from fill deposits their potential to contribute to our understanding of the operation of mixed-trade commercial practice in colonial Sydney from the late eighteenth to the early twentieth century is limited (Criterion e). The assemblage of crockery, glass service vessels, faunal and shell remains, representing 1,117 individual objects, provides a glimpse of generic diet patterns and dining practices typical for nineteenth century urban sites in colonial Sydney (Criterion a, e). Fully or substantially intact artefacts provide an aesthetic and tangible link to the site's history and hold special association with the wider Hawkesbury regional community. These values hold particular significance for objects (such as the possible Pelham bit) potentially linked to the historical military presence within Windsor (Criterion c, d).

Overall, the assemblage represents a typical assemblage for an urban site in New South Wales from the early nineteenth through mid-twentieth centuries and contributes to our understanding of Windsor's colonial past. Collectively, the assemblage meets the threshold for local significance.

5.10 Recommendations

5.10.1 CONSERVATION

The WBRP Collection should be monitored for ongoing issues with moisture content within three months of its new storage location at the Hawkesbury Regional Museum. Silicone sachets should be discarded or replaced as appropriate.

5.10.2 STORAGE

During the final post excavation analysis and reporting phase, the assemblage was securely stored in a dry and stable environment at the Extent Heritage office in Pyrmont.

The WBRP Collection will be stored securely by the Hawkesbury Regional Museum located at 8 Baker Street, Windsor NSW 2756. The Hawkesbury Regional Museum are responsible for the collection's long term storage and management.

The WBRP Collection should be stored securely in a dry and stable environment.

The collection should be made available and accessible to researchers upon request.

5.10.3 DISPLAY

While some objects are already on display at the Hawkesbury Regional Museum as part of the exhibition 'UNCOVERED – The Archaeology of Thompson Square', it is recommended that additional objects from the assemblage be considered for display also.

Artefacts should be made available and accessible for loan to other museums subject to qualified Conservator's advice.

5.10.4 FURTHER RESEARCH

The WBRP Collection should be examined in reference to associated excavation zones and assemblages—both underwater and terrestrial. This comparative information will add value in terms of the project's overall Research Design.

The WBRP Collection could be examined in reference to similar contemporary archaeological sites within New South Wales. This comparative information will add value in terms of the wider historical and archaeological heritage of the Hawkesbury River and Greater Sydney regions.

5.10.5 DATA ARCHIVE

The WBRP Collection Artefact Report and associated records should be lodged with an appropriate and publicly accessible data repository.

6 SOIL ANALYSIS

During investigations of Area 3 (east Bridge Street), several small soil samples were collected for pollen analysis to test for possible evidence of land cultivation.

Three samples from WBRP Area 3, George Street—soil sample 1 (long root), soil sample 2 (circular feature), and soil sample 3 (short root)—underwent palynological analysis following the method described in Moss (2013), using sodium polytungstate heavy liquid with a specific gravity of 2.0. All of these samples recorded the presence of pollen, with concentrations greater than 200 grains per cm³ for samples 1 and 3 and 20 grains per cm³ for sample 2. In addition, well-preserved carbonised particles (particles <250 µm), were found in all three samples, which is reflective of regional burning; and *Sporormiella* (dung fungus spores) concentration was also recorded in samples 1 and 3, which provides insight into the presence of large herbivores.

These findings suggest that the location from which samples 1 and 3 were drawn were relatively moist and anaerobic, which are key characteristics for pollen preservation, although the pollen concentrations are low compared with lacustrine or peatland sites (Moss 2013). The very low pollen concentrations in sample 2 suggest drier and aerobic conditions.

Overall, this result is possibly associated with garden bed conditions. Each sample was counted for pollen, carbonised particles, and *Sporormiella* at 400 times resolution using a compound light microscope (Leica DM2500), and at least 300 pollen grains were counted from each slide or two slides were counted. A pollen diagram was then produced (Figure 6-1, below), which summarised the key trends in each of the samples, and a brief description of these are discussed below. In addition, images of common pollen/spore grains were also recorded. Figure 6-2, below shows some of the key taxa found at the site.

Samples 1 and 3 provide evidence of the regional landscape, which is a eucalypt forest or woodland community, but the presence of relatively high herb values suggests a relatively open landscape. There is evidence of a range of exotic taxa, particularly with the arboreal group, with the presence of northern hemisphere tree species, such as Oak (*Quercus*), Willow (*Salix*) and Lime trees (*Tilia*), a New Zealand species, Red Beech (*Nothofagus fusca*), and two Australian taxa, *Agathis* (Kauri) and *Araucaria* (Hoop and/or Bunya pine) that are not native to the Sydney Basin, but have been commonly planted since European settlement. In addition, there are several species that may be native to the region but are also commonly planted as garden trees, including Lilly Pilly (*Syzygium*), Ti Tree (*Leptospermum*), Paperbark (*Melaleuca*), and *Lomatia*, which is also the only arboreal taxa found in Sample 2. Furthermore, the range of herb and wetland taxa are consistent with a disturbed landscape, with the presence of herbaceous taxa such as daisies (Asteraceae [*Tubuliflorae*]) and the exotic taxa Asteraceae [*Liguliflorae*]), Amaranthaceae, and Brassicaceae (cabbage family), as well as wetland taxa such as *Anthoceros* (hornwort, commonly found in disturbed soils), monolete fern spores, sedges (Cyperaceae), and rushes (Restionaceae).

It is interesting to note the presence of water milfoil (*Myriophyllum*) in sample 3—the low pollen concentrations would suggest a dry environment in which these taxa should not be found, and it is possible that its presence is associated with a water feature, as these taxa are commonly found in garden ponds. Finally, while charcoal values are high in samples 1 and 3, reflecting regional burning in the landscape, charcoal values are low in sample 2; this may reflect a different depositional environment, protected from the regional pollen and charcoal signal. *Sporormiella* values are also very low, which suggests minimal grazing occurred across the three sample sites.

In summary, the three samples are suggestive of a garden environment. This is supported by the low pollen concentrations, presence of exotic arboreal taxa, and a variety of native species that are commonly used in gardens, as well as a range of herbaceous and wetland taxa that are commonly

Figure 1 is a horizontal bar chart showing the distribution of bacterial taxa in the rhizosphere of three soil types (Soil 1, Soil 2, Soil 3). The chart displays the percentage of total bacterial taxa for various phyla and classes. The x-axis represents the percentage of total bacterial taxa, ranging from 0 to 100%.

The taxa are grouped by color: red for Proteobacteria, green for Actinobacteria, blue for Bacteroidetes, black for Firmicutes, and grey for other taxa.

Key taxa and their approximate percentages are as follows:

- Soil 1:**
 - Proteobacteria (red): ~45%
 - Actinobacteria (green): ~35%
 - Bacteroidetes (blue): ~10%
 - Firmicutes (black): ~5%
 - Other taxa (grey): ~5%
- Soil 2:**
 - Proteobacteria (red): ~45%
 - Actinobacteria (green): ~35%
 - Bacteroidetes (blue): ~10%
 - Firmicutes (black): ~5%
 - Other taxa (grey): ~5%
- Soil 3:**
 - Proteobacteria (red): ~45%
 - Actinobacteria (green): ~35%
 - Bacteroidetes (blue): ~10%
 - Firmicutes (black): ~5%
 - Other taxa (grey): ~5%

Windsor Bridge Replacement Project | AAJV 245

7 DISCUSSION OF RESULTS

7.1.1 SUMMARY OF THE ARCHAEOLOGICAL LANDSCAPE OF THE WBRP AREA

The stratigraphic evidence from the archaeological investigations detailed in this report indicates that little in the way of the artefact-bearing deposits from Phase 2 identified in Area 1 extended into Area 1A. This is likely due to a combination of factors, including increased levels of subsequent disturbance identified within Area 1A in comparison to Area 1. It is also possible that while it was considered that a portion of the artefact assemblage identified in Area 1 had been the result of downslope movement of material over a period of years, the topography of Area 1A meant that material was washed from here downslope into Area 1.

The one location where Phase 2 archaeological remains were identified was Area 3. Here the brick footings of the walls of the former Government domain and driveway were identified. However, no archaeological material other than the brickwork and associated cut and fill deposits were identified in association with these features.

With regards to Phase 3, the archaeological investigations identified disparate elements of the drain system from various widely separated locations within the WBRP, allowing for the accurate charting of the alignment of the box drains, while providing access to the interior of the main oviform drain itself. However, beyond confirming the alignment and angles of the various box drains, the additional excavation provided little in the way of new information regarding their construction or use, with the exception of the unusual height change present in Box Drain A. Even where access to the interior of the oviform drain was available, it only confirmed the profile previously recorded in Area 1. It is noted though that the additional excavation along the length of Box Drain 1 did identify evidence relating to the collapse of the western section of drain with no corresponding evidence of use, further suggesting that the western half of the drainage system was constructed but short-lived, if ever formally commissioned.

The elements of the drainage system exposed during the second phase of site works provided some minor additional information that indicates that the primary drainage line survives in varying degrees of intactness and that the subsidiary feeder lines (box drains) was quite extensive. The feeder lines appear to have been an attempt at undertaking area drainage through a herring-bone system of box drains. The third element of the drainage system was surface drainage. This would normally take the form of ditches or dish-drains feeding into gully-traps at the head of each of the box drains. No trace of this portion of the drainage system was exposed during works possibly indicating that the heads of the box drains are located outside the development footprint. The herring-bone system of drains is also a possible indicator that the purpose was to drain the square itself rather than taking runoff from individual buildings adjacent to the square.

Much of the later disturbance present across all the investigated areas related to the construction of Windsor Bridge and the associated approach roads from 1874 onwards, that impacted both the earliest archaeological remains as well as those of the Howe and McGrath drainage system. Evidence of later construction included the 'scalping' of the oviform drain by later road alignments, visible in both Areas 1A and 4, as well as the levelling works required for construction of the staging area for the concrete formwork, the retaining wall along The Terrace, and the various phases of milling, re-sheeting and surfacing works along Bridge Street.

As a result of the above impacts, the archaeological resource from the earliest periods of occupation (Phases 1 and 2) has been demonstrated to survive in only limited pockets present within Area 1A, and below the road corridor and footpaths within Areas 2 and 3. In Area 4 the survival of only the lower half of the main oviform drain provided clear proof of the extent to which the nineteenth century deposits

and surfaces had been impacted by the later development of the road system in the southern portion of the study area. However, apart from thin lenses of deposits relating to potential ground surfaces, no direct evidence of occupation or use of Thompson Square or the immediate surrounds was identified. Archaeological material relating to the early settlement period and the extensive and ambitious drainage system identified during the additional salvage works generally corresponded to that found during the initial investigations, and as such only nominally enhance the dataset already obtained through the works undertaken to date. The significance and archaeological contributions of these elements of the additional salvage excavation are considered below.

The only other significant body of remains consisted of Phase 5 material exposed in Area 1A associated with the works area established in the early 1920s for the concrete beam-casting works associated with the modifications made to Windsor Bridge in the period 1920 to 1922. The material consisted of a set of concrete rails. A number of timber boards were also exposed within the southern bridge approaches. These formed part of the lower part of the works area and provided a surface that enabled the beams cast in Area 1A to be manoeuvred into place on the bridge itself.

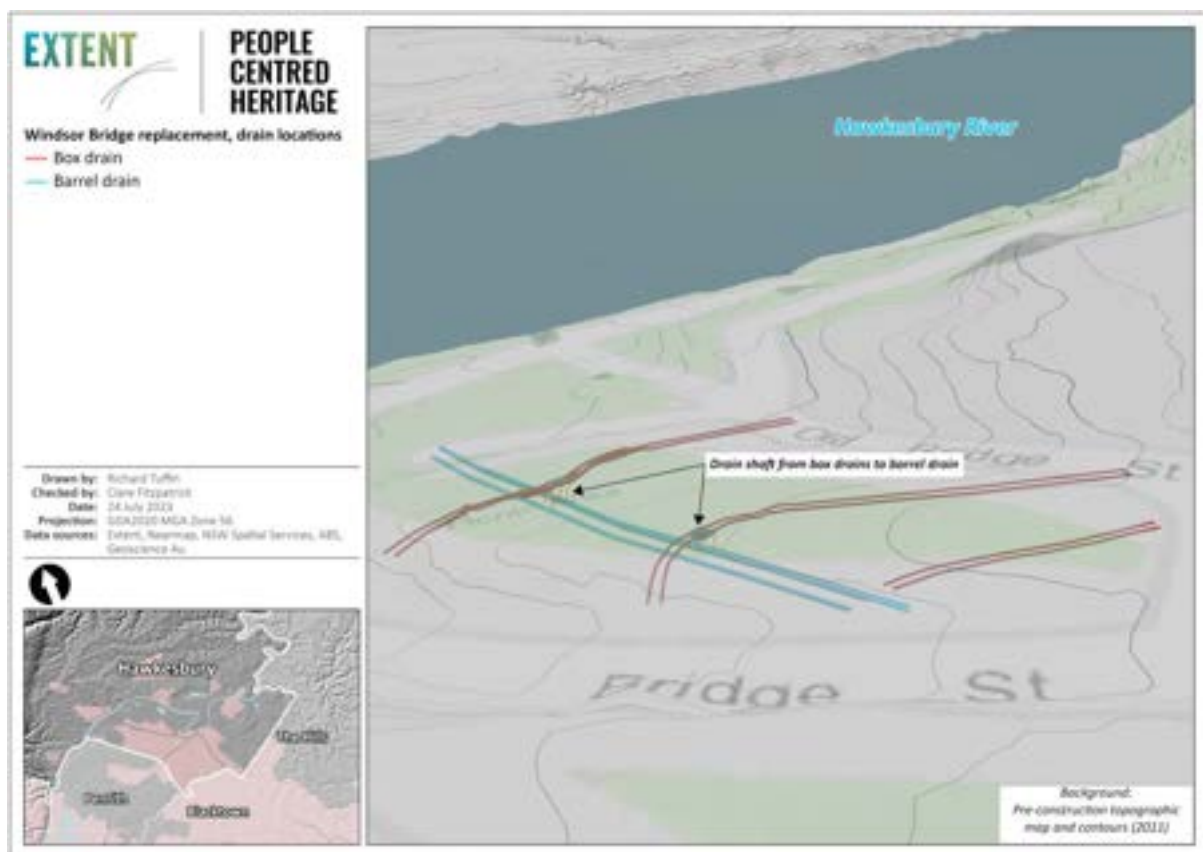


Figure 7-1 Pre-construction topographic map with contours showing location of drains and drain shafts.



Figure 7-2 Pre-construction aerial photograph with contours showing drain locations.



Figure 7-3 Pre-construction aerial photograph with contours showing drain locations with detail insets of the drain.

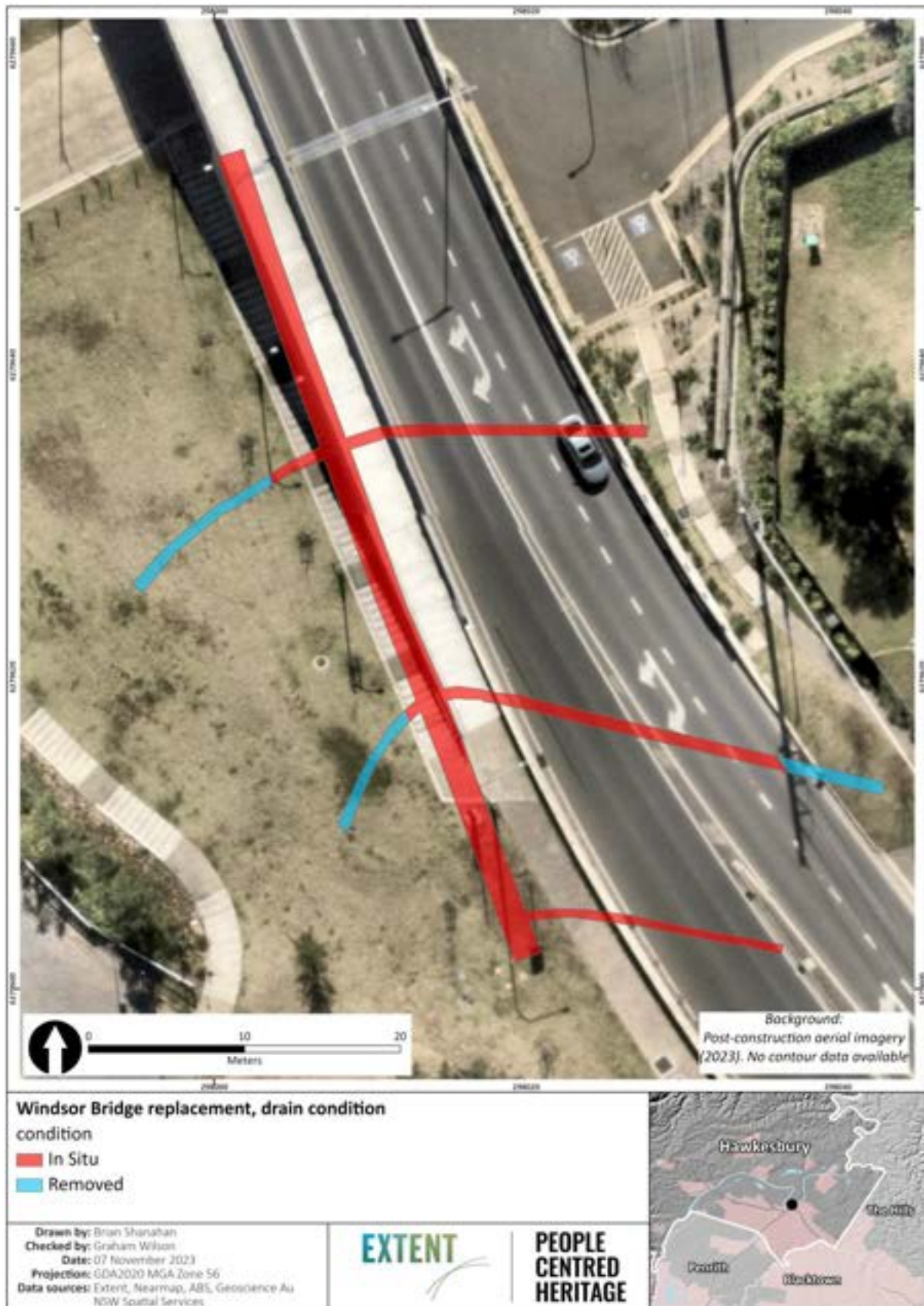


Figure 7-4 Post-construction aerial photograph showing where the drain was retained in situ and where it was removed.

7.1.2 THE CULTURAL MATERIAL

The artefact collection represented two distinctive periods of site use. The earliest period consisted of a small number of artefacts consisting primarily of coins, two George III copper farthings, mould blown and hand finished glass table vessels, and hand-blown wine / champagne bottles, all produced before 1840. The ceramic assemblage contained a small selection of pre-1830 creamware and early edgeware. Also present were a small number of early transfer-printed wares dating between 1800 and 1845. These early assemblages may be associated with the initial settlement and governmental use of Thompson Square into the early Victorian period, that is Phase 2, Phase 3 and the early part of Phase 4. None of the assemblages with this period could be reliably associated with particular sites or particular activities within or adjacent to Thompson Square apart from the dumping of refuse or localised filling.

A second, later period of site use was identified across the various artefact classes. The artefact assemblage consisted primarily of material dated to the period after 1850 with a concentration of artefacts dating to the first decades of the twentieth century. All dated examples of clay tobacco pipes were made after the mid-nineteenth century. Metals contained numerous modern drawn-wire and machine-made nails. An increasing amount of whiteware, industrial slips, and yellow ware characterised this later ceramic assemblage, in addition to 'decal' decorated fragments. Commercially branded products from both the ceramic and glass assemblages dated to the late-nineteenth and early twentieth century. Most of the coin assemblage dated from 1921 to 1966, with a distinct cluster around the 1920s–1930s. The artefact assemblage may have consisted in part of casual loss or discard associated with the use of the square as a recreation reserve but much of the assemblage was recovered from fill deposits. Only one assemblage could be reliably associated with a particular site with a known function. This exception was a small collection of non-diagnostic artefacts including shell, nails, glass, and ceramics recovered from the former yard of the Punt House adjacent to Area 5. Although the Punt House had been in existence since the 1820s (early Phase 4), the domestic artefacts recovered from the yard adjacent to the Punt House were associated with late Phase 4 or early Phase 5 activities.

8 RESPONSE TO RESEARCH QUESTIONS

8.1 Research questions

The following sections serve to outline the general research questions which the archaeological test and salvage programmes were designed to answer. Research questions associated with the artefact assemblage are answered in Part 5 of this report.

8.1.1 BROAD RESEARCH QUESTIONS

The ARD was formulated to answer general questions about any deposits or features exposed during excavation work at any given site. The ability to answer these questions is critical to developing information related to broader research objectives. These general questions that are typically asked about a site are:

- What features or deposits are present on the site?
- What is the nature and extent of these features and deposits?
- How intact are they?
- What is their significance?
- What are their depths below the current surface?
- What date or occupation phase can be assigned to them?
- How does this information compare to available historical information relating to the site?

8.1.2 SITE-SPECIFIC QUESTIONS

The following site-specific questions were to be asked of the archaeological remains of the Windsor site. They have been set out below based on the chronology identified in the archaeological assessment for the site. Note that questions relating solely to the riverine environment or maritime archaeological processes have not been included in this document.

Where the ARD proposed thematically based research questions which were aimed to help direct the wider archaeological investigation of Thompson Square and the Windsor area, this assessment has not sought to answer these wider research questions at this time. Instead, any such questions will be answered at the completion of all historical archaeological investigations associated with all five management areas of the WBRP.

8.1.2.1 LANDSCAPE

- Is there evidence for flooding or other erosional effects from the site's proximity to the river?
- Can historically attested floods be discerned?
- What palynological evidence is there for the changes to the local flora from pre- to post-colonisation?
- Is the first clearance of the site evident and what effects did it have on the site?
- Was the area of the square stabilised, cut, filled, or otherwise altered to serve its purpose as a landing place and then public space?

8.1.2.2 CONTACT ARCHAEOLOGY (1791–1820s)

- Is there evidence for the initial period of contact between the local Aboriginal people and Europeans?

8.1.2.3 EUROPEAN OCCUPATION

- What is the earliest evidence for the European presence on the site?
- Is it related to the river or other activities?
- Is there any evidence of the first settlers of Green Hills / Mulgrave Place?
- What evidence is there for Baker's and Thompson's occupations on the south side of the river?
- Is there any remaining evidence of the government buildings, which occupied the western portion of the site?
- What materials were they constructed from?
- Is there any evidence for early paths and tracks to access areas on both the north and south sides of the river?
- Is there evidence for an early alignment (pre-1810) of George Street?
- Is there evidence for Howe's brick barrel drain(s) in the square?
- Is there evidence for the heavy military presence at Windsor on the south side of the river?
- Are any other structures or occupation evidence remaining at the intersection of the Wilberforce and Freemans Reach Roads?
- What evidence is there for modifications and development to Thompson Square and adjacent areas?
- What is the evidence of the late-nineteenth / early-twentieth century modifications across the site? How have these later modifications affected the survivability of the historical archaeological resource?
- What did vacant space mean in the context of Windsor over 200 years and how is this manifested at Thompson Square? Was it a place to dump refuse or was it treated as a civic space?

8.1.3 ADDITIONAL RESEARCH QUESTIONS

While the 2016 test excavation provided answers to some research questions, the retrieved data could not be considered exhaustive. Therefore, the site's research potential was not realised in full at that time and the majority of the research questions contained in the ARD were still considered relevant for providing general contexts for further historical and archaeological research. In light of the results of the 2016 test excavations, the following more specific research questions were raised:

- Can the retrieved archaeological evidence provide additional information to that already contained in the written and pictorial resources?
- Do deeper subsurface features (e.g. wells and cesspits) dating from the late-eighteenth and early-nineteenth centuries exist within the boundaries of the site? If not, how can their absence be explained?
- Can the full extent and nature of the brick footing associated with the entry gate of the Government Cottage compound be determined? How accurately do the historical resources compare with the actual location and fabric of the former gate?

- Can the artefact assemblage provide any insight into the lives of the first settlers of Green Hills / Mulgrave Place?
- Can the artefact assemblage provide any more specific information about the military presence and activities at the site?
- Can the archaeological resource provide any additional information about the site not available from other resources?

8.2 Response to Research Questions

This section of the report provides a summary response to the broad and site-specific research questions within the limits of the available data. The abridged information against each research question is presented in the table below. This report does not address any of the site-specific thematic research questions, as the fragmentary nature of the archaeological resources and artefact questions has not provided sufficient data for detailed analysis and response to those questions.

With respect to the site-specific research questions regarding the earliest phases of settlement of Green Hills and Mulgrave Place, prior to the formal establishment of Windsor, none of the archaeological evidence recovered clearly relates to that pre-Windsor period and, given the cycles of disturbance, construction, erosion and deposition, it is unclear if any evidence of that very early period of European occupation survives at all.

As noted elsewhere in the WBRP project reports, the project area has been highly disturbed since the 1810s through successive series of public works, as well as erosion and deposition. It remains the project team's view that areas of archaeological significance which have been subject to less disturbance and are therefore more archaeologically intact lie within the boundaries of the private lands to either side of Thompson Square. Future work in these areas may provide other evidence and insights into the early phases of Windsor which had been largely destroyed within the bounds of the WBRP project area.

Research question	Answered (yes/no/partly)	Response
Broad research questions		
What features or deposits are present on the site?	Yes	Predominantly features and deposits identified in the Area 1 salvage were also identified during the additional salvage program documented in this report. This included material from all six phases of historical development of the site: • Phase 1 (pre-1794): Natural aeolian and windblown soil deposits predominantly comprised of sand. • Phase 2 (1794–1814): Limited areas of thin topsoil present in Area 1A. • Phase 3 (1814–1816): A continuation of the elements of the drainage system and timber logs recorded in Area 1 across Areas 1A and 2. • Phase 4 (1816–1874): Walls and other structural elements associated with the Government Domain. Located in George Street in Area 3 and the eastern footpath of Area 2. • Phase 5 (1874–1934): A continuation of the elements from this phase identified Area 1, as well as further evidence relating to the continued evolution of the road system present in the study area, such as the widespread introduction of Telford paving and The Terrace wall. • Phase 6 (1934–2018): Continued grading of road alignments, as well as the additional excavation of various service trenches and installation of road signage.
What is the nature and extent of these features and deposits?	Yes	Many of the excavated features and deposits represent structural and depositional elements previously documented in Area 1. The exceptions to this are: • The outer wall of the Government Domain, identified in Areas 2 and 3, and likely dating from the first half of the nineteenth century. • The late nineteenth century foreshore wall along The Terrace. • The early twentieth century Macadam roadbed. All of these features consisted of features generally localised in discrete parts of the site; along the eastern part of Areas 2 and 3 for the wall, along the western side of Bridge Street and George Street for the Macadam roadbed, and along The Terrace for the retaining wall.
How intact are they?	Yes	As with Area 1, the preserved sections of the drainage system, particularly the main oviform drain, were found to be in fairly good condition, as were the remains of the Macadam roadbed. The archaeological

Research question	Answered (yes/no/partly)	Response
		remains of the Government Domain wall were variable; while being best preserved below the northern portion of George Street, they still consisted of only the lowest few courses of brickwork. Significant damage had occurred in the past to the same stretch of wall in the southern lane of George Street, while a portion of wall found in Area 2 was heavily truncated and less than 1 m in length had survived. The foreshore wall present in the Terrace was well preserved, due to the size and robustness of its construction.
What is their significance?	Yes	The archaeological salvage program generally identified further instances of the historical archaeological features and deposits first recorded in Area 1 that were assessed to be of both State and local significance. In addition to those deposits listed above, the remains of the Government Domain wall are considered to be of limited significance due to the poor level of preservation of what is ultimately a replacement of the original boundary line. Similarly, the other archaeological features identified during the additional salvage work are considered to be of local significance as they only form part of the overall picture of the development of Windsor from the latter half of the nineteenth century onwards.
What are their depths below the current surface?	Yes	The exposed historical archaeological remains are located at a depth varying between 100 mm, predominantly within current road alignments, and 2 m in the north of the excavated area.
What date or occupation phase can be assigned to them?	Yes	The archaeological remains identified cover a broad date range: from the early days of the establishment of Green Hills and the Government Domain (c.1794), through the construction of the drainage system in 1814–1816, the development of the 1874 road surface, the late nineteenth century formalisation of the Terrace wall, the early 1920s upgrade of Windsor Bridge and various subsequent phases of improvements and resurfacing works associated with the road alignments present within the study area.
How does this information compare to available historical information relating to the site?	Yes	The archaeological evidence obtained from the additional salvage excavation by and large supports the historical information already established through the salvage works undertaken in Area 1. The investigation of the wall of the Government Domain served to demonstrate the construction techniques and material used for its construction through the type of brick and bonding mortar employed, as did the exposure and recording of The Terrace wall.
Site-specific questions: landscape		

Research question	Answered (yes/no/partly)	Response
Is there evidence for flooding or other erosional effects from the site's proximity to the river?	Yes	There is abundant evidence of colluvial soils and remedial fills identified in both vertical and horizontal stratigraphy of Area 1A and Area 2i.
Can historically attested floods be discerned?	Partly	The additional works did not provide any information to answer this question.
What palynological evidence is there for the changes to the local flora from pre- to post-colonisation?	Yes	Pollen analysis undertaken on pre-colonial soil samples suggests that the Holocene environment was a eucalypt forest with a mixed grassy / shrubby understory, probably not much different from the landscape that the early settlers found ~230 years ago in the region. In addition, the top samples collected from Aboriginal test pits provided evidence of the sharp rise in <i>Sporormiella</i> , which may be associated with pastoral activities, thus further confirming the chronological models in showing that parts of the site retain early colonial layers. Other introduced species have been identified in the area of the entry to the government house on George Street.
Is the first clearance of the site evident and what effects did it have on the site?	Partly	No additional information was identified beyond that already noted for Area 1.
Was the area of the square stabilised, cut, filled, or otherwise altered to serve its purpose as a landing place and then public space?	Yes	The additional information gathered during this program of works supplemented or confirmed the evidence already noted for Area 1.
Site-specific questions: contact archaeology		
Is there evidence for the initial period of contact between the local	Yes	Two glass items were identified as potentially being reworked by Aboriginal people—a black bottle base that had been used as a core [1233] and a glass scraper [sondage AH24].

Research question	Answered (yes/no/partly)	Response
Aboriginal people and Europeans?		
Site-specific questions: European occupation		
What is the earliest evidence for the European presence on the site?	No	The earliest evidence for the European presence remains the artefactual deposits identified in Area 1.
Is it related to the river or other activities?	No	No additional information was identified beyond that already noted for Area 1.
Is there any evidence of the first settlers of Green Hills / Mulgrave Place?	No	No additional information was identified beyond that already noted for Area 1.
What evidence is there for Baker's and Thompson's occupations on the south side of the river?	No	No additional information was identified beyond that already noted for Area 1.
What materials were they constructed from?	No	No additional information was identified beyond that already noted for Area 1.
Is there any evidence for early paths and tracks to access areas on both the north and south sides of the river?	No	No additional information was identified beyond that already noted for Area 1.

Research question	Answered (yes/no/partly)	Response
Is there evidence for an early alignment (pre-1810) of George Street?	No	No evidence was identified relating to earlier alignments of George Street.
Is there evidence for Howe's brick barrel drain(s) in the square?	Yes	Where the initial excavation of Area 1 identified evidence of the drainage system, the additional excavation work undertaken, specifically that within Areas 1A, 2ii and 4, provided further information into how the drainage system was constructed and likely operated. While a small section of the interior of the oviform drain was accessible through the sondage excavated in Area 1, the drain itself was blocked both upslope and downslope from that point. However, the 'scalping' of the drain in Area 1A provided access into the drain at a point where it was possible to document and record it further downslope where it was preserved in its entirety. Area 4 also allowed the recording of a large section of the drain and the ability to document how it had been affected by later impacts. With regard to the box drains that fed into the main oviform drain, the results of the excavation in Area 1A provided further evidence of how the drain failed and the shortfalls in its construction, that was further confirmed by the presence of abrupt and unaccountable changes in the construction of the drain bases in Area 2.
Is there evidence for the heavy military presence at Windsor on the south side of the river?	No	No additional information was identified beyond that already noted for Area 1.
Are any other structures or occupation evidence remaining at the intersection of the Wilberforce and Freemans Reach Roads?	n/a	No archaeological evidence in this location.
What evidence is there for modifications and development to	Yes	The additional salvage excavation identified further evidence of the same large-scale landform modifications previously noted in Area 1.

Research question	Answered (yes/no/partly)	Response
Thompson Square and adjacent areas?		
What is the evidence of the late nineteenth / early twentieth century modifications across the site? How have these later modifications affected the survivability of the historical archaeological resource?	Yes	As with the main excavation work undertaken in Area 1, evidence consisted of substantial fills for the construction of the 1874 bridge and associated access road. However, it also included the presence of the casting pit associated with the 1920s works on the bridge, although these works were not in the vicinity of any identified archaeological remains associated with earlier phases of occupation. Further evidence of later impacts occurred in areas outside of Area 1A in the form of ongoing grading works within road corridors and the formalisation of footpaths, as well as the introduction of modern services throughout the study area. All this work served to further reduce the level of preservation of archaeological remains across the site.
What did vacant space mean in the context of Windsor over 200 years and how is this manifested at Thompson Square? Was it a place to dump refuse or was it treated as a civic space?	No	No additional information was identified beyond that already noted for Area 1.
Additional research questions		
Can the retrieved archaeological evidence provide additional information to that already contained in the written and pictorial resources?	Yes	In addition to supporting the findings of Area 1 in this regard, the additional archaeological investigations also identified that while historical records showed a timber fence demarcating the entrance to the Government Domain, instead a brick wall was identified in its place. This indicates that despite the short period of time for which the Government Domain remained in use, it was still subject to improvements and changes in how the site was managed.

Research question	Answered (yes/no/partly)	Response
Do deeper subsurface features (e.g. wells and cesspits) dating from the late eighteenth and early nineteenth centuries exist within the boundaries of the site? If not, how can their absence be explained?	No	No additional information was identified beyond that already noted for Area 1 as, with the exception of the drainage system, no other evidence of deeper features such as wells or cesspits from the late eighteenth or early nineteenth century were recorded.
Can the full extent and nature of the brick footing associated with the entry gate of the Government Cottage compound be determined? How accurately do the historical resources compare with the actual location and fabric of the former gate?	Partly	The archaeological investigations were unable to confirm the full extent and nature of the brick wall as it continued beyond the limit of excavation and into private property to the north and south of George Street. Interestingly, an apparent second section of the wall was found extending westwards towards Old Bridge Street, although this section of wall was heavily truncated. Levels of preservation also varied considerably, with generally good preservation across the northern side of George Street that was significantly lower on the southern side, where the change in slope resulted in modern grading works have resulted in substantial compaction and impact to the brickwork. The historical images showing the entrance to the Government Domain shows a timber fence with what appear to be four brick or timber gate posts with ball finials. In contrast, the wall was confirmed as being constructed of brick, culminating in a single square gate post on either side of a narrow entranceway. This indicates the later replacement of the original timber fence with the brickwork that was identified in the trench. However, due to the shallow nature of the archaeological remains coupled with the limited depth of impact in the vicinity of George Street, only the upper two courses of bricks were uncovered. This provided a limited ability to interpret the archaeological remains.
Can the artefact assemblage provide any insight into the lives of the first settlers of Green Hill / Mulgrave Place?	No	No additional information was identified beyond that already noted for Area 1.

Research question	Answered (yes/no/partly)	Response
Can the artefact assemblage provide any more specific information about the military presence and activities at the site?	No	No additional information was identified beyond that already noted for Area 1.
Can the archaeological resource provide any additional information about the site not available from other resources?	No	No additional information was identified beyond that already noted for Area 1.

9 REVISED SIGNIFICANCE ASSESSMENT

9.1 Existing Statement of Significance

The following statement of significance has been reproduced from the 2012 Biosis report:

The historical analysis, archaeological assessment and evidence from testing and past works demonstrate that there is likely to be a complex and chronologically deep archaeological profile within Thompson Square and to a lesser degree on the northern river bank. It is impossible to isolate the resource that could exist within the subject area and assess its significance. It must be assumed that the evidence contained within the subject area will have the same values and significance as the rest of Thompson Square even if specific elements within both may vary from each other. The significance of the archaeological resource within the subject area is the same as that for the resource across all of Thompson Square and this cultural significance must be assessed on several levels.

Windsor is the third settlement in Australia after Sydney and Parramatta. These are the places that made long-term European settlement possible and their histories inform us of the circumstances, the pressures and visions that would shape our history and the way we live. Apart from its importance as one of our first permanent settlements, Windsor also has added status as a Macquarie town, one of only five places in the Hawkesbury that were specifically selected and influenced by arguably our most important Governor, Lachlan Macquarie. A number of the improvements and designs for Thompson Square are a direct result of Macquarie's involvement. Thompson Square has direct associations with outstanding people in the development of the town and region particularly Andrew Thompson, who lived and worked here. The archaeological resource could provide tangible links or associations with significant historical figures by revealing works or improvements that have been created for, on behalf of, or by these figures.

Thompson Square is the single place that links the earliest settlement on the Hawkesbury with the Macquarie-era town. This site was used as a civic precinct to service the first farms established on the river from 1794. It evolved into a small village in its own right that also provided the services and administration for the region. It is the seminal place of the town's evolution. It was this village that was incorporated into the Macquarie planned town of Windsor; it was the only town to incorporate this earlier layer of settlement. It is unique. If Windsor and Thompson Square are important then archaeological evidence that can better document or reveal the history of use and development that is unique to this place and provide evidence of its associations is also significant. The below ground resources are likely to provide evidence of the earliest years of settlement, pre-dating the fabric that survives above ground. Archaeological evidence is also likely to provide evidence of events and processes that were specific to Thompson Square but are representative of the development of this town.

The principal value of the potential archaeological profile in Thompson Square is its cumulative value. It has the potential to document events, processes, improvements and places that span the full history of European development in this place from 1794 to the present day. It is likely to be the only place in Windsor or its environs that can do so. The archaeological profile of the subject area on the south bank is completely unique to it. Because of the potential chronological depth of the profile it may include sites that are rare beyond the specific history of this place.

Apart from the potential to document and demonstrate the changing town and the place of Thompson Square in it over a long period of time the archaeological profile of Thompson

Square can be evaluated for different levels of significance that are largely relevant to their rarity either through age or singular uses. In particular, evidence that relates to the founding settlement of 1794 up to and inclusive of Macquarie-era works is assessed to be of exceptional significance for its importance within the town, its rarity and its contribution to documenting the growth of the colony in its formative years. For the earliest years of settlement this resource would be the only fabric that survives in the town; there is no evidence above ground that predates 1811. It is comparable to only a very small number of other places in New South Wales that have the same depth of development such as Sydney or Parramatta.

As well as works from the first decades of the town's growth the subject area is also likely to encompass important improvements from the middle and later years of the 19th century that reflect the changing status and role of the town and Thompson Square. These include the development of the bridge across the river to link the two communities. Many of these processes are not evident in above ground resources. These are resources that can make a substantial addition to the evidence that survives above ground; they have value for the town.

Evidence that derives from the early to middle years of the twentieth century is less significant. These processes are still evident in other forms and they have impacted on earlier and very rare resources. Evidence from the later years of the twentieth century onwards which is still largely intact above ground and has acted to remove or disturb older or very rare elements is considered to have little individual significance but is recognised as an integral component in the complex profile.

The northern area of the subject area across the river also has a history of settlement that dates back to 1794 with a farm established here by the ex-convict, Edward Whitton, in that year. Apart from his pioneer status Whitton's contribution is representative of the thousands of people who worked to develop the region.

Archaeology in the northern part of the subject area is unlikely to have the same complexity of resources as Thompson Square because of the nature of settlement here; largely pastoralism and agriculture. It has value as a comparison to the complex history of Thompson Square but its individual components are likely to be less significant; the exception would be the site of a long-standing landmark inn although its precise location cannot be determined. The resource in the northern part of the subject area, with few exceptions, is likely to be more representative of the agricultural/pastoral development that characterised this side of the river.

The archaeological resource is likely to provide a depth of historical layering and sense of place to the acknowledged visual qualities of Thompson Square. These are qualities and resources that can be valued by the community. It has the ability to provide unique, rare and representative components for this place and for New South Wales. The cumulative profile recording evidence of works and change over two centuries is unique. Within that adjusted profile evidence of the Green Hills period of development and Macquarie-era works would be of State significance; evidence contained within it, above and below ground that can be determined to have a direct association with the Green Hills Settlement or the period of expansion under the direction of Governor Lachlan Macquarie would potentially be of National significance. The remainder of the archaeological profile has local significance.¹⁰⁹

¹⁰⁹ Biosis (2012) pg. 229–230.

This original Statement of Significance reflects an expectation of what the presumed archaeological resources of the project area may have been able to contribute to the understanding of the settlement, development, and use of Thompson Square and its vicinity (e.g. the statement “[i]t must be assumed that the evidence contained within the subject area will have the same values and significance as the rest of Thompson Square”). What the archaeological investigations for the Windsor Bridge Replacement Program have shown, however, is a highly impacted archaeological landscape that has lost most evidence of the early use and development of the area. The construction of the brick oviform drain in 1816 represents the first major impact to the place, that cut through the centre of the early settlement. Subsequent flooding, with patterns of erosion and deposition have also heavily impacted the archaeological potential of the areas along the river’s edge, and areas adjacent to the oviform drain cut. Finally, the construction of Windsor Bridge and the extensive road network that passed through the site in several different configurations have all served to significantly impact the actual archaeological potential and significance of the area.

Thus, the original Statement of Significance is based on an assumption, now proved erroneous, that there would be substantial intact archaeological deposits relating to the early phases of the settlement. Due to these historical modifications to the site, this was not the case. Aside from the oviform drain and associated feeder drains, other archaeological evidence has proved fragmentary, affording the project team with little data with which to draw significant new conclusions. Archaeological potential remains in unexcavated areas adjacent to the locations excavated for this project, particularly within the privately held land to the east and west of Thompson Square. The revised Statement of Significance below reflects the archaeological reality of a history of heavy modification through both human and natural action, which has eliminated much of the assumed archaeological potential.

9.2 Revised Statement of Significance

9.2.1 ASSESSMENT CRITERIA

In general, the level of archaeological significance defines the degree of impact or tolerance for change that the archaeological resource can be subjected to and determines the level of investigation and recording that is required. While archaeological resources form an integral component of the adjusted significance of a place, their significance is assessed independently from above ground and other heritage elements. This is because the extent and nature of archaeological features and deposits are often unknown. The following significance reassessment of the subject site's archaeological resource considers criteria expressed in the publication 'Assessing Significance for Historical Archaeological Sites and "Relics"', prepared by the Heritage Branch, Department of Planning (NSW) (now the Heritage Division, OEH) in December 2009.

The four NSW Heritage Criteria for Assessing Significance related to Archaeological Sites and Relics are:

- archaeological research potential (current NSW Criterion E);
- associations with individuals, events, or groups of historical importance (NSW Heritage Criteria A, B, and D);
- aesthetic or technical significance (NSW Heritage Criterion C); and
- ability to demonstrate the past through archaeological remains (NSW Heritage Criteria A, C, F, and G).

The above assessment criteria for historical archaeological sites are supplemented by the established assessment framework that was developed by Anne Bickford and Sharon Sullivan in 1984. It comprises three key questions generally used as a guide for assessing the significance of an archaeological site.

9.2.2 STATEMENT OF SIGNIFICANCE

The results of the historical archaeological salvage excavations supplemented the results from Area 1, where it was indicated that disturbance from various site formation processes had a larger effect on the predicted survival of archaeological material than was expected based on the results of the 2016 archaeological testing program. With the exception of the oviform drain, which is discussed further in the previous assessment in a separate report, the additional areas of excavation lacked the artefactual assemblage which gave significance to Area 1. However, while the overall Government Domain area is likely to be of State significance in terms of the historical values which it embodies (criterion a, b f), the archaeological remains, consisting solely of the lower courses of the outer wall of the site, are considered to be only of local significance owing to their highly disturbed nature and the consideration that they do not provide a direct link to the activities that occurred within the domain (Criterion e, b). Similarly, the retaining wall on the Terrace, while of substantial construction, is also considered to be of local significance due to its relatively late date of construction and the utilitarian purpose for which it was made (Criterion f, g).

The archaeological artefact assemblage recovered during the Windsor Bridge Replacement Project is a significant collection of relics from Windsor's colonial past. The artefact assemblages recovered from both phases of site investigation (Area 1 and Areas 1A, 2, 3, 4 and 5) when combined, constitute a small collection (5,676 items). The objects forming the collection were recovered primarily from fill deposits that did not provide substantive information regarding the use and development of specific places within the study area. This is particularly so with objects recovered from the second phase of investigation in Areas 1A, 2, 3, 4 and 5. The objects recovered during the first phase of investigation

(Area 1) were again mostly recovered from fill deposits. In Area 1 the fill deposits with significant artefact assemblages were stratigraphically secure and dated to Phase 2 (1794-1814) and Phase 3 (1814-1816) of the site's development (1,784 items). As such, the assemblages from Area 1 provide a good indication of the material culture of the Green Hills/Windsor district during the first generation of British occupation. The significance of the assemblage from Area 1 lies in value as a comparative collection that is securely dated to the period between 1794 and 1816. As such the combined collections constitute a good representative example of material culture within the colony of New South Wales in the period before 1820 (Criterion a, g).

Items of trade and manufacture recovered from Areas 1A, 2, 3 4 and 5 demonstrate the shift from a reliance upon imported goods (British ceramics and glassware, Chinese export porcelains) to locally manufactured products, including lead glazed wares, medicines, soft drinks and beers (Criterion a, e). However, as these artefacts were recovered primarily from fill deposits their potential to contribute to our understanding of the operation of mixed-trade commercial practice in colonial Sydney from the late eighteenth to the early twentieth century is limited (Criterion e). The assemblage of crockery, glass service vessels, faunal and shell remains, representing 1,117 individual objects, provides a glimpse of generic diet patterns and dining practices typical for nineteenth century urban sites in colonial Sydney (Criterion a, e). Fully or substantially intact artefacts provide an aesthetic and tangible link to the site's history and hold special association with the wider Hawkesbury regional community. These values hold particular significance for objects (such as the possible Pelham bit) potentially linked to the historical military presence within Windsor (Criterion c, d).

Overall, the assemblage represents a typical assemblage for an urban site in New South Wales from the early nineteenth through mid-twentieth centuries and contributes to our understanding of Windsor's colonial past. Collectively, the assemblage meets the threshold for local significance.

10 CONCLUSIONS AND RECOMMENDATIONS FOR FUTURE MANAGEMENT

10.1 Conclusions

The program of monitoring and archaeological salvage associated with the Windsor Bridge Replacement Project between 2016 and 2020 provided some limited archaeological evidence that reflected the use of Thompson Square during the nineteenth century. Two hundred and twenty years of continuing attempts to provide a reliable crossing of the Hawkesbury River at Windsor have effectively compromised the integrity of former features, such as buildings, that occupied a number of locations within the area occupied by Thompson Square. The most significant surviving elements were those associated with the drainage system and a small portion of the Government domain wall. Once the Square was established there was limited opportunity for undertaking activities that had the potential to leave substantial archaeological remains. This is the nature of a public square - it is a place which people pass through or undertake temporary activities within. Earlier uses within the bounds of Thompson Square had been completely removed through a series of historical activities including repeated flooding, erosion and deposition, the construction of the barrel drain and branch drains in the 1810s, the construction of the first Windsor Bridge and associated road system in the 1870s, and subsequent modern modifications to roads, the construction and demolition of the boat shed and other intrusions, small and large, in the space over two centuries.

It is likely that most significant intact archaeological remains of the early periods of settlement survive in the residential areas adjacent to Thompson Square located outside the project area. The archaeological works primarily provided a better understanding of the construction and extent of the 1816 drainage system that was known from the historical record, but which is not described in any detail. The preservation of a section of the brick oviform drain beneath the new bridge and the implementation of interpretation within the public domain of Thompson Square will assist in the appreciation of this site into the future.

10.2 Recommendations

Based on the findings of this report, the following recommendations are made:

- This report presents the results of archaeological excavation, analysis, and findings of the entire program of archaeological mitigation measures required within the impact corridor (as recommended in the Detailed Salvage Strategy).¹¹⁰
- The findings of this report should be used to inform management of in situ retained archaeological remains during any future ground disturbance works that may be required.
- Recommendations pertaining to the artefact assemblage can be found in Section 10.3.
- The WBRP Collection will be stored securely by the Hawkesbury Regional Museum located at 8 Baker Street, Windsor NSW 2756. The Hawkesbury Regional Museum are responsible for the collections long term storage and management.
- Copies of this and all final reports detailing salvage works within the WBRP development zone are to be provided for lodgement with the Department of Planning and Environment, Heritage NSW Department of Premier and Cabinet and the heritage section of Hawkesbury City Council's library.

¹¹⁰ AAJV 2017c.

10.3 Artefact Management Policy

The following policy outlines the management of the assemblage from the Windsor Bridge Replacement Project historical archaeological excavations.

CONSERVATION

- The WBRP Collection should be monitored for ongoing issues with moisture content within three months of its new storage location at the Hawkesbury Regional Museum. Silicone sachets should be discarded or replaced as appropriate.

STORAGE

- The WBRP Collection will be stored securely by the Hawkesbury Regional Museum located at 8 Baker Street, Windsor NSW 2756. The Hawkesbury Regional Museum are currently in possession of previously loaned artefacts as part of the exhibition 'UNCOVERED – The Archaeology of Thompson Square'.
- The Hawkesbury Regional Museum are responsible for the WBRP Collection's long term storage and management.
- The WBRP Collection should be stored securely in a dry and stable environment.
- The collection should be made available and accessible to researchers upon request.

DISPLAY

- While some objects are already on display at the Hawkesbury Regional Museum as part of the exhibition 'UNCOVERED – The Archaeology of Thompson Square', it is recommended that additional objects from the assemblage be considered for display also..
- Artefacts should be made available and accessible for loan to other museums subject to qualified Conservator's advice. Where items are removed from the WBRP Collection at the Hawkesbury Regional Museum, the museum's collections database should be amended to indicate the movements of the item. For any such removal the database or a separate register should include a digital image of the objects in question.

FURTHER RESEARCH

- The WBRP Collection should be examined in reference to associated excavation zones and assemblages – both underwater and terrestrial. This comparative information will add value in terms of the project's overall Research Design.
- The WBRP Collection could be examined in reference to similar contemporary archaeological sites within New South Wales. This comparative information will add value in terms of the wider historical and archaeological heritage of the Hawkesbury River and Greater Sydney regions.

DATA ARCHIVE

- The WBRP Collection Artefact Report and associated records should be lodged with an appropriate and publicly accessible data repository.

ARTEFACT DISCARD AND SAMPLING

- Following post excavation artefact analysis, no artefact discard was carried out. As part of this analysis, all artefacts in the collection were catalogued and subject to preliminary analysis.

- Subject to further analysis, the Hawkesbury Regional Museum may carry out artefact discard or undertake a sampling strategy where their analysis of significance indicates that:
 - The artefact is undiagnostic and has limited research potential;
 - The contexts from which the artefacts were recovered lack integrity;
 - Excessive quantities of a class of material has been retained;
 - The condition of the artefacts precludes long term curation; or
 - The artefacts constitute hazardous materials.
- However, exceptions to the above may occur in which case the principal investigators and collection manager at the Hawkesbury Regional Museum should use their experience and best professional judgment to make informed decisions concerning what to curate, sample or discard.
- In cases where sampling or discard is undertaken, the artefact catalogue and the museum's collection database should be amended to state that these processes were undertaken.

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APPENDIX 1. SITE DRAWINGS

Area	Drawing Number	Scale	Description	Contexts	Features
1A	14a	1:20	Area 1 west ridge southern extent at location of barrel drain, joins 14b + 14c		Barrel Drain
1A	14b	1:20	Area 1 west ridge southern extent, joins 14a + 14c		Box Drain 1
1A	14c	1:20	Area 1 west ridge southern extent, joins 14a + 14b	1490, 1491, 1492	Box Drain 1
1A	15a	1:20	Box drain 3 plan	1466, 1467, 1470	Box Drain 3
1A	15b	1:20	Box drain 3 plan	1466, 1467, 1470	Box Drain 3
1A	16a	1:10	Box drain 2 west section plan	1449, 1450, 1451	Box Drain 2
1A	16b	1:10	Box drain 2 west section plan	1428, 1429, 1449, 1450, 1451	Box Drain 2
1A	16c	1:10	Box drain 2 west section plan	1428, 1429	Box Drain 2
1A	17	1:10	Continuation of Box Drain 2 - West facing section. Same sheet as Drawing 18		Box Drain 2
1A	18	1:10	West facing section - Continuation of Box Drain 2. Same sheet as Drawing 17		Box Drain 2
1A	19a	1:10	Box drain 1 northern section plan	1504, 1505	Box Drain 1
1A	19b	1:10	Box drain 1 northern section plan	1504, 1505	Box Drain 1
1A	20	1:10	Box drain 1 southern extent. Same sheet as Drawing 21	1502, 1503	Box Drain 1
1A	21	1:10	Box drain 1 southern extent w/base. Same sheet as Drawing 20	1502	Box Drain 1
1A	22a	1:10	Box drain 1 northern section w/base	1504	Box Drain 1

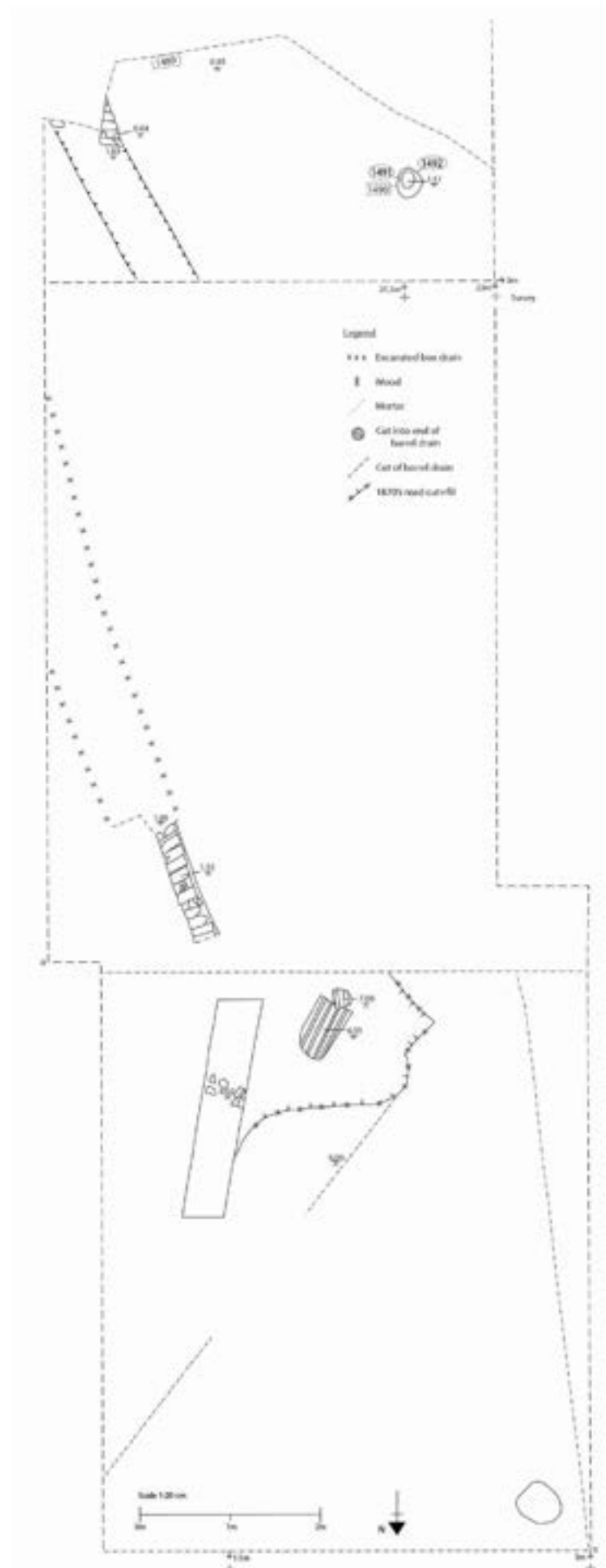
Area	Drawing Number	Scale	Description	Contexts	Features
1A	22b	1:10	Box drain 1 northern section w/base	1504	Box Drain 1
1A	23	1:10	Box drain 1 at damaged section	1499, 1500, 1501	Box Drain 1
North	24	1:20	Pump base - north bank	1511, 1512, 1514, 1516, 1517, 1518, 1519, 1520, 1521, 1522, 1523, 1524, 1525, 1526, 1527, 1529, 1575	Pump House
North	25	1:20	Pump base - with channel base - north bank	1512, 1514, 1515, 1517, 1520, 1521, 1522, 1523, 1524, 1531, 1532, 1533	Pump House
1A	26a	1:20	Concrete beams	1510, 1545	Concrete beams
	26b	1:20	Concrete beams	1510	Concrete beams
	26c	1:20	Concrete beams	1510	Concrete beams
	26d	1:20	Concrete beams	1510	Concrete beams
	26e	1:20	Concrete beams	1510	Concrete beams
1A	27a	1:10	Timber section west of barrel drain	1546, 1549, 1551, 1552, 1553, 1554, 1547, 1555, 1556, 1557, 1558, 1559, 1563	Barrel Drain
1A	27b	1:10	Timber section west of barrel drain	1552, 1553, 1554, 1556, 1557, 1558, 1559, 1560, 1561, 1562, 1608,	Barrel Drain
1A	27c	1:10	Timber section west of barrel drain	1552, 1553, 1560, 1561, 1562	Barrel Drain
1A	28a	1:20	Concrete beams - under carpark	1510	Concrete beams
1A	28b	1:20	Concrete beams - under carpark	1510, 1548	Concrete beams

Area	Drawing Number	Scale	Description	Contexts	Features
1A	29	1:20	Pits 1563 + 1565, west of Bridge Street	1563, 1564, 1565, 1566	
	30a	1:20	Section east of carpark (adjacent to timber)	1567, 1568, 1569, 1570, 1571, 1572, 1573, 1574, 1575, 1576, 1577, 1578, 1579, 1580	
	30b	1:20	Section east of carpark (adjacent to timber)	1568, 1569, 1570, 1572, 1573, 1576, 1579, 1580, 1581, 1582, 1583, 1584, 1586	
	31	1:10	Section east of carpark - north (west)	1585, 1586, 1587, 1588, 159, 1595,	
	32	1:20	Section east of carpark - north (east)	1584, 1585, 1589, 1596, 1601, 1602, 1603	
1A	33a	1:10	Timber section 2, west of barrel drain	1546, 1547, 1551, 1553, 1554, 1556, 1557, 1558, 1559, 1560, 1608, 1609, 1610	Barrel Drain
1A	33b	1:10	Timber section 2, west of barrel drain	1553, 1554, 1557, 1558, 1560, 1562, 1557, 1560, 1609	Barrel Drain
1A	34	1:20	Concrete beams over barrel drain	1510	Concrete beams
1A	35	1:20	Concrete beams in sewer trench	1510	Concrete beams
3	36	1:25	Pre-ex plan of Area 3i (George Street north lane)	300, 302, 304, 305, 306, 307, 308, 309, 310, 311, 312, 315, 316, 317, 318, 320, 321, 322, 323, 324, 325, 326, 327, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341	Domain Wall, SA25

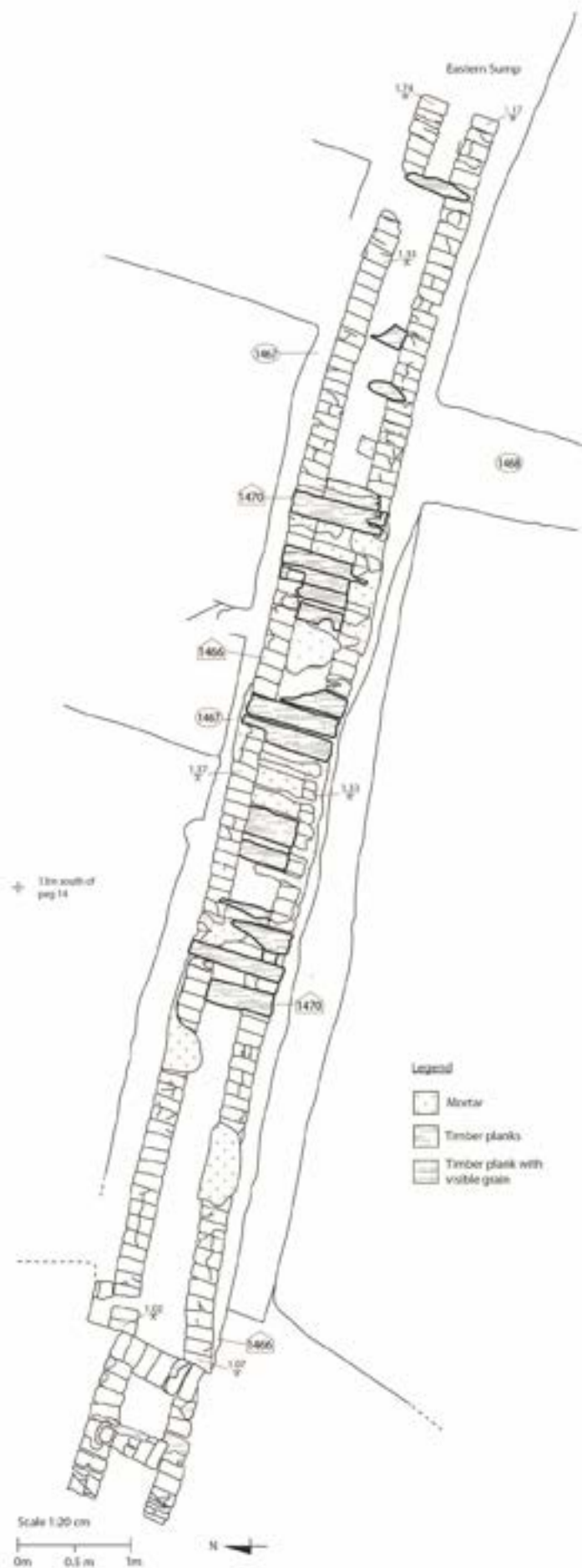
Area	Drawing Number	Scale	Description	Contexts	Features
3	37	1:25	George St East (Northern Side) - joins Drawing 36	301, 304, 331, 403, 404, 405, 406, 407, 408, 410, 411, 412	Domain Wall
3	"Joins 37"	Presumed 1:25	Joins 37 to east	331, 403, 404, 405, 406, 413, 414	Domain Wall, SA24
3	37(2)	1:50	DUPLICATED NUMBER. Southern lane of George Street, ties into Drawing 39	315, 335, 336, 337, 338, 339, 340, 341, 342, 365, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 385, 388	
3	38	1:20	Mid-excavation Domain Wall		Domain Wall
3	39	1:50	Mid-excavation, eastern end of southern lane, ties in with duplicated Drawing 37	328, 331, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 365, 366, 367, 368, 369, 370, 373, 379, 383, 384	
3	40	1:20	George St. NW Corner	2200, 2201, 2202, 2203	
2	41	1:20	Old Bridge Street - west facing section below footpath	2207, 2214, 2215, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2228, 2229, 2230, 2231, 2232, 2233	
3	42	1:25	South facing section of 10 Bridge Street with post holes. Same sheet as below	5001, 5002, 5003, 5004, 5005, 5006, 5007	
2	43	1:75	Plan showing location of brick wall extending out of 10 Bridge Street. Same sheet as above		Domain Wall

Area	Drawing Number	Scale	Description	Contexts	Features
3	44	1:25	"East section along Bridge Street adjacent to 10 Bridge Street"	5001, 5026, 5028, 5029, 5030, 5031	
2i	45	1:50	Post-ex of northern part of Old Bridge Street road alignment	2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2228	
2i	46	1:50	Mid-ex of southern end of Old Bridge Street road alignment	2205, 2206, 2207, 2228, 2240, 2241, 2242, 2243, 2244	Box Drain

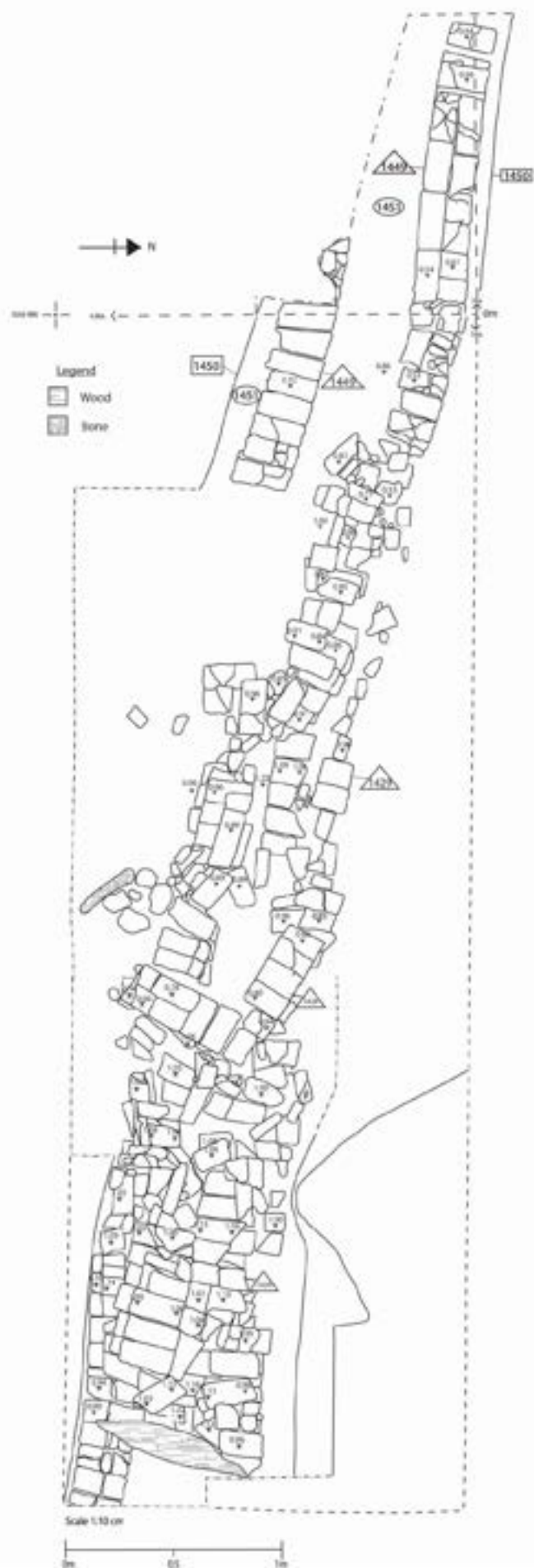
Area 1A: West ridge southern extent at location of Barrel Drain and Box Drain 1



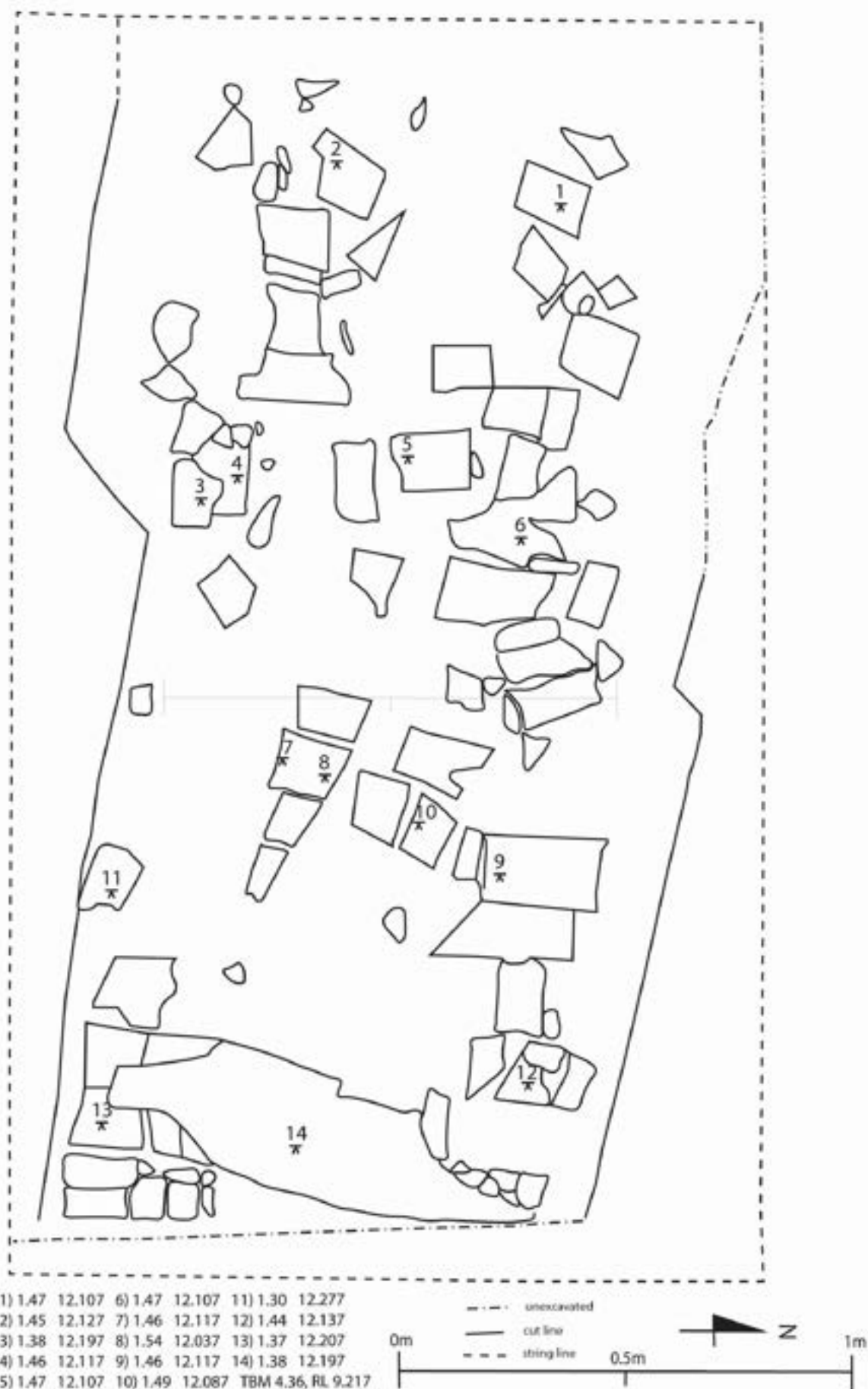
Area 1A: Box Drain 3



Area 1A: Box Drain 2, west



Windsor Bridge Replacement Project
 Drawing #17
 1:10
 Area 1A: Box Drain 2, west

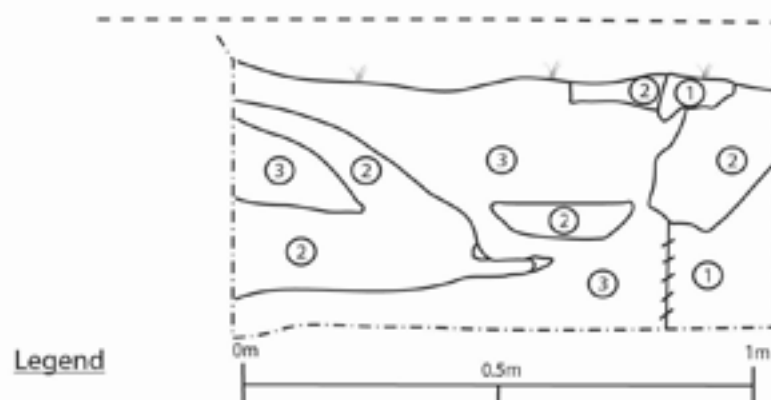


Windsor Bridge Replacement Project

Drawing #18

1:10

Area 1A: West section, Box Drain 2



Legend

✓ Surface level

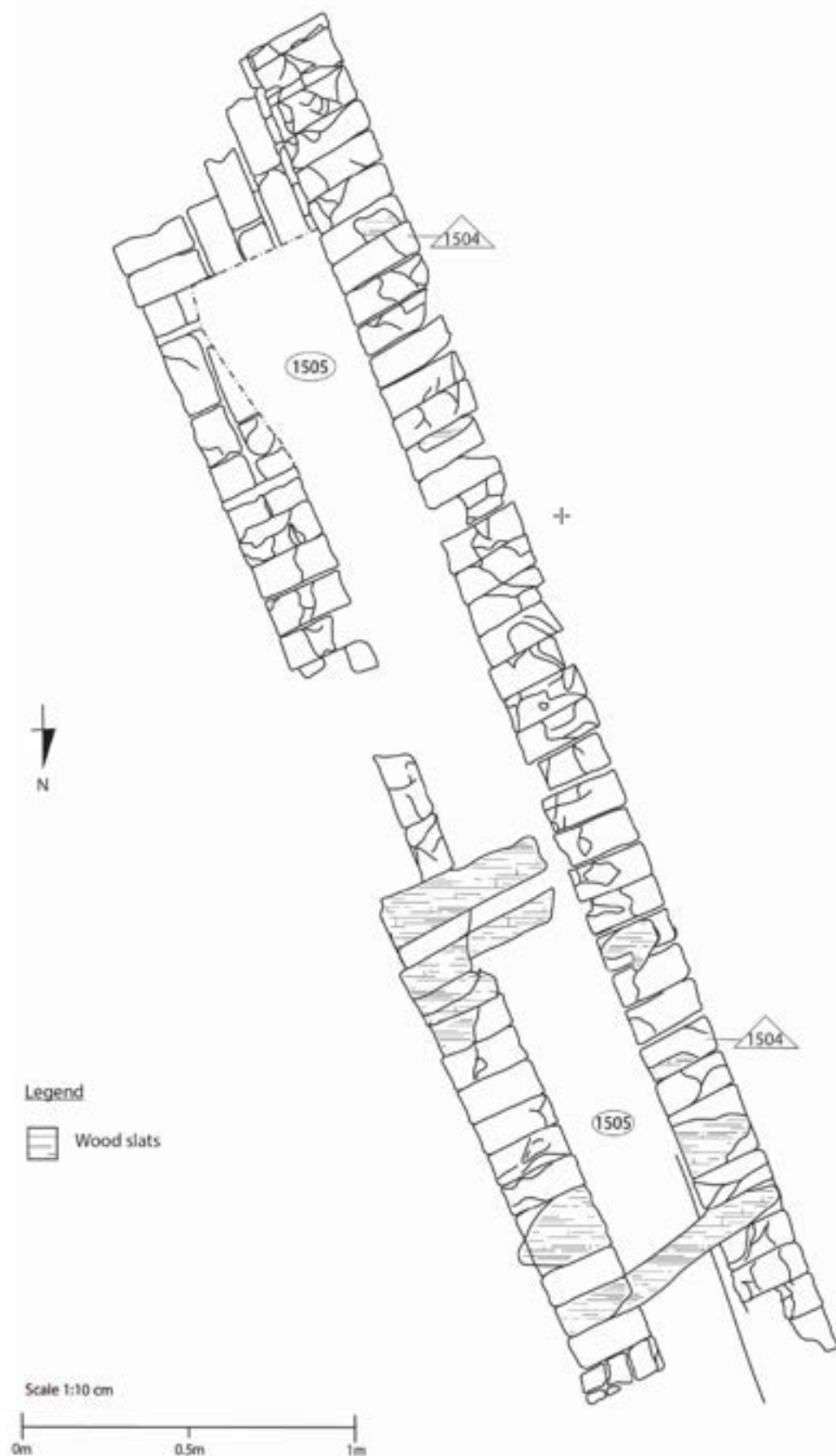
① Loosely compacted, finely sorted sandstone gravel

② Moderately compacted, medium grey sandy soil
with dark grey inclusions <2%

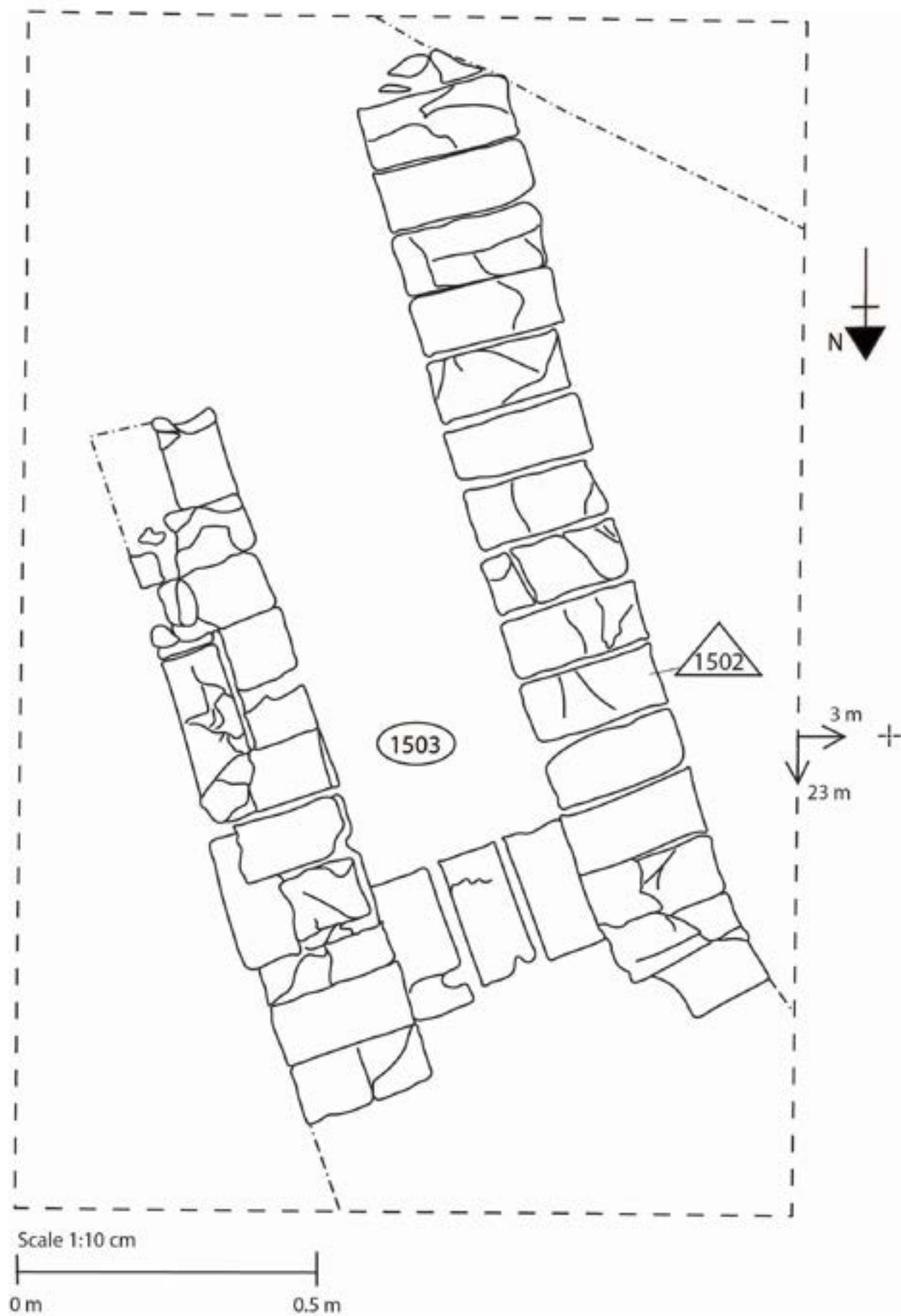
③ Moderately compacted, light sandy soil
with light grey sandy soil inclusions <2%

⊥ Drain cut

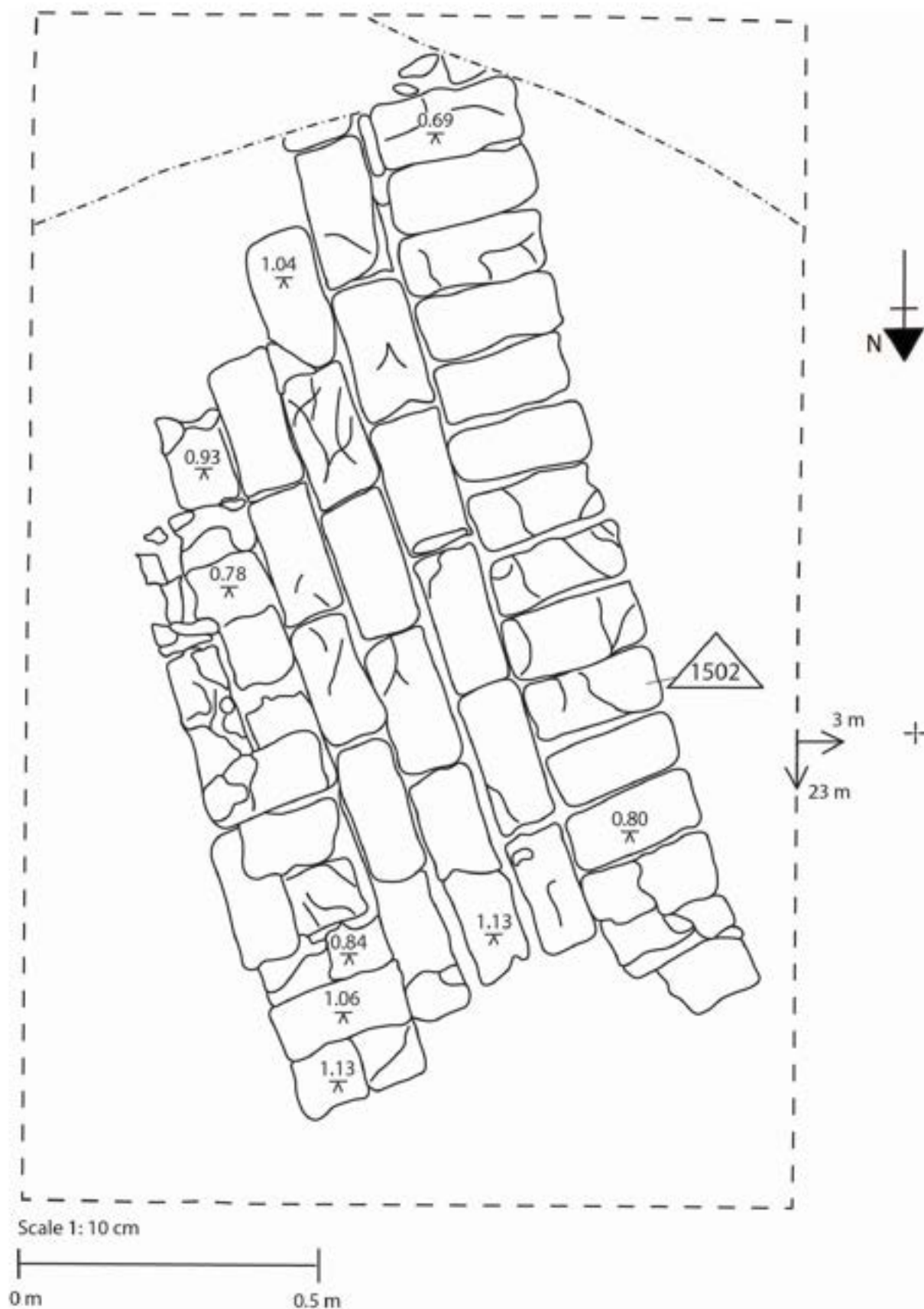
Windsor Bridge Replacement Project
Drawing #19a, 19b
1:10
Area 1A: Box Drain 1, north



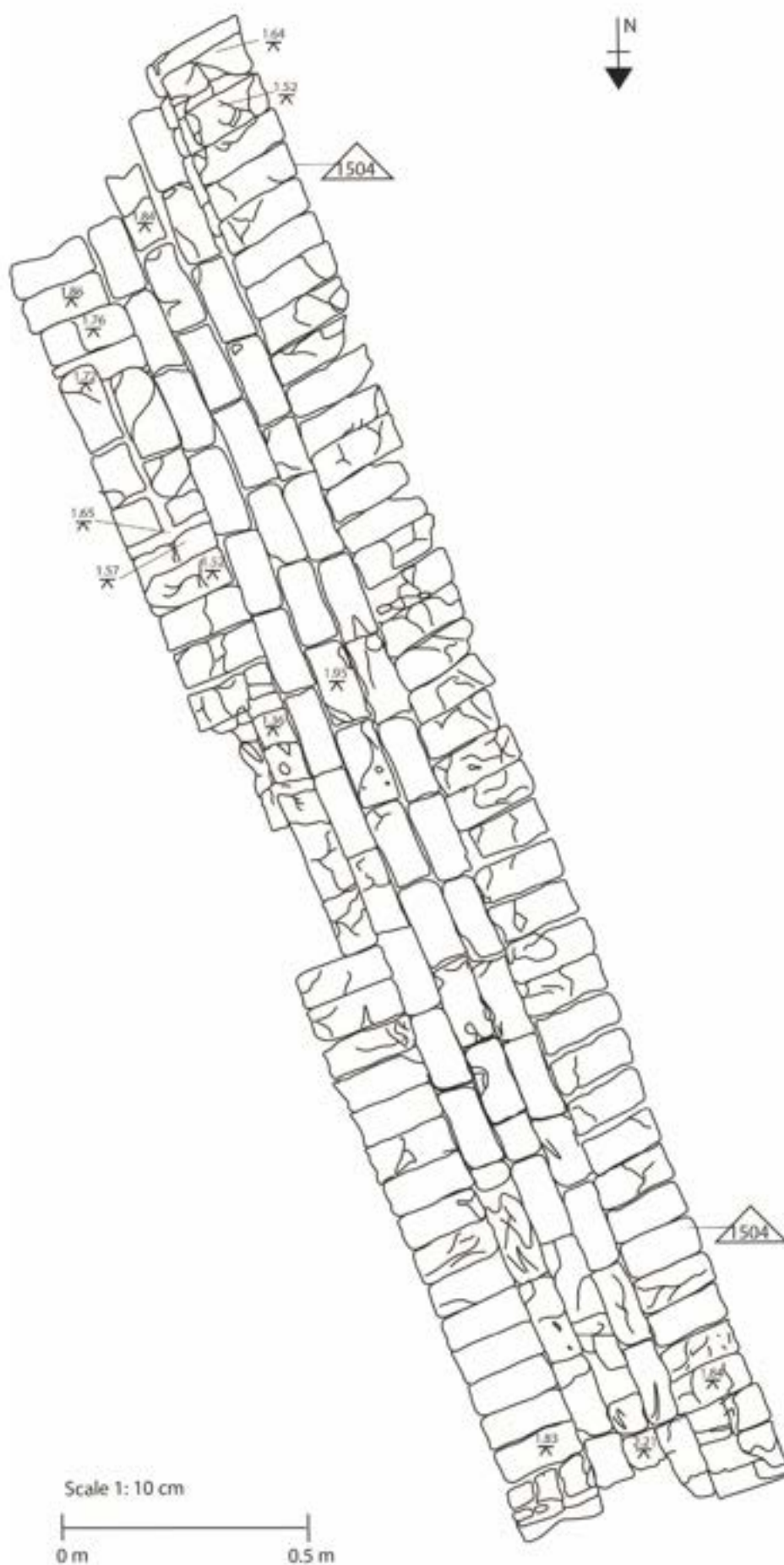
Windsor Bridge Replacement Project
Drawing #20
1:10
Area 1A: Box Drain 1, south



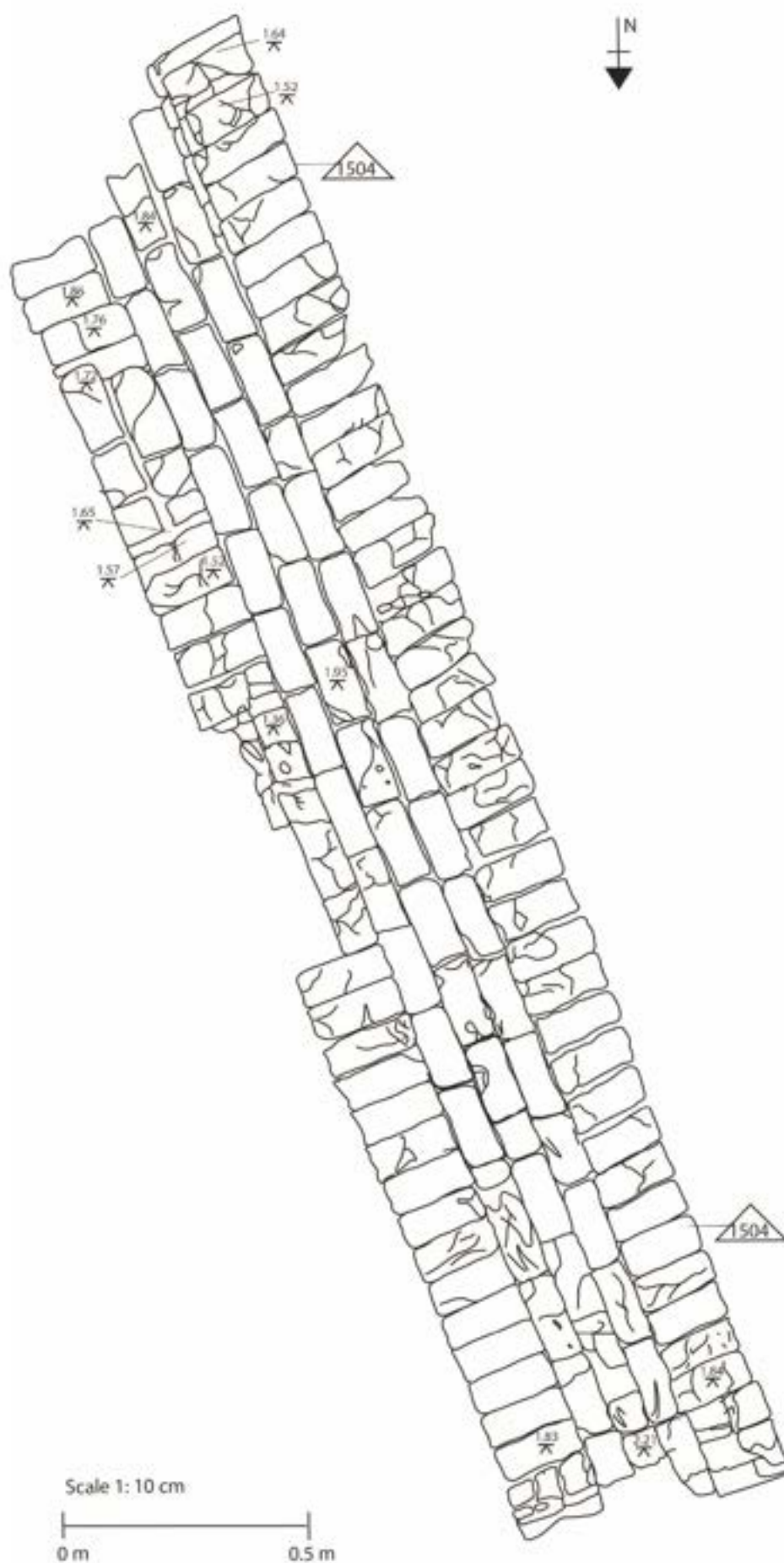
Windsor Bridge Replacement Project
Drawing #21
1:10
Area 1A: Box Drain 1 with base, south



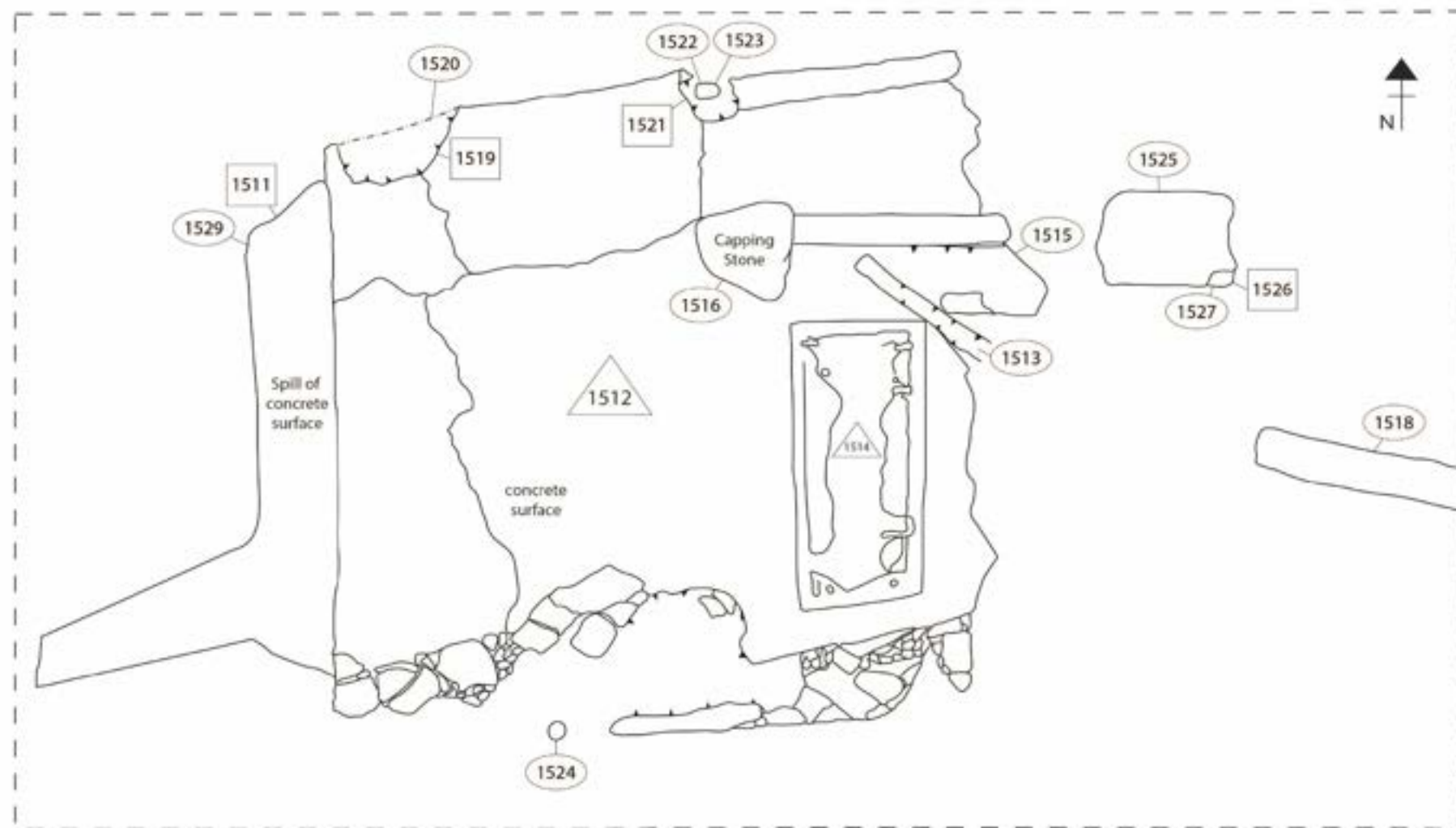
Windsor Bridge Replacement Project
Drawing #22a, 22b
1:10
Area 1A: Box Drain 1, north, with base



Windsor Bridge Replacement Project
Drawing #23
1:10
Area 1A: Box Drain 1, damaged section



Windsor Bridge Replacement Project
Drawing #24
1:20
Area North: Pump base, north bank



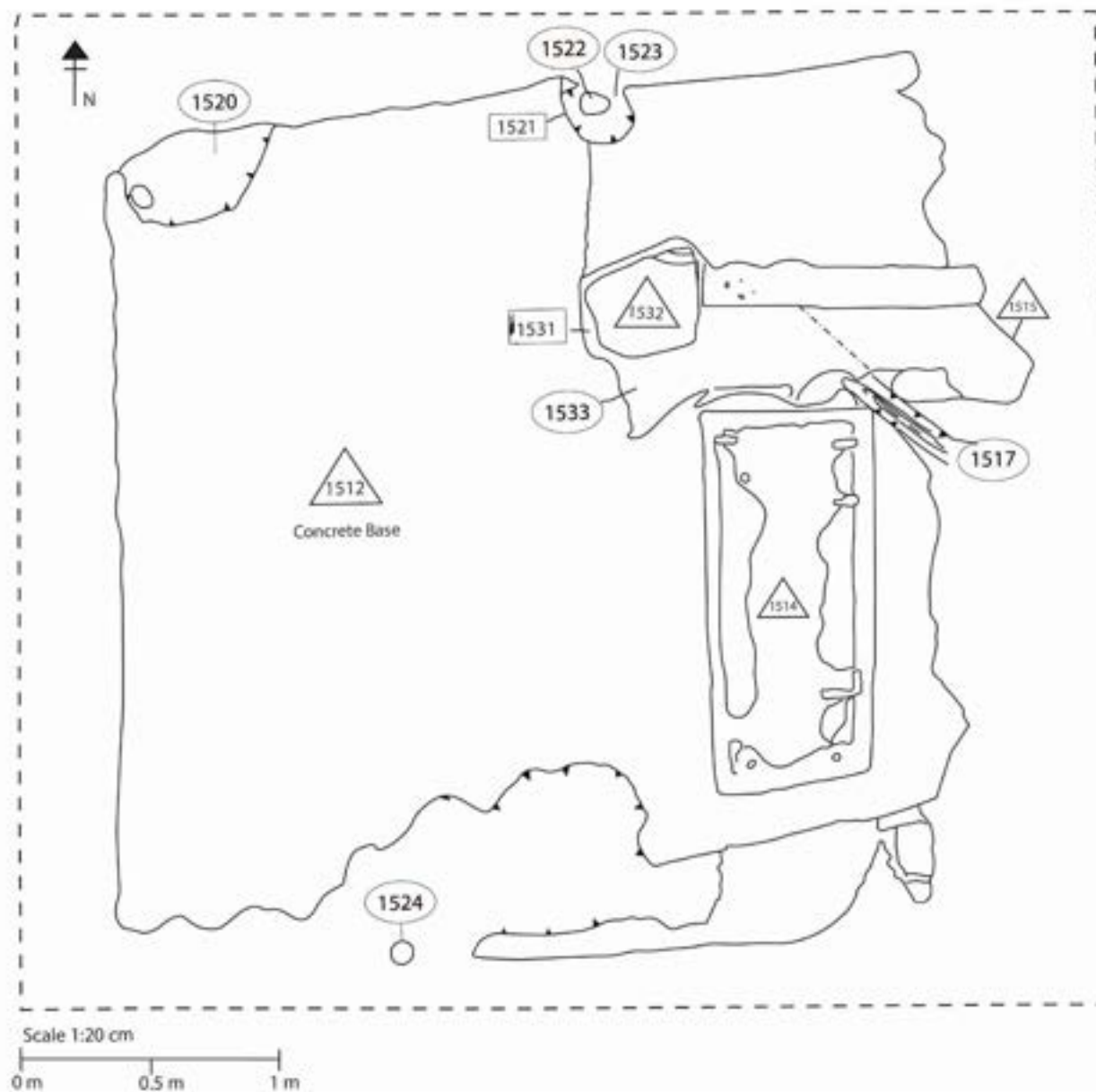
Scale 1:20 cm
0m 0.5 m 1m

Windsor Bridge Replacement Project

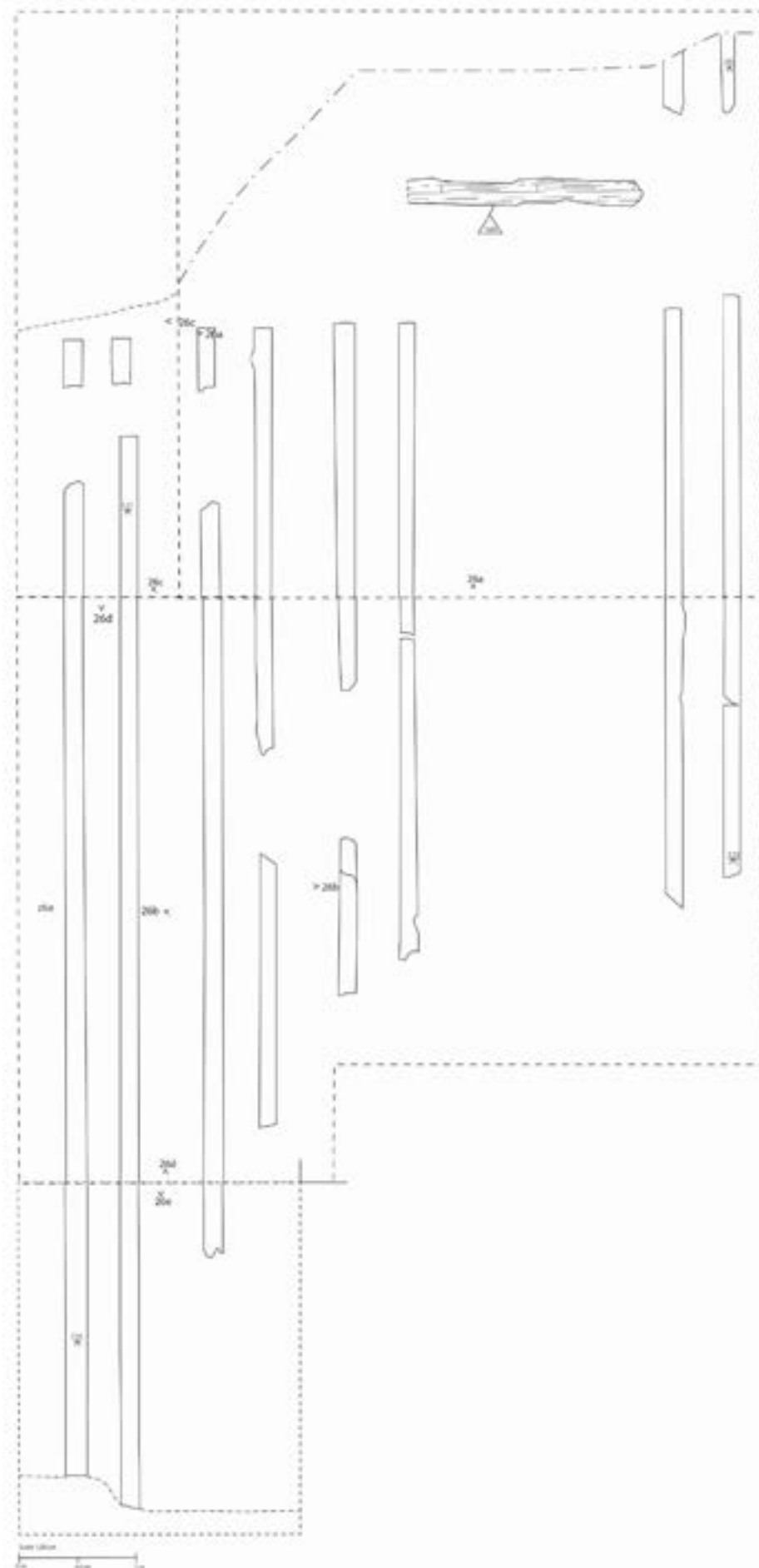
Drawing #25

1:20

Area North: Pump base with channel base, north bank



Windsor Bridge Replacement Project
Drawing #26a, 26b, 26c, 26d, 26e
1:20
Area 1A: Concrete beams

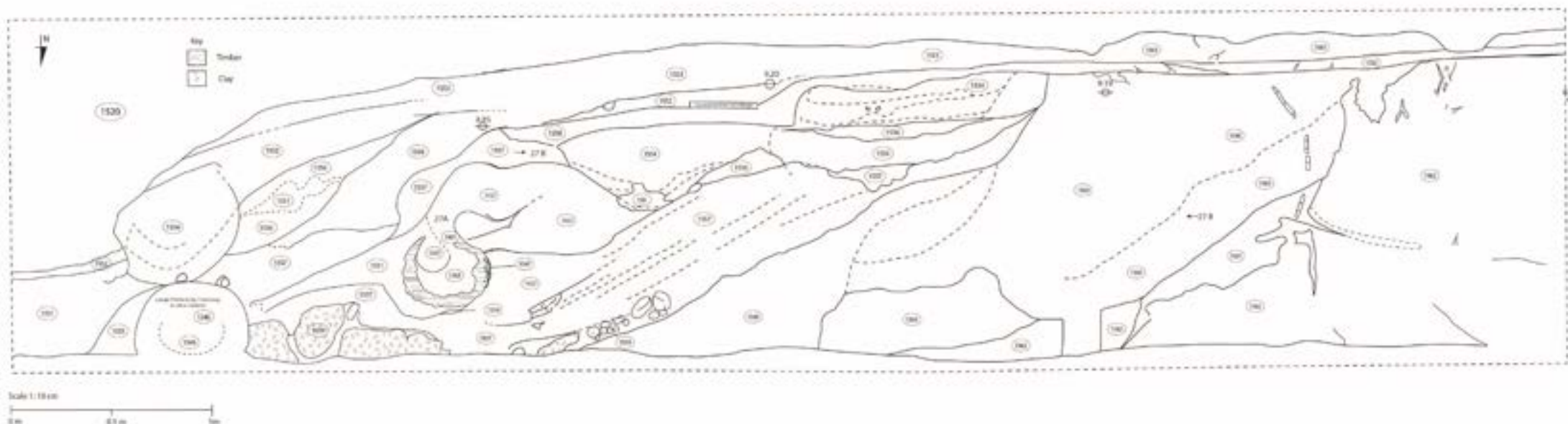


Windsor Bridge Replacement Project

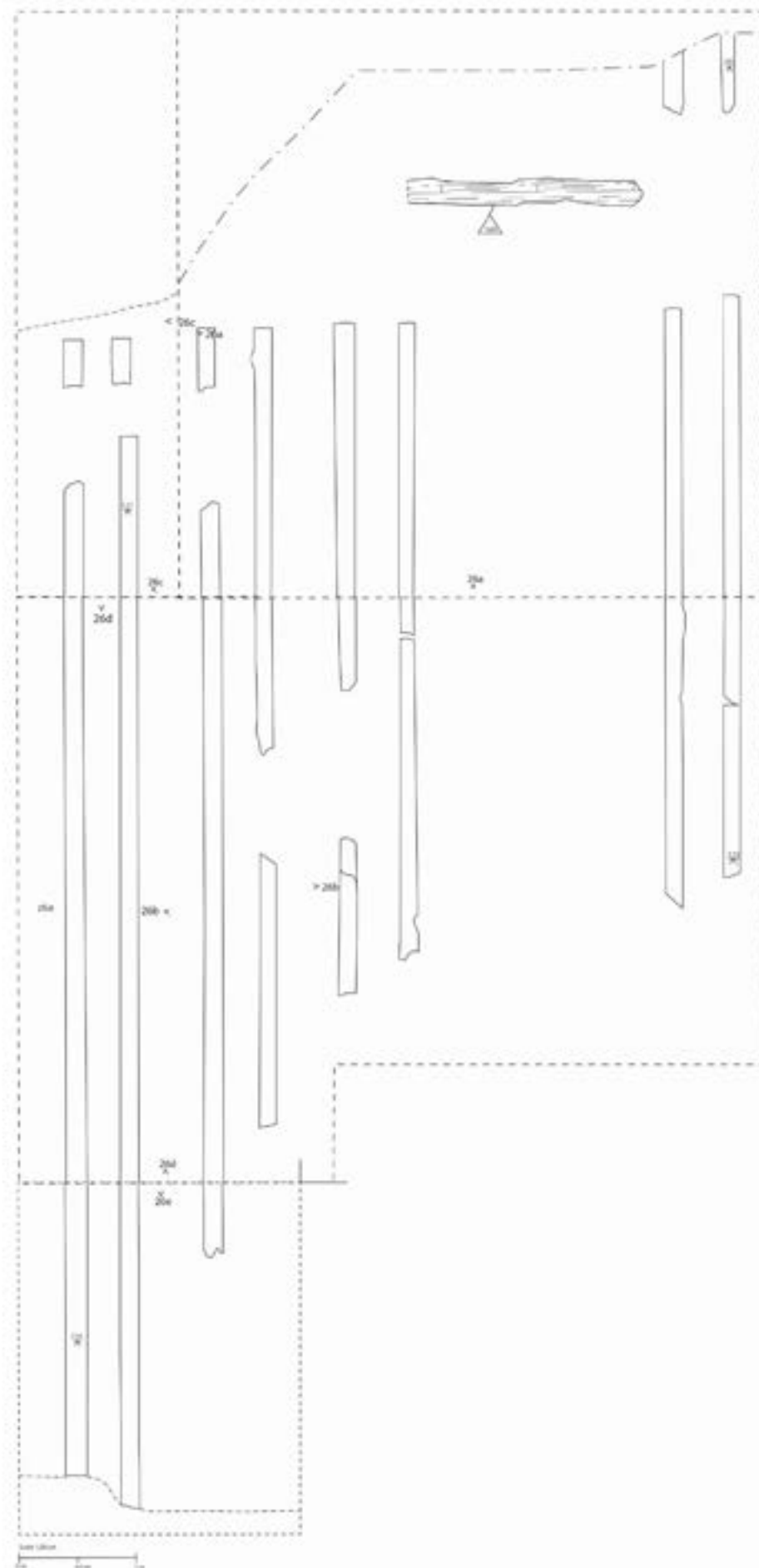
Drawing #27a, 27b, 27c

1:10

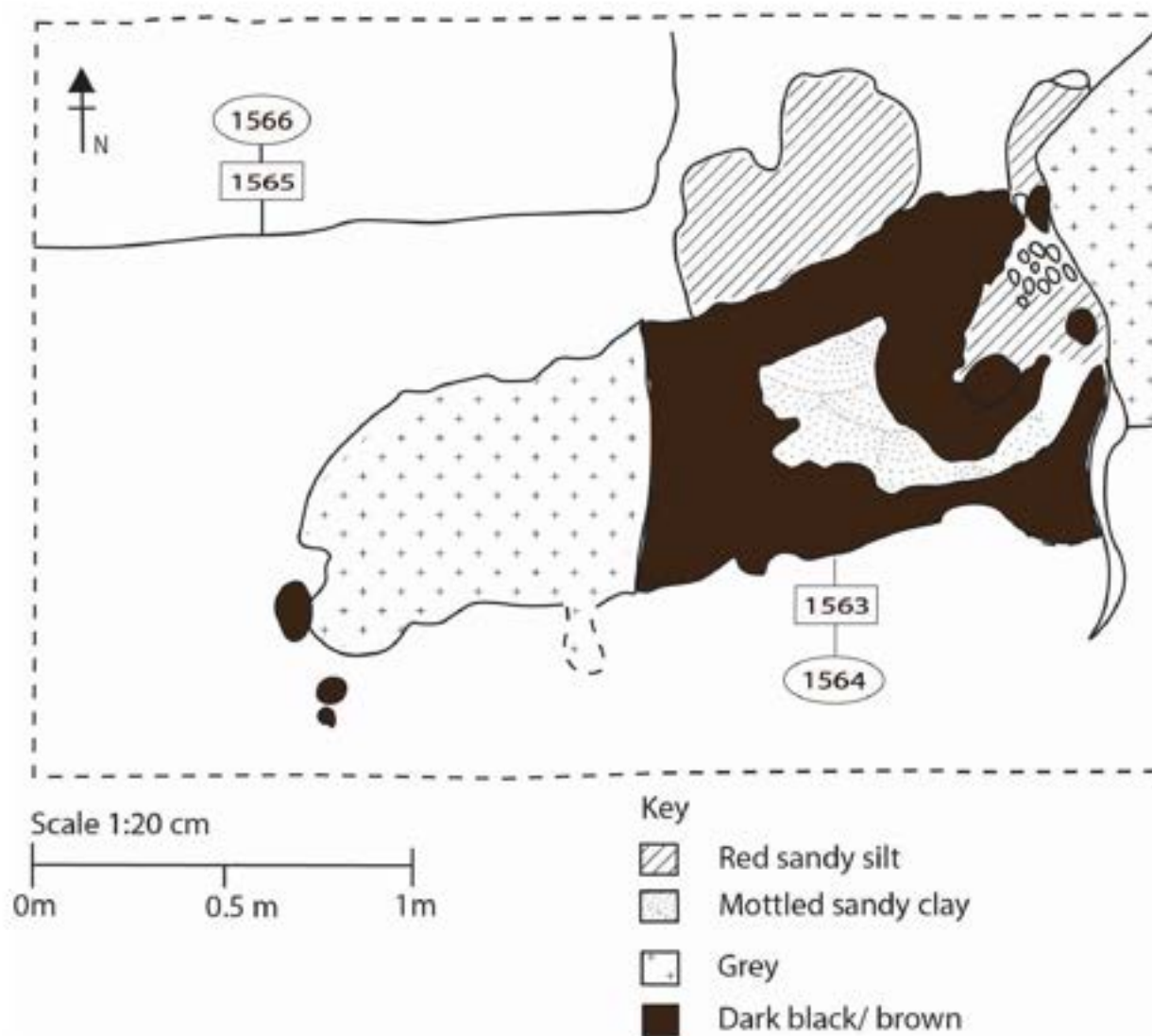
Area 1A: Timber section, south section, west of Barrel Drain



Windsor Bridge Replacement Project
Drawing #26a, 26b, 26c, 26d, 26e
1:20
Area 1A: Concrete beams



Windsor Bridge Replacement Project
Drawing #29
1:20
Area 1A: Pits 1563 & 1565, west of Bridge Street

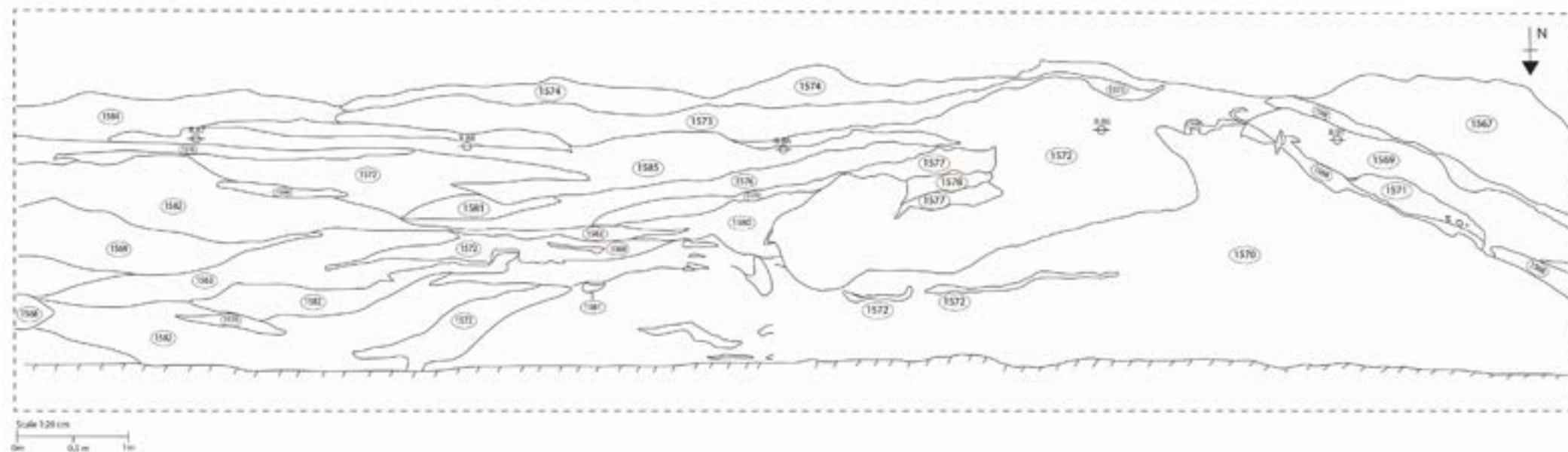


Windsor Bridge Replacement Project

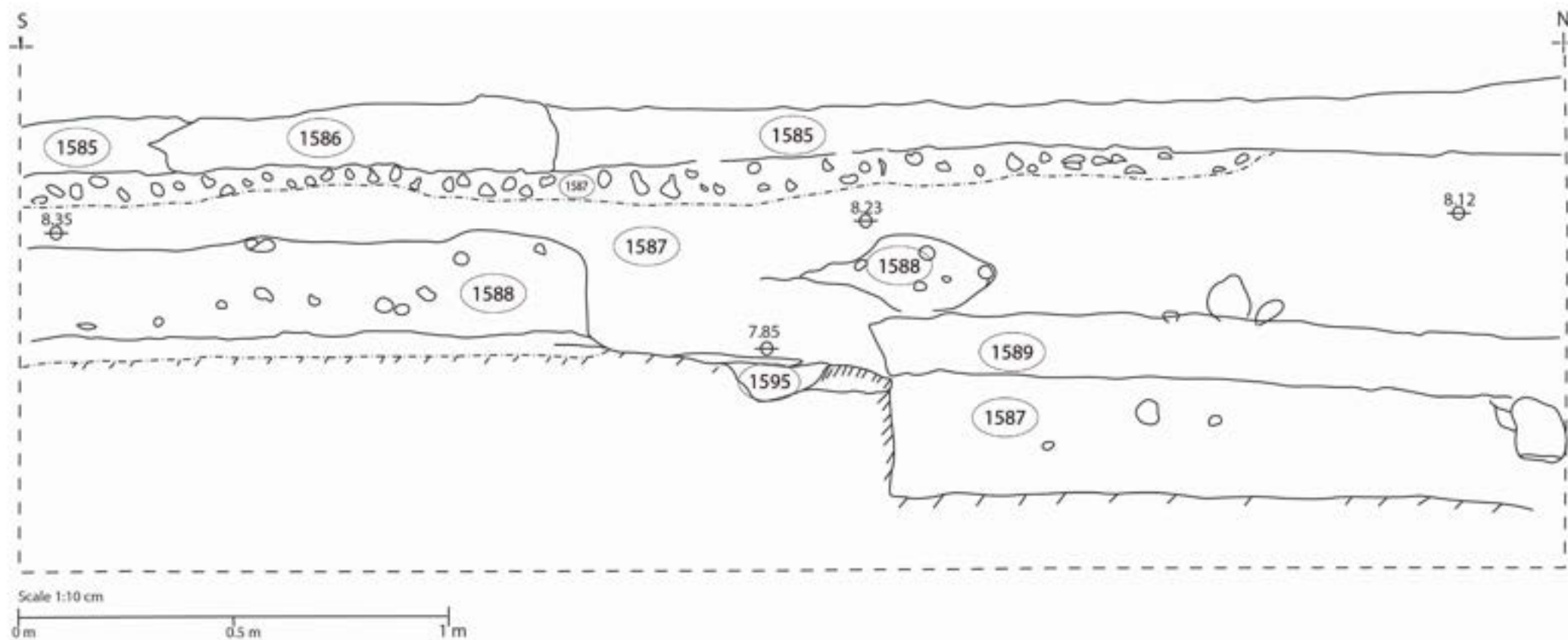
Drawing #30a, 30b

1:20

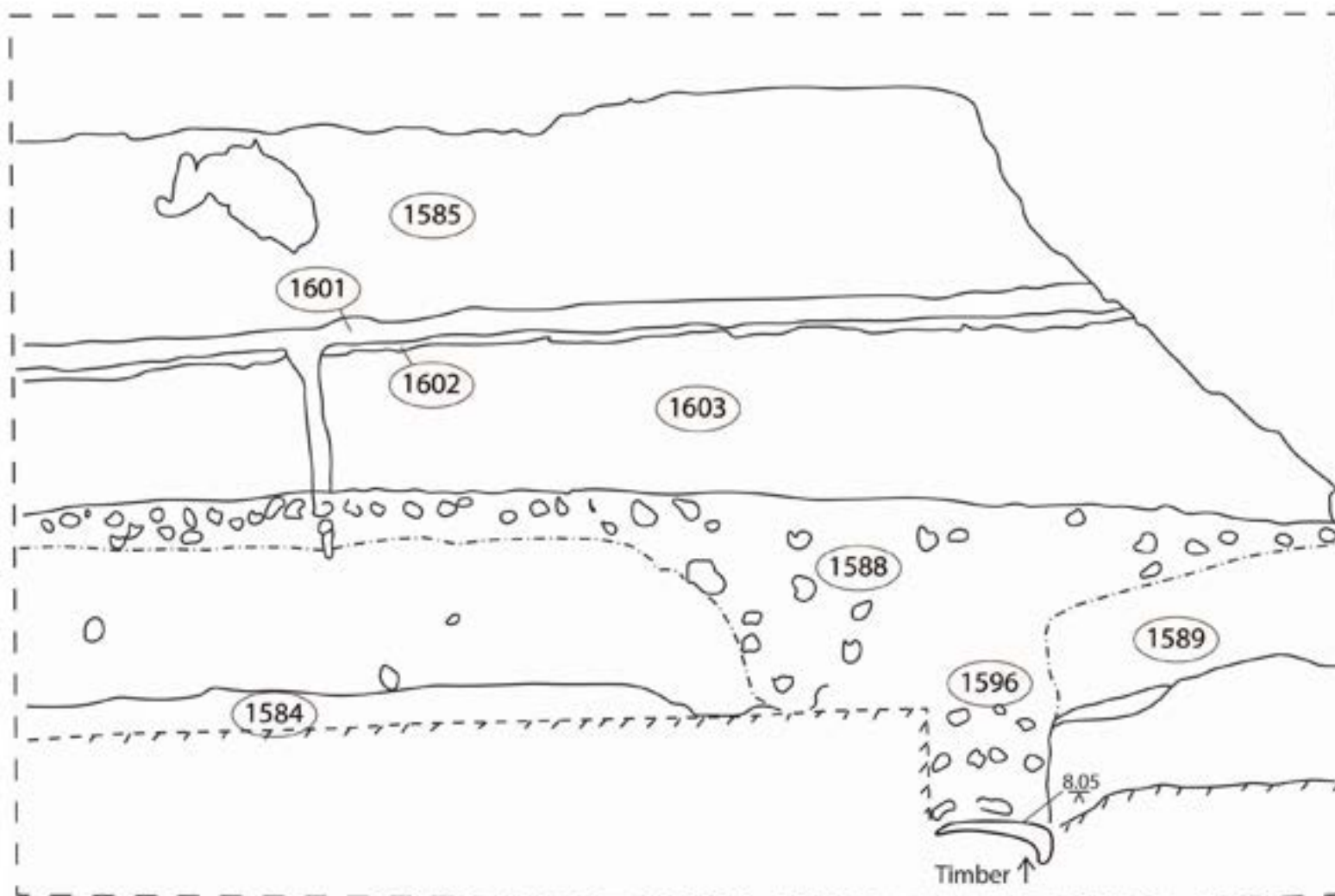
Area 1A: South section, east of carpark, adjacent to timber



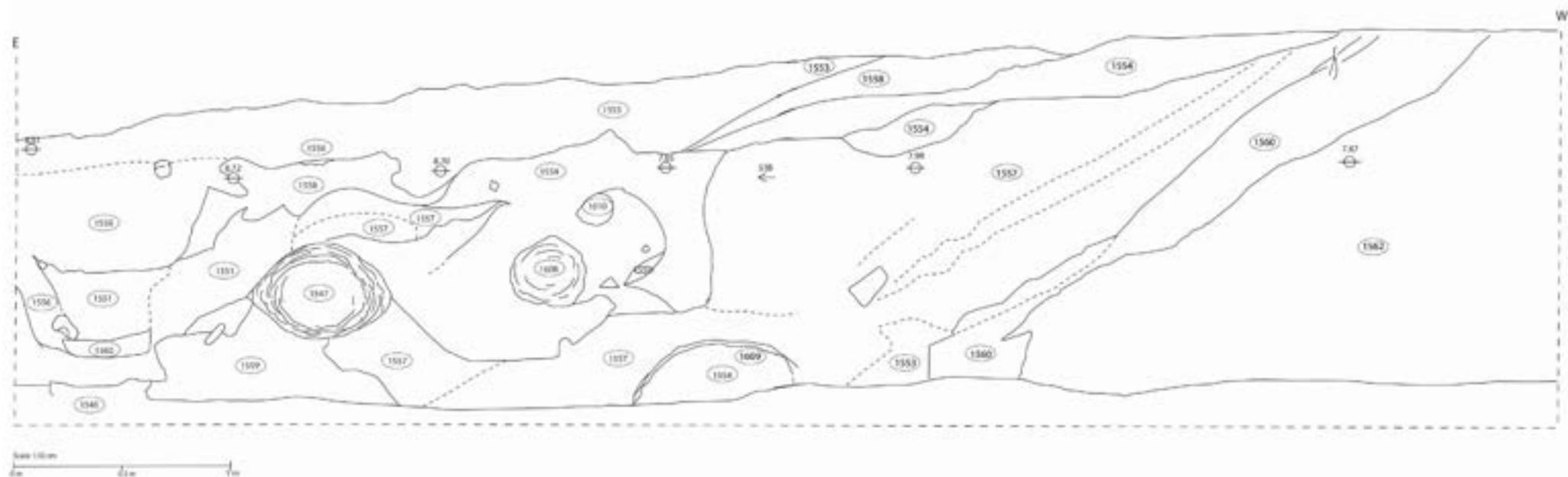
Windsor Bridge Replacement Project
Drawing #31
1:10
Area 1A: West section, east of carpark



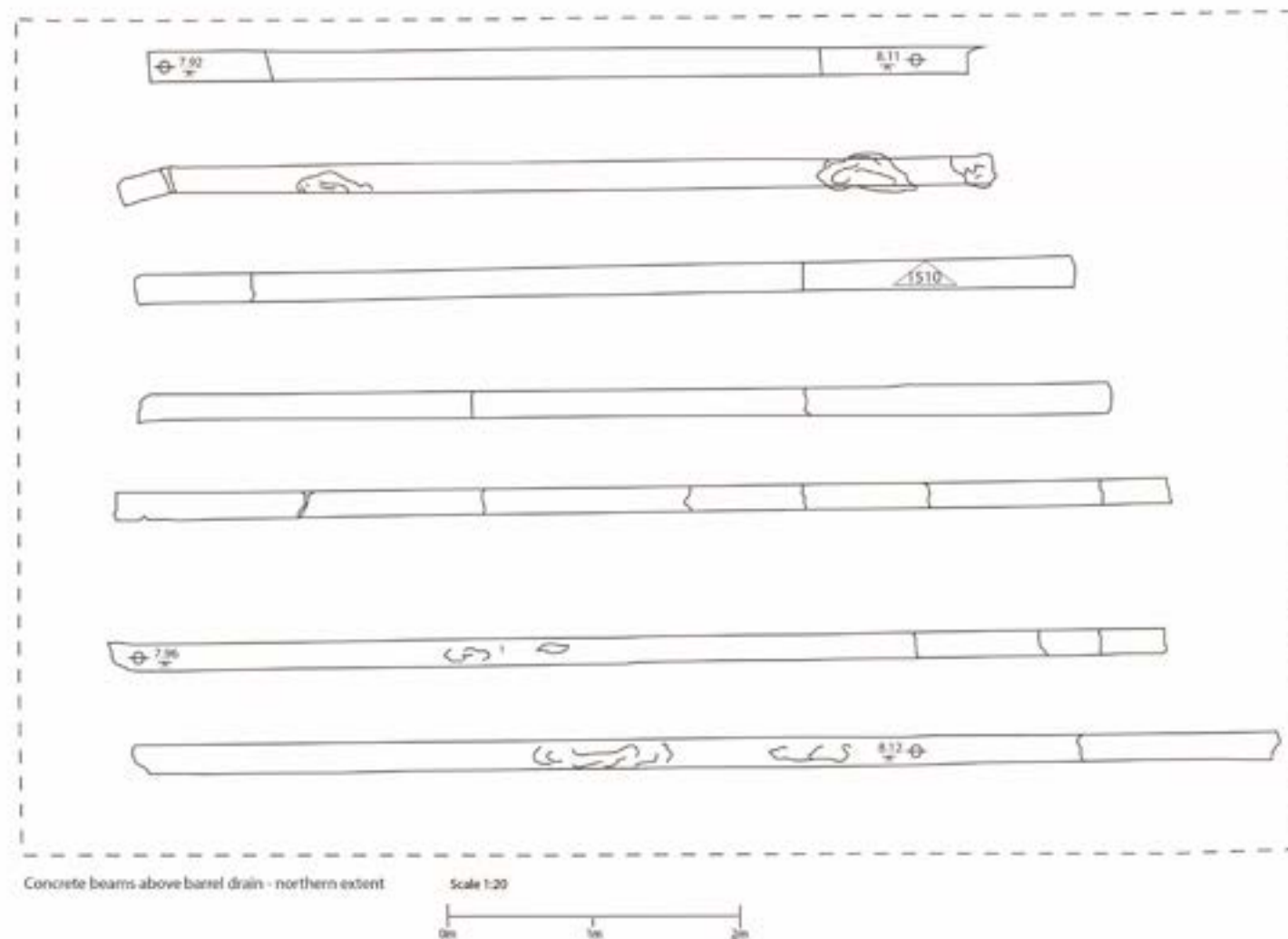
Windsor Bridge Replacement Project
Drawing #32
1:20
Area 1A: East section, east of carpark



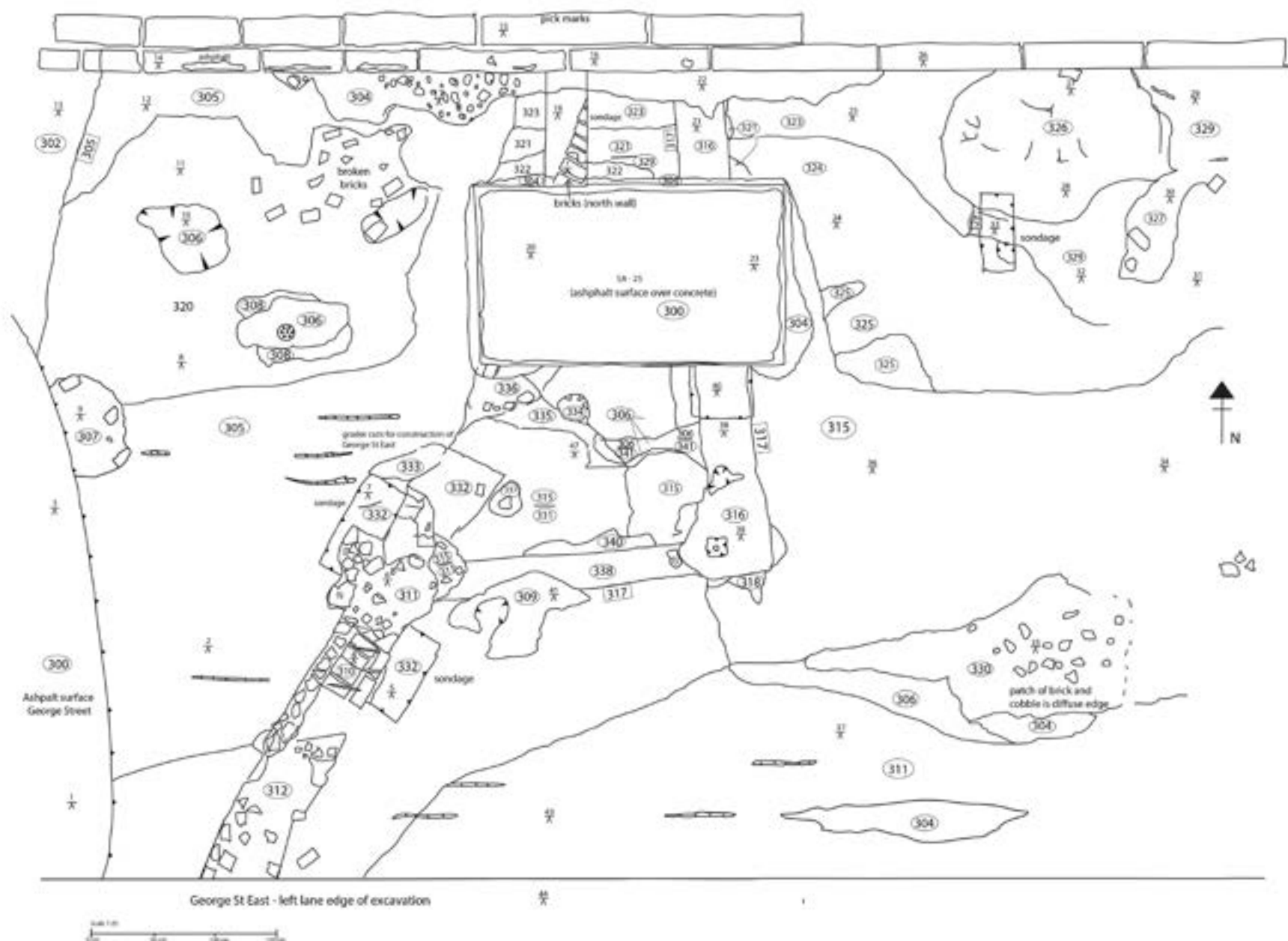
Windsor Bridge Replacement Project
Drawing #33a, 33b
1:10
Area 1A: Timber section 2, west of Barrel Drain



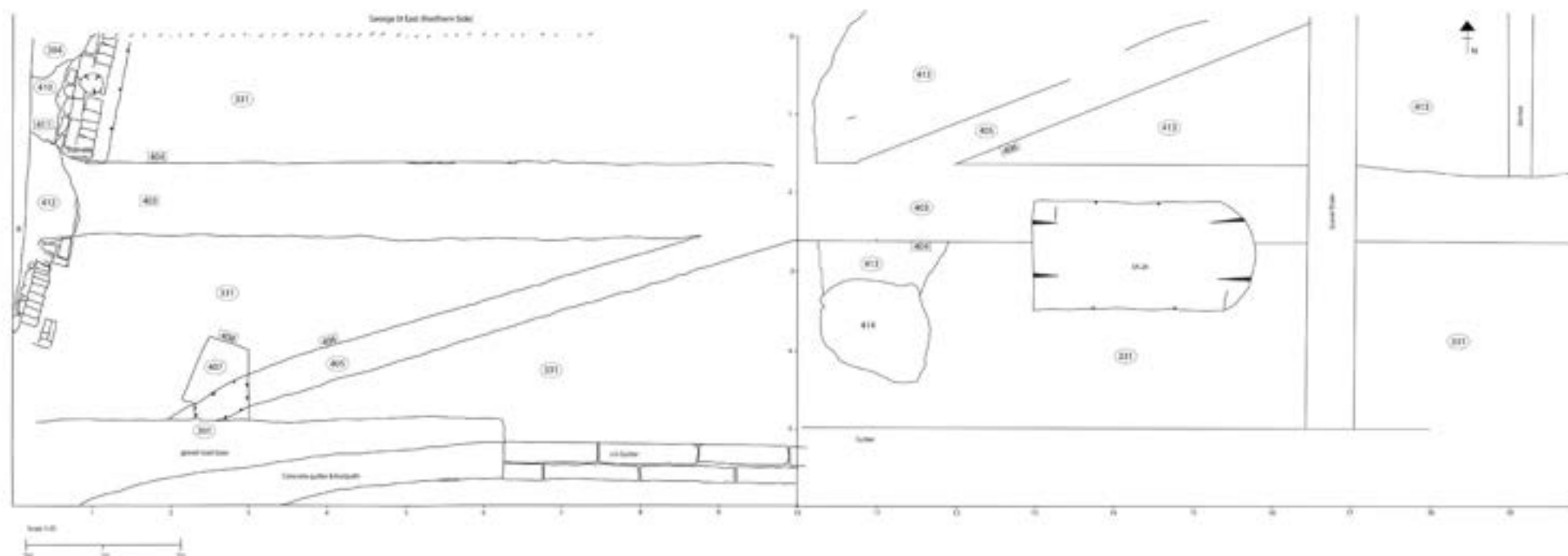
Windsor Bridge Replacement Project
Drawing #34
1:20
Area 1A: Concrete beams over Barrel Drain



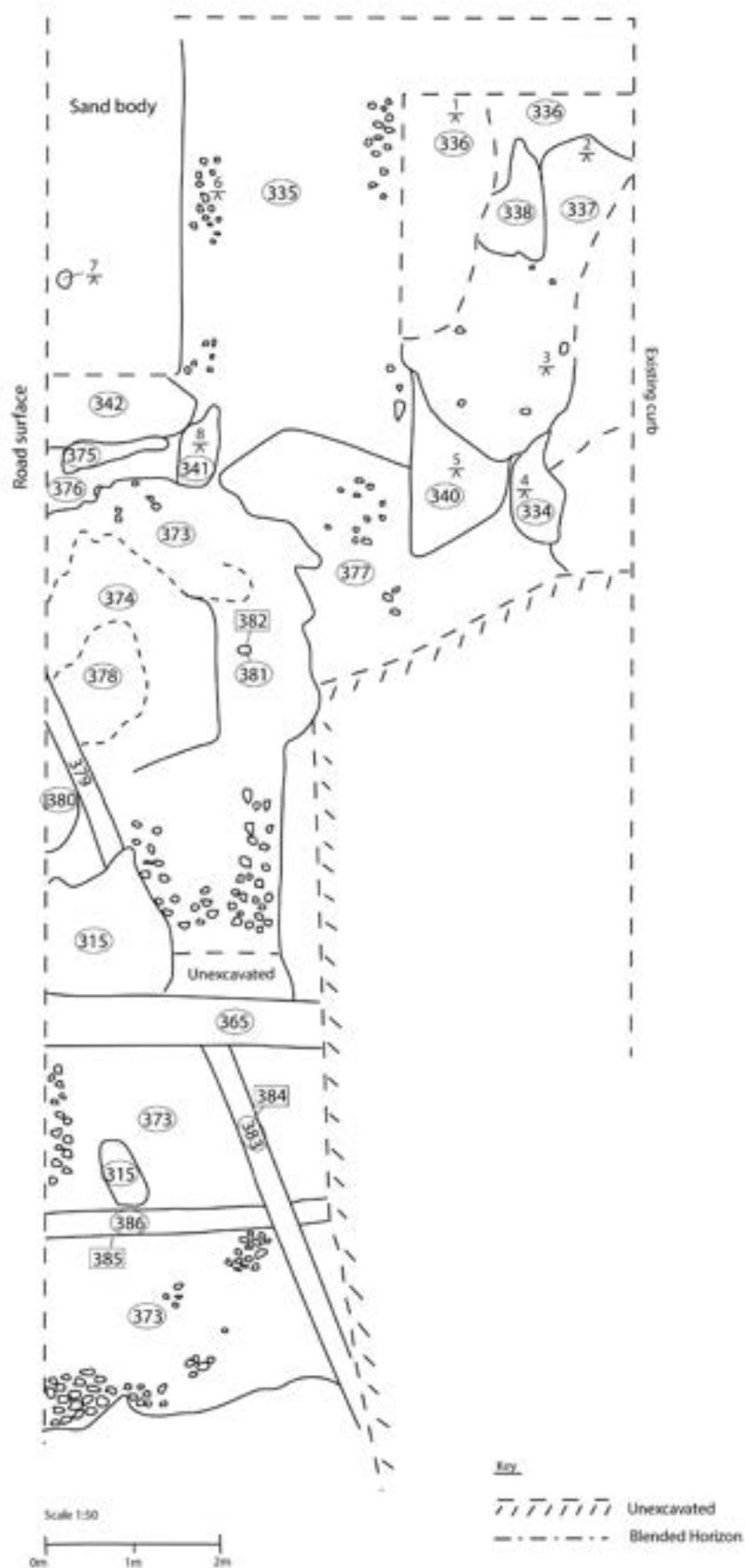
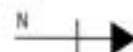
Windsor Bridge Replacement Project
 Drawing #36
 1:25
 Area 3: George Street east, north lane



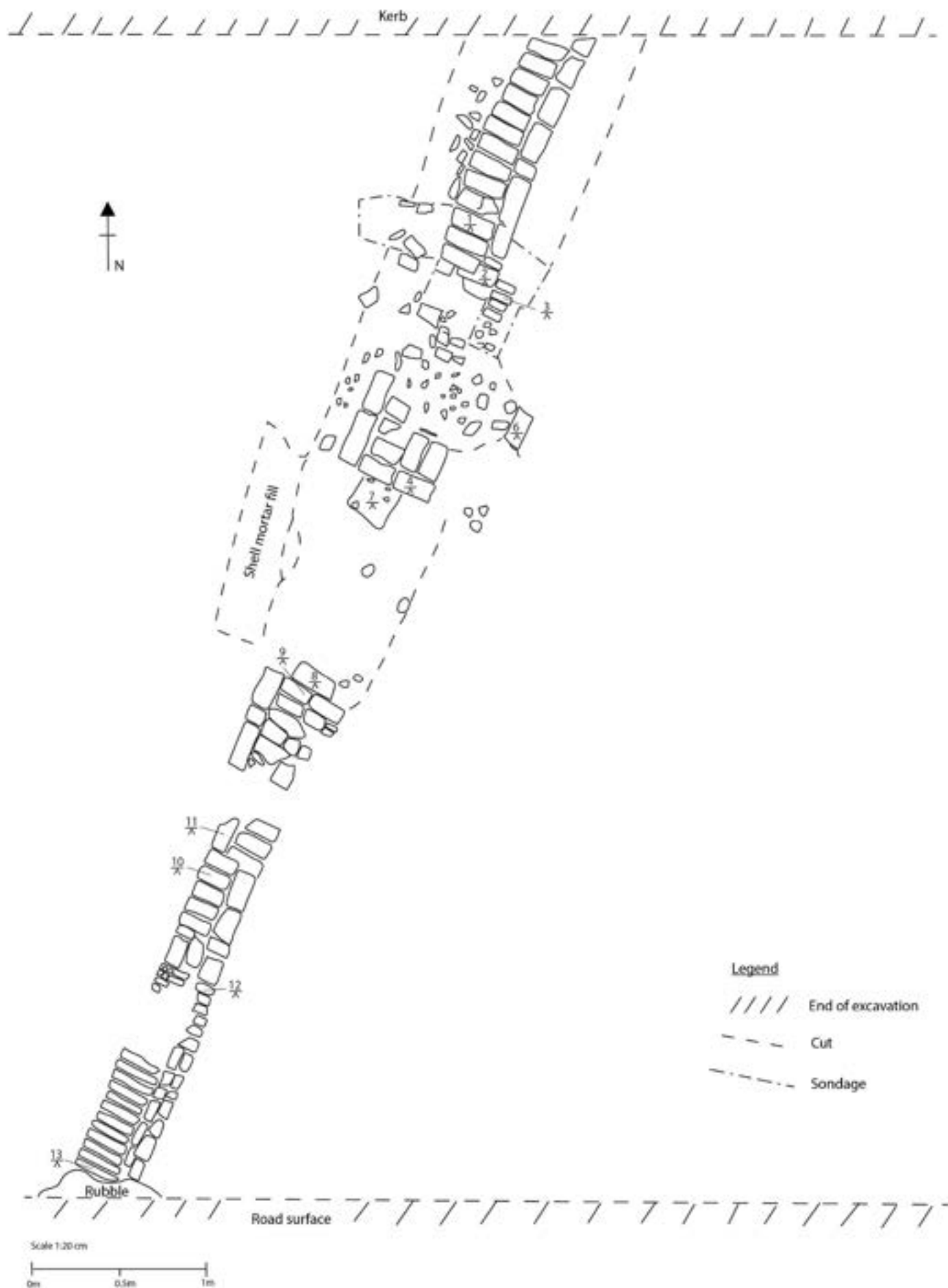
Windsor Bridge Replacement Project
 Drawing #37a, 37b
 1:25
 Area 3: George Street east, north lane



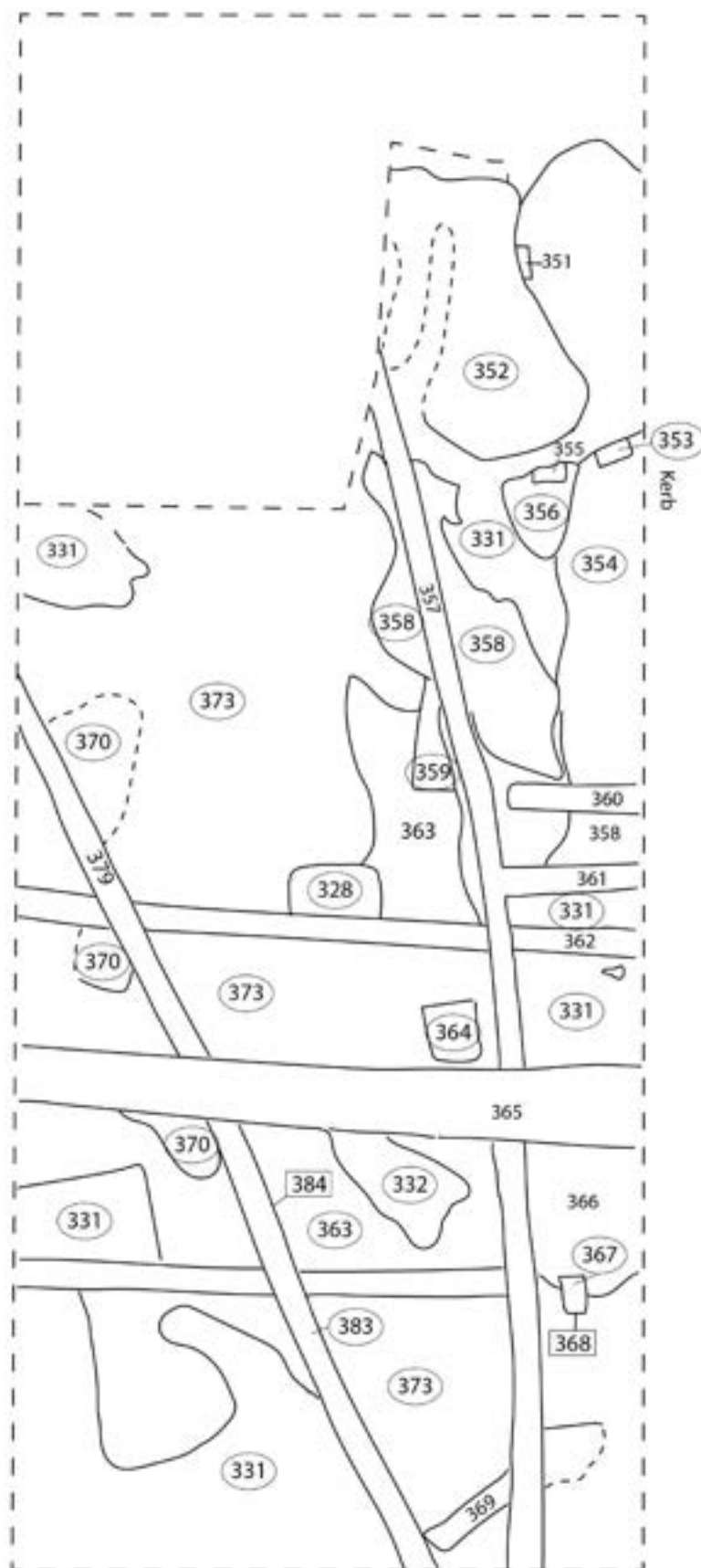
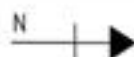
Windsor Bridge Replacement Project
 Drawing #37 (2)
 1:50
 Area 3: Southern lane George Street



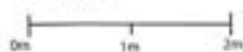
Windsor Bridge Replacement Project
Drawing #38
1:20
Area 3: Mid-excavation, Domain Wall



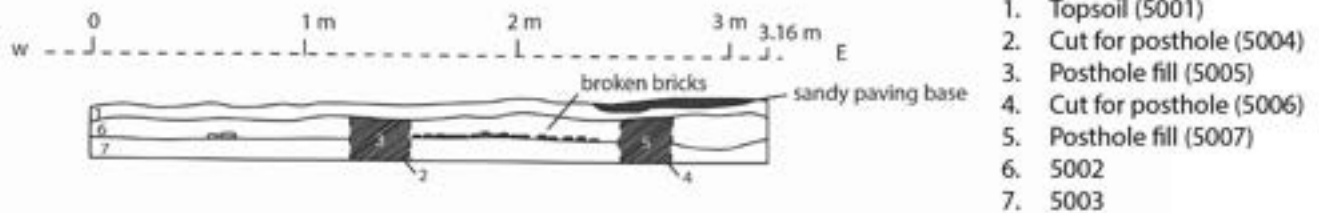
Area 3: Mid-excavation, east end of southern lane



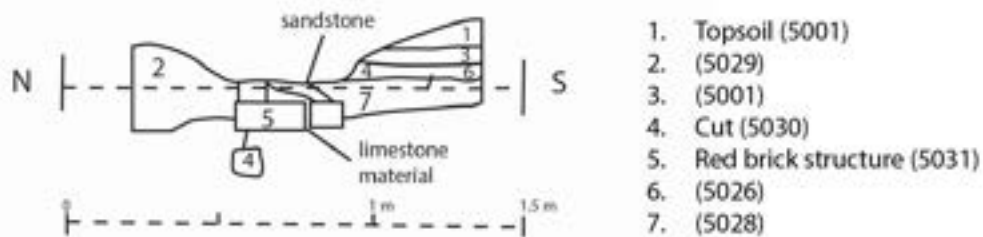
Scale 1: 50 cm



Windsor Bridge Replacement Project
Drawing #42
1:25
Area 3: North section, 10 Bridge Street with postholes



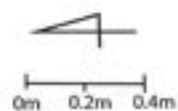
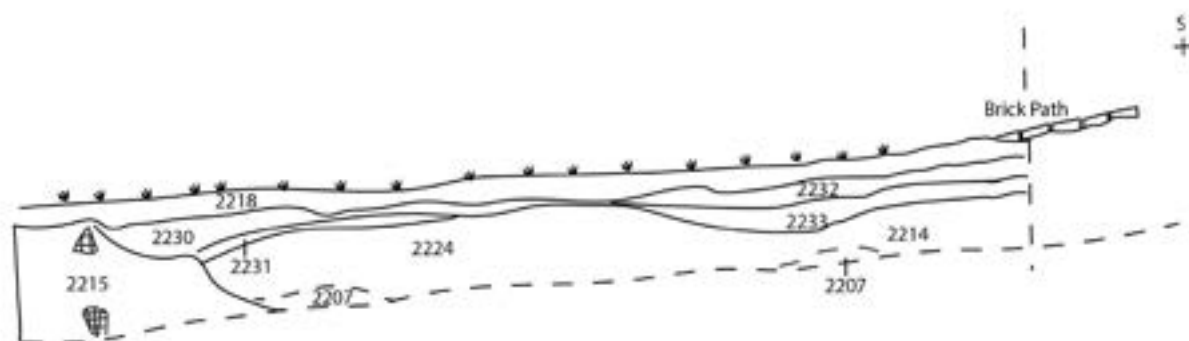
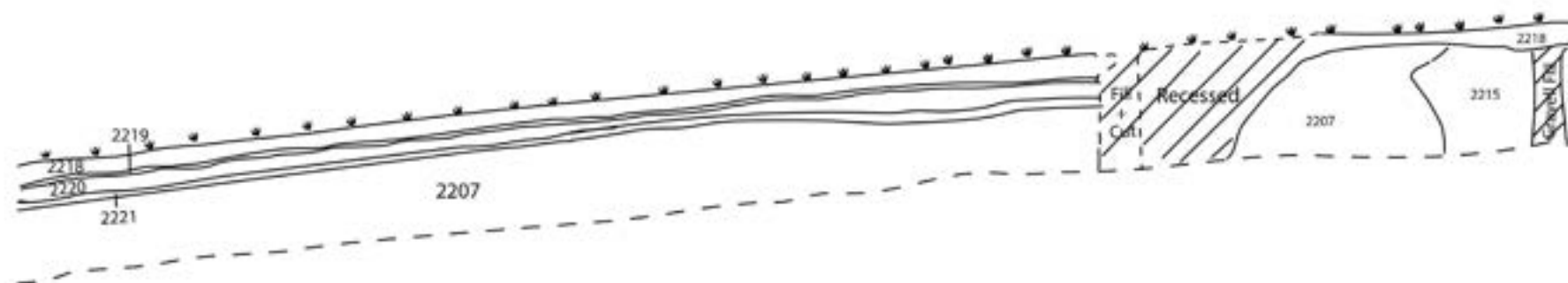
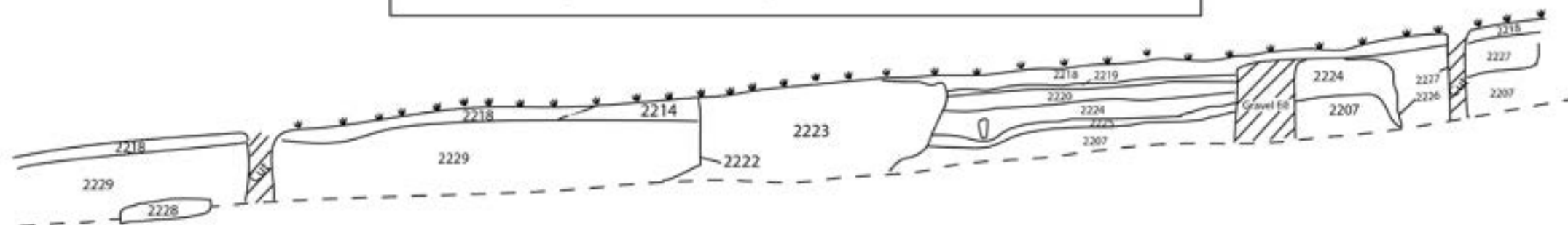
Windsor Bridge Replacement Project
Drawing #44
1:25
Area 3: East section, Bridge Street adjacent to 10 Bridge Street



Windsor Bridge Replacement Project
Drawing #40
1:20
Area 3: George Street, northwest corner



Windsor Bridge Replacement Project
 Drawing #41
 1:20
 Area 2: Old Bridge Street, below footpath, east section

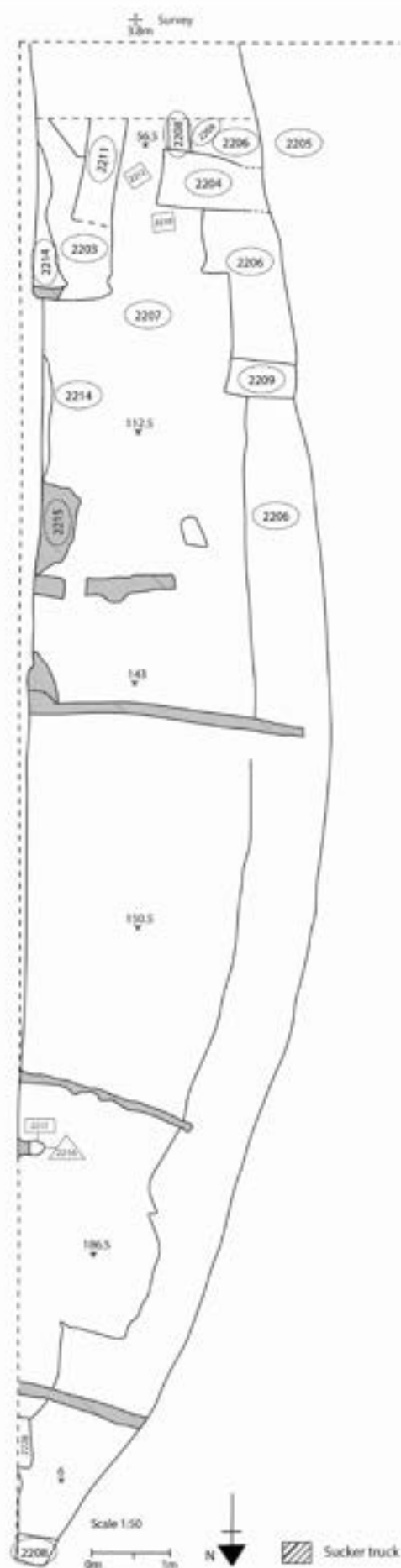


Windsor Bridge Replacement Project

Drawing #45

1:50

Area 2i: Post-excavation, northern part of Old Bridge Road alignment

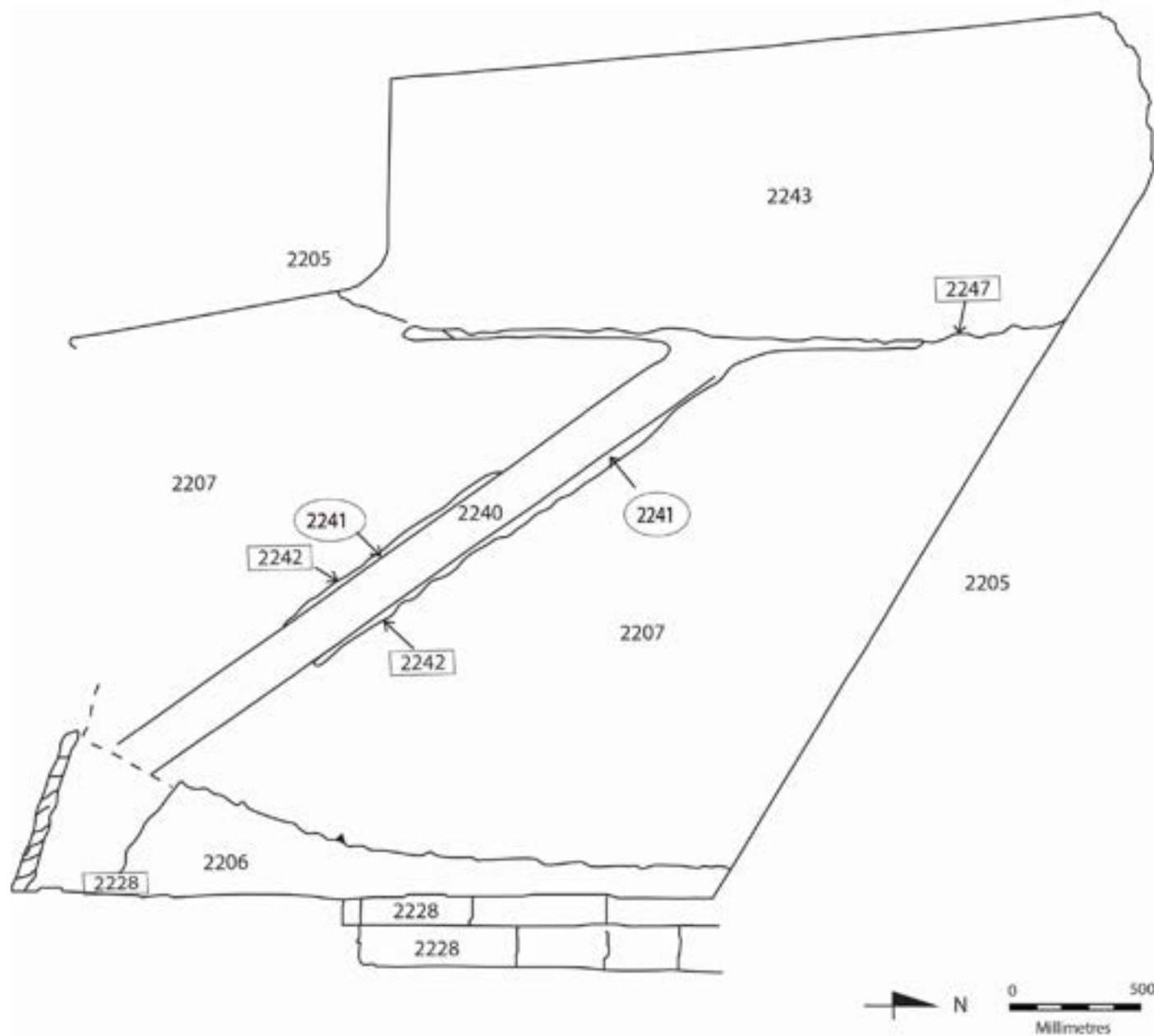


Windsor Bridge Replacement Project

Drawing #46

1:50

Area 2i: Mid-excavation, southern end, Old Bridge Street alignment



APPENDIX 2. SITE PHOTOGRAPH REGISTER

File Name	Area	Direction	Phase	Description	Date
20180904_090805.jpg	1A	W	Mid-ex	Commencement of excavation in central, western portion of site	4/09/2018
20180904_113141.jpg	1A	S	Mid-ex	General view of ground surface during excavation through layers associated with Bridge Street cutting	4/09/2018
20180904_113153.jpg	1A	S	Mid-ex	As above	4/09/2018
20180904_113156.jpg	1A	S	Mid-ex	As above	4/09/2018
20180914_115135.jpg	1A	W	Mid-ex	East facing section showing tree growing over location of Box Drain 2 as it enters the baulk	14/09/2018
20180914_115137.jpg	1A	W	Mid-ex	As above	14/09/2018
20180914_115139.jpg	1A	W	Mid-ex	As above	14/09/2018
20180920_114541.jpg	1A	E	Mid-ex	Ongoing excavation of Box Drain 2. Note timber covering near baulk	20/09/2018
20180920_114553.jpg	1A	E	Mid-ex	Detail showing top of sump into Box Drain 3 as first identified	20/09/2018
20180920_114602.jpg	1A	S	Mid-ex	As above	20/09/2018
20180920_114608.jpg	1A	S	Mid-ex	General shot showing height difference between area of Aboriginal excavation and upper shelf containing box drain	20/09/2018
20180920_114935.jpg	1A	S	Mid-ex	General shot showing area where Box Drain 2 runs under stump of tree	20/09/2018
20180920_114943.jpg	1A	N	Mid-ex	General shot showing northern portion of Area 1A following removal of overburden	20/09/2018
20180920_114949.jpg	1A	N	Mid-ex	Post hole cut [1405] from former fence	20/09/2018
20180920_120532.jpg	1A	W	Mid-ex	Box Drain 3 following identification of sump	20/09/2018
20180924_114401.jpg	1A	W	Mid-ex	Working shot showing collapse of Box Drain 2 in foreground	24/09/2018
20180924_150123.jpg	1A	SW	Mid-ex	Portion of preserved Box Drain 3 in vicinity of the tree stump beyond area of collapse	24/09/2018
20180924_150128.jpg	1A	E	Mid-ex	General view of area of collapse in Box Drain 2	24/09/2018
20180925_122336.jpg	1A	W	Mid-ex	Working shot showing length of Box Drain 2 and collapse following cleaning	25/09/2018
20180925_135725.jpg	1A	W	Mid-ex	As above	25/09/2018
20180925_135747.jpg	1A	W	Mid-ex	As above	25/09/2018
20180927_112716.jpg	1A	W	Mid-ex	As above	27/09/2018
20180927_122043.jpg	1A	N	Mid-ex	Detail of sump and collapse either side	27/09/2018
20180927_122048.jpg	1A	NW	Mid-ex	Detail of western end of box drain with collapse and preserved section	27/09/2018
20180927_140301.jpg	1A	NE	Mid-ex	Road marker (1458) showing smooth upper portion and workings on lower faces	27/09/2018
20180927_140306.jpg	1A	NE	Mid-ex	As above	27/09/2018
20180927_140320.jpg	1A	W	Mid-ex	General shot on initial identification of western sump from Box Drain 3	27/09/2018
20180927_140330.jpg	1A	E	Mid-ex	General shot along route of Box Drain 3 following removal of overburden	27/09/2018
20180928_072810.jpg	1A	SW	Mid-ex	Western sump of Box Drain 3	28/09/2018

File Name	Area	Direction	Phase	Description	Date
20180928_072832.jpg	1A	E	Mid-ex	Section through sondage over Box Drain 3 showing [1467] and fill (1466)	28/09/2018
20180928_072834.jpg	1A	E	Mid-ex	As above	28/09/2018
20180928_072846.jpg	1A	S	Mid-ex	Detail of western sump on Box Drain 3	28/09/2018
20180928_135857.jpg	1A	W	Mid-ex	General view showing sump and southern wall of Box Drain 3	28/09/2018
20180928_135858.jpg	1A	W	Mid-ex	As above	28/09/2018
20180928_135911.jpg	1A	?	Mid-ex	Cut of post hole [1460]	28/09/2018
20180928_135942.jpg	1A	W	Mid-ex	General view of Box Drain 2	28/09/2018
20181004_094221.jpg	1A	E	N/A	View along river showing exposed timber following heavy rain event	4/10/2018
20181004_094224.jpg	1A	E	N/A	Detail of exposed timber	4/10/2018
20181008_092342.jpg	1A	W	Mid-ex	Section of Box Drain 3 previously exposed during Stage 1 excavations after removal of backfill	8/10/2018
20181008_092346.jpg	1A	SW	Mid-ex	As above	8/10/2018
20181008_124933.jpg	1A	SW	Mid-ex	View along Box Drain 3 following exposure of uppermost bricks and timber coverings	8/10/2018
20181008_124939.jpg	1A	SW	Mid-ex	As above	8/10/2018
20181009_082111.jpg	1A	SW	Mid-ex	General view showing stratigraphy in southern portion of study area during excavation	9/10/2018
20181012_143227.jpg	1A	E	Mid-ex	Section during excavation in SE corner of site showing whiteware fragments in the upper topsoil deposit (1401)	12/10/2018
20181015_110840.jpg	1A	N	Mid-ex	General view showing removal of asphalt in Area 2	15/10/2018
20181015_110843.jpg	1A	N	Mid-ex	As above	15/10/2018
20181015_111753.jpg	1A	N	Mid-ex	As above	15/10/2018
20181015_135833.jpg	1A	S	Mid-ex	Southern portion of Area 1A following removal of overburden	15/10/2018
20181015_135839 Shrunken.jpg	1A	S	Mid-ex	Same as above, with brick wall of Box Drain 1 highlighted	15/10/2018
20181015_135839.jpg	1A	S	Mid-ex	Same as above, without brick wall of Box Drain 1 highlighted	15/10/2018
20181016_104512.jpg	1A	N	Mid-ex	Sondage showing brickwork of Barrel Drain appearing	16/10/2018
20181016_120447.jpg	1A	N	Mid-ex	General view showing location of Barrel Drain in relation to wider site	16/10/2018
20181016_120536.jpg	1A	SW	Mid-ex	View of Barrel Drain brickwork	16/10/2018
20181017_104439.jpg	1A	W	Mid-ex	General view showing brick wall of Box Drain 1	17/10/2018
20181017_104520.jpg	1A	S	Mid-ex	As above	17/10/2018
20181018_142022.jpg	1A	W	Mid-ex	Working shot following removal of initial cobblestones from Barrel Drain	18/10/2018
20181018_142136.jpg	1A	W	Mid-ex	As above	18/10/2018
20181018_142142.jpg	1A	S	Mid-ex	General view across southern portion of Area 1A with alignment of Box Drain 1 covered by fabric	18/10/2018
20181022_132926.jpg	1A	SW	Mid-ex	General view showing partial preservation of Box Drain 1 to the south of the Barrel Drain	22/10/2018

File Name	Area	Direction	Phase	Description	Date
20181022_132931.jpg	1A	SW	Mid-ex	As above	22/10/2018
20181022_132934.jpg	1A	SW	Mid-ex	As above	22/10/2018
20181023_095840.jpg	1A	SE	Mid-ex	View along preserved section of Box Drain 1 showing where brickwork terminated	23/10/2018
20181023_095915.jpg	1A	SE	Mid-ex	View along preserved section of Box Drain 1 also showing remnant of damaged section and Barrel Drain	23/10/2018
20181023_095917.jpg	1A	SE	Mid-ex	As above	23/10/2018
20181023_095945.jpg	1A	E	Mid-ex	Working shot showing view into Barrel Drain during removal of cobbles	23/10/2018
20181023_100006.jpg	1A	NW	Mid-ex	As above	23/10/2018
20181023_100114.jpg	1A	S	Mid-ex	General view of upper section of Box Drain 1	23/10/2018
20181023_100145.jpg	1A	NW	Mid-ex	General view of continued excavation of Barrel Drain	23/10/2018
20181024_080421.jpg	1A	NW	Mid-ex	View into Barrel Drain following clean-up	24/10/2018
20181024_080423.jpg	1A	NW	Mid-ex	As above	24/10/2018
20181024_080430.jpg	1A	SE	Mid-ex	View of Box Drain 1 and southern portion of Area 1	24/10/2018
20181024_080439.jpg	1A	NW	Mid-ex	View into Barrel Drain following clean-up	24/10/2018
20181024_080601.jpg	1A	NW	Post-ex	View along interior of Barrel Drain	24/10/2018
20181024_080607.jpg	1A	NW	Post-ex	As above	24/10/2018
20181024_080710.jpg	1A	NW	Post-ex	As above	24/10/2018
20181024_080719.jpg	1A	NW	Post-ex	As above	24/10/2018
20181024_080729.jpg	1A	NW	Post-ex	As above	24/10/2018
20181029_095800.jpg	1A	SW	N/A	Interior of sewer main from Area 1A following removal; note terracotta pipe attached inside	29/10/2018
20181029_095806.jpg	1A	SW	N/A	As above	29/10/2018
20181029_095809.jpg	1A	SW	N/A	As above	29/10/2018
20181031_071544.jpg	1A	W	N/A	View along river showing works completed along bank	31/10/2018
20181031_071738.jpg	1A	E	N/A	View along river following dumping of rubble to protect the bank	31/10/2018
20181120_100932.jpg	1A	N	Post-ex	View of timber excavated and recorded by MK while DM was on leave	20/11/2018
20181120_100935.jpg	1A	N	Post-ex	As above	20/11/2018
20181120_100955.jpg	1A	N	Post-ex	Same as above, including section showing tip-lines associated with Barrel Drain	20/11/2018
20181120_101002.jpg	1A	N	Post-ex	As above	20/11/2018
20181120_101006.jpg	1A	N	Post-ex	As above	20/11/2018
20181220_101011.jpg	1A	W	Post-ex	Sondage excavated to allow insertion of metal framework for Barrel Drain crossing point	20/11/2018
20190117_103056.jpg	1A	W	N/A	Boring works being undertaken to document vibration effects on Barrel Drain	17/01/2019
20190709_133406.jpg	2i	E	Mid-ex	Overview of sondage in SE corner of driveway showing services	9/07/2019
20190709_133409.jpg	2i	E	Mid-ex	As above	9/07/2019
20190709_133413.jpg	2i	E	Mid-ex	Detail from within sondage showing services	9/07/2019

File Name	Area	Direction	Phase	Description	Date
20190709_134626.jpg	2i	E	Mid-ex	Sondage in NE corner of driveway identifying shell mortar deposit (2503) in cut [2502]	9/07/2019
20190709_134630.jpg	2i	E	Mid-ex	As above	9/07/2019
20190709_134635.jpg	2i	E	Mid-ex	As above	9/07/2019
20190709_134650.jpg	2i	N	Mid-ex	As above	9/07/2019
20190709_144815.jpg	2i	S	Mid-ex	General view of sondage showing plastic from various services on surface	9/07/2019
20190709_144817.jpg	2i	S	Mid-ex	As above	9/07/2019
20190709_144820.jpg	2i	S	Mid-ex	As above	9/07/2019
20190709_144827.jpg	2i	E	Mid-ex	As above	9/07/2019
20190709_144830.jpg	2i	E	Mid-ex	As above	9/07/2019
20190709_144831.jpg	2i	E	Mid-ex	As above	9/07/2019
20190709_144838.jpg	2i	S	Mid-ex	As above	9/07/2019
20190709_144841.jpg	2i	S	Mid-ex	As above	9/07/2019
20190709_144842.jpg	2i	S	Mid-ex	As above	9/07/2019
20190710_083342.jpg	2i	E	Post-ex	General view of eastern portion of driveway showing various services cutting the area	10/07/2019
20190710_083355.jpg	2i	N	Post-ex	As above	10/07/2019
20190710_083400.jpg	2i	N	Post-ex	As above	10/07/2019
20190710_084221.jpg	2i	E	Mid-ex	General view showing patch of shell mortar (2503) in NE corner of trench	10/07/2019
20190710_084224.jpg	2i	E	Mid-ex	As above	10/07/2019
20190710_112402.jpg	2i	N	Post-ex	Section of tree bowl [2502] showing different deposits	10/07/2019
20190710_112407.jpg	2i	N	Post-ex	As above	10/07/2019
20190710_112409.jpg	2i	N	Post-ex	As above	10/07/2019
20190710_112411.jpg	2i	N	Post-ex	As above	10/07/2019
20190710_112606.jpg	2i	N	Post-ex	As above	10/07/2019
20190710_112608.jpg	2i	N	Post-ex	As above	10/07/2019
20190618_143438.jpg	2i	SE	Mid-ex	Portion of Box Drain 1 identified in trench for new service	18/06/2019
20190618_145043.jpg	2i	SE	Mid-ex	As above	18/06/2019
20190618_145049.jpg	2i	S	Mid-ex	Wider view of trench alignment showing section of Box Drain 1	18/06/2019
20190618_145054.jpg	2i	S	Mid-ex	As above	18/06/2019
20190618_152705.jpg	2i	SE	Post-ex	Overview of section of Box Drain 1 in service trench. Note clay base	18/06/2019
20190618_152719.jpg	2i	SE	Post-ex	As above	18/06/2019
20190618_152756.jpg	2i	NW	Post-ex	As above	18/06/2019
20190618_152816.jpg	2i	N	Post-ex	As above	18/06/2019
20190618_152826.jpg	2i	N	Post-ex	As above	18/06/2019
20190618_152853.jpg	2i	S	Post-ex	As above	18/06/2019
20190618_152856.jpg	2i	S	Post-ex	As above	18/06/2019
20190618_154002.jpg	2i	S	Post-ex	As above	18/06/2019
20190618_154008.jpg	2i	S	Post-ex	As above	18/06/2019

File Name	Area	Direction	Phase	Description	Date
20190618_154014.jpg	2i	S	Post-ex	As above	18/06/2019
20190618_154036.jpg	2i	S	Post-ex	Detail showing basal layer of bricks placed directly onto clay	18/06/2019
20190618_154039.jpg	2i	S	Post-ex	As above	18/06/2019
20190618_154105.jpg	2i	S	Post-ex	As above	18/06/2019
20190618_154110.jpg	2i	S	Post-ex	As above	18/06/2019
20190618_154133.jpg	2i	N	Post-ex	Detail showing internal facing of southern wall of Box Drain 1	18/06/2019
20190710_082004.jpg	2i	S	Mid-ex	Preliminary photograph showing upper bricks of Box Drain A	10/07/2019
20190710_082011.jpg	2i	S	Mid-ex	As above	10/07/2019
20190710_082030.jpg	2i	N	Mid-ex	As above	10/07/2019
20190710_082042.jpg	2i	NW	Mid-ex	As above	10/07/2019
20190710_082047.jpg	2i	NW	Mid-ex	As above	10/07/2019
20190710_082159.jpg	2i	N	Mid-ex	Eastern end of Box Drain A as above	10/07/2019
20190710_082205.jpg	2i	N	Mid-ex	As above	10/07/2019
20190710_082211.jpg	2i	N	Mid-ex	As above	10/07/2019
20190710_082435.jpg	2i	NW	Mid-ex	Overview along Box Drain A	10/07/2019
20190710_082445.jpg	2i	NW	Mid-ex	As above	10/07/2019
20190710_082447.jpg	2i	NW	Mid-ex	As above	10/07/2019
20190710_082454.jpg	2i	NW	Mid-ex	As above	10/07/2019
20190710_082458.jpg	2i	NW	Mid-ex	As above	10/07/2019
20190711_102443.jpg	2i	SE	Post-ex	General shot showing interior of Box Drain A	11/07/2019
20190711_102449.jpg	2i	SE	Post-ex	As above	11/07/2019
20190711_102453.jpg	2i	SE	Post-ex	As above	11/07/2019
20190711_102513.jpg	2i	NW	Post-ex	General shot showing interior of Box Drain A	11/07/2019
20190711_102514.jpg	2i	NW	Post-ex	As above	11/07/2019
20190711_102609.jpg	2i	N	Post-ex	Section of northern wall of Box Drain A	11/07/2019
20190711_102612.jpg	2i	N	Post-ex	As above	11/07/2019
20190711_102617.jpg	2i	Overhead	Post-ex	Overhead shot showing point where brickwork of base finishes	11/07/2019
20190711_102636.jpg	2i	N	Post-ex	General shot showing the point where the brickwork in the base finishes	11/07/2019
20190711_102645.jpg	2i	N	Post-ex	As above	11/07/2019
20190711_102651.jpg	2i	N	Post-ex	As above	11/07/2019
20190711_102706.jpg	2i	NW	Post-ex	As above	11/07/2019
20190711_102729.jpg	2i	NW	Post-ex	General shot showing typical brickwork in the base of Box Drain A	11/07/2019
20190711_102733.jpg	2i	NW	Post-ex	As above	11/07/2019
20190711_102735.jpg	2i	NW	Post-ex	Detail of above shot	11/07/2019
20190711_102743.jpg	2i	NW	Post-ex	Oblique angle of above shot	11/07/2019
20190528_084446.jpg	2i	N	Post-ex	General view of southern end of Area 2i showing various modern services and cuts for signposts	28/05/2019
20190528_084450.jpg	2i	N	Post-ex	As above	28/05/2019
20190528_084508.jpg	2i	E	Post-ex	As above	28/05/2019

File Name	Area	Direction	Phase	Description	Date
20190528_084510.jpg	2i	E	Post-ex	As above	28/05/2019
20190528_084549.jpg	2i	S	Post-ex	As above	28/05/2019
20190528_084603.jpg	2i	S	Post-ex	As above	28/05/2019
20190528_084625.jpg	2i	S	Post-ex	As above	28/05/2019
20190528_084631.jpg	2i	S	Post-ex	As above	28/05/2019
20190528_084655.jpg	2i	E	Post-ex	General shot of levelling fills (2224) and (2225) within the road alignment	28/05/2019
20190528_084703.jpg	2i	N	Post-ex	As above	28/05/2019
20190528_084751.jpg	2i	N	Post-ex	General view of modern concrete footings for holding street sign	28/05/2019
20190528_084754.jpg	2i	N	Post-ex	As above	28/05/2019
20190528_084802.jpg	2i	E	Post-ex	As above	28/05/2019
20190528_111327.jpg	2i	E	Post-ex	Section through various compacted road deposits	28/05/2019
20190528_111333.jpg	2i	E	Post-ex	As above	28/05/2019
20190528_111407.jpg	2i	E	Post-ex	As above	28/05/2019
20190528_111414.jpg	2i	SE	Post-ex	As above	28/05/2019
20190528_111513.jpg	2i	E	Post-ex	As above	28/05/2019
20190528_111514.jpg	2i	E	Post-ex	As above	28/05/2019
20190528_113722.jpg	2i	E	Post-ex	As above	28/05/2019
20190528_113726.jpg	2i	E	Post-ex	As above	28/05/2019
20190528_113729.jpg	2i	E	Post-ex	As above	28/05/2019
20190528_145510.jpg	2i	W	N/A	General shot of kerbstones removed as part of excavation	28/05/2019
20190528_145512.jpg	2i	W	N/A	As above	28/05/2019
20190528_145514.jpg	2i	W	N/A	As above	28/05/2019
20190530_104046.jpg	2i	W	Mid-ex	General shot taken during excavation through sand in northern end of Area 2i, below former traffic island	30/05/2019
20190530_104108.jpg	2i	NW	Mid-ex	As above	30/05/2019
20190531_115454.jpg	2i	W	Mid-ex	General overview of soil profile below sand deposit at location of former traffic island	31/05/2019
20190531_115932.jpg	2i	W	Mid-ex	As above	31/05/2019
20190531_115935.jpg	2i	W	Mid-ex	As above	31/05/2019
20190605_100830.jpg	2i	E	Post-ex	West facing section of Area 2i below footpath showing topsoil (2218) and clay (2207)	5/06/2019
20190605_100839.jpg	2i	E	Post-ex	As above	5/06/2019
20190605_100919.jpg	2i	E	Post-ex	As above	5/06/2019
20190605_100929.jpg	2i	E	Post-ex	As above	5/06/2019
20190605_100931.jpg	2i	E	Post-ex	As above	5/06/2019
20190605_101007.jpg	2i	NE	Post-ex	General view of central portion of Area 2i	5/06/2019
20190605_101015.jpg	2i	E	Post-ex	As above	5/06/2019
20190605_101045.jpg	2i	N	Post-ex	As above	5/06/2019
20190605_101050.jpg	2i	N	Post-ex	As above	5/06/2019
20190605_101058.jpg	2i	E	Post-ex	As above	5/06/2019
20190605_101113.jpg	2i	NW	Post-ex	As above	5/06/2019

File Name	Area	Direction	Phase	Description	Date
20190605_101207.jpg	2i	N	Post-ex	Same as above, highlighting service trench	5/06/2019
20190605_101211.jpg	2i	N	Post-ex	As above	5/06/2019
20190605_101214.jpg	2i	N	Post-ex	As above	5/06/2019
20190605_121647.jpg	2i	E	Mid-ex	Section showing accumulation of soil deposits below footpath	5/06/2019
20190606_081310.jpg	2i	E	Post-ex	As above	6/06/2019
20190606_081315.jpg	2i	E	Post-ex	As above	6/06/2019
20190606_081320.jpg	2i	E	Post-ex	As above	6/06/2019
20190606_081354.jpg	2i	N	Mid-ex	General view of gravel (2211) which overlay Box Drain A	6/06/2019
20190606_081404.jpg	2i	N	Mid-ex	As above	6/06/2019
20190606_081406.jpg	2i	N	Mid-ex	As above	6/06/2019
20190613_102817.jpg	2i	W	Post-ex	East facing section of baulk below present road	13/06/2019
20190613_102856.jpg	2i	W	Post-ex	As above	13/06/2019
20190613_102923.jpg	2i	W	Post-ex	As above	13/06/2019
20190613_103019.jpg	2i	W	Post-ex	As above	13/06/2019
20190613_103021.jpg	2i	W	Post-ex	As above	13/06/2019
20190613_103054.jpg	2i	W	Post-ex	As above	13/06/2019
20190613_103102.jpg	2i	NW	Post-ex	As above	13/06/2019
20190613_103134.jpg	2i	NW	Post-ex	As above	13/06/2019
20190617_075740.jpg	2i	E	Post-ex	Kerbstones (2228) following removal of overburden	17/06/2019
20190617_075742.jpg	2i	E	Post-ex	As above	17/06/2019
20190617_075751.jpg	2i	SE	Post-ex	As above	17/06/2019
20190617_093258.jpg	2i	W	N/A	Construction shot over river	17/06/2019
20190625_121220.jpg	2i	SE	Post-ex	General view over central portion of Area 2i following removal of road surface and bluemetal	25/06/2019
20190625_121223.jpg	2i	SE	Post-ex	As above	25/06/2019
20190625_121256.jpg	2i	SE	Post-ex	As above	25/06/2019
20190625_121313.jpg	2i	W	Post-ex	As above	25/06/2019
20190625_141726.jpg	2i	SW	Post-ex	Same as above, showing modern pit	25/06/2019
20190625_141729.jpg	2i	SW	Post-ex	As above	25/06/2019
20190625_141735.jpg	2i	SW	Post-ex	As above	25/06/2019
20190625_141746.jpg	2i	W	Post-ex	As above	25/06/2019
20190625_141750.jpg	2i	W	Post-ex	As above	25/06/2019
20190625_141752.jpg	2i	W	Post-ex	As above	25/06/2019
20190625_141827.jpg	2i	S	Post-ex	Base of modern telegraph pole	25/06/2019
20190625_141828.jpg	2i	S	Post-ex	As above	25/06/2019
20190625_141836.jpg	2i	W	Post-ex	As above	25/06/2019
20190625_141849.jpg	2i	SW	Post-ex	As above	25/06/2019
20190626_112351.jpg	2i	S	Post-ex	Central portion of Area 2i	26/06/2019
20190626_112400.jpg	2i	S	Post-ex	As above	26/06/2019
20190626_112422.jpg	2i	E	Post-ex	As above	26/06/2019
20190626_112425.jpg	2i	E	Post-ex	As above	26/06/2019

File Name	Area	Direction	Phase	Description	Date
20190627_084301.jpg	2i	E	Post-ex	Half-sectioned fill of undulation containing bricks and glass (# TBC)	27/06/2019
20190627_084306.jpg	2i	E	Post-ex	As above	27/06/2019
20190705_133928.jpg	2i	W	Post-ex	Sondage through silt deposit (#TBC) showing underlying natural sand deposits	5/07/2019
20190705_133944.jpg	2i	W	Post-ex	As above	5/07/2019
20190705_134019.jpg	2i	E	Post-ex	As above	5/07/2019
20190705_134105.jpg	2i	W	Post-ex	As above	5/07/2019
20190705_134111.jpg	2i	W	Post-ex	As above	5/07/2019
20190705_134149.jpg	2i	N	Post-ex	As above	5/07/2019
20190705_134152.jpg	2i	N	Post-ex	As above	5/07/2019
20190705_134202.jpg	2i	N	Post-ex	As above	5/07/2019
20190705_134238.jpg	2i	E	Post-ex	As above	5/07/2019
20190708_082808.jpg	2i	SE	Post-ex	General shot of northernmost end of Area 2i showing various levelling and fill deposits overlying combination of natural sands and clays	8/07/2019
20190708_082814.jpg	2i	SE	Post-ex	As above	8/07/2019
20190708_082816.jpg	2i	SE	Post-ex	As above	8/07/2019
20190708_131415.jpg	2i	E	Post-ex	Location of 2 post holes (# TBC) associated with late 19th century fencing of Thompson Square	8/07/2019
20190708_131435.jpg	2i	W	Post-ex	As above	8/07/2019
20190708_131437.jpg	2i	W	Post-ex	As above	8/07/2019
20190708_131446.jpg	2i	N	Post-ex	As above	8/07/2019
20190708_131450.jpg	2i	N	Post-ex	As above	8/07/2019
20190708_131452.jpg	2i	N	Post-ex	As above	8/07/2019
20190708_131501.jpg	2i	E	Post-ex	As above	8/07/2019
20190708_131523.jpg	2i	NE	Post-ex	View over northern section of Area 2i following excavations	8/07/2019
20190708_131526.jpg	2i	NE	Post-ex	As above	8/07/2019
20190708_131607.jpg	2i	E	Post-ex	Lower portion of Area 2i following removal of overburden	8/07/2019
20190708_131609.jpg	2i	E	Post-ex	As above	8/07/2019
20190708_143254.jpg	2i	E	Post-ex	Post hole (#TBC)	8/07/2019
20190708_143300.jpg	2i	E	Post-ex	As above	8/07/2019
20190708_143301.jpg	2i	E	Post-ex	As above	8/07/2019
20190708_143346.jpg	2i	E	Post-ex	Detail of fill of post hole (# TBC)	8/07/2019
20190708_143349.jpg	2i	E	Post-ex	As above	8/07/2019
20190709_074421.jpg	2i	SE	Post-ex	Post hole (#TBC)	9/07/2019
20190709_074425.jpg	2i	E	Post-ex	As above	9/07/2019
20190709_074431.jpg	2i	N	Post-ex	General view of various sand deposits underlying former alignment of Old Bridge Street	9/07/2019
20190709_133001.jpg	2i	W	Post-ex	Isolated and highly disturbed section of Box Drain 1 located between Old Bridge Street and Area 1	9/07/2019
20190709_133016.jpg	2i	N	Post-ex	As above	9/07/2019

File Name	Area	Direction	Phase	Description	Date
20190709_133018.jpg	2i	N	Post-ex	As above	9/07/2019
20190709_133026.jpg	2i	NW	Post-ex	As above	9/07/2019
20190709_133036.jpg	2i	SW	Post-ex	As above	9/07/2019
20190709_133045.jpg	2i	SW	Post-ex	As above	9/07/2019
20190709_133126.jpg	2i	SE	Post-ex	As above	9/07/2019
20190709_133128.jpg	2i	SE	Post-ex	As above	9/07/2019
20190709_133142.jpg	2i	NW	Post-ex	As above	9/07/2019
20190709_133143.jpg	2i	NW	Post-ex	As above	9/07/2019
20191108_110638.jpg	2i	W	Post-ex	As above	8/11/2019
20190605_121647.jpg	2i	E	Post-ex	Section showing accumulation of soil deposits below footpath	5/06/2019
20190606_081310.jpg	2i	E	Post-ex	As above	6/06/2019
20190606_081315.jpg	2i	E	Post-ex	As above	6/06/2019
20190606_081320.jpg	2i	E	Post-ex	As above	6/06/2019
20190606_081354.jpg	2i	N	Mid-ex	General view of gravel (2211) which overlay Box Drain A	6/06/2019
20190606_081404.jpg	2i	N	Mid-ex	As above	6/06/2019
20190606_081406.jpg	2i	N	Mid-ex	As above	6/06/2019
20190613_114002.jpg	2i	NE	Mid-ex	Initial identification of Box Drain A	13/06/2019
20190613_114006.jpg	2i	NE	Mid-ex	As above	13/06/2019
20190613_114014.jpg	2i	NE	Mid-ex	As above	13/06/2019
20190613_114016.jpg	2i	NE	Mid-ex	As above	13/06/2019
20190613_114026.jpg	2i	SW	Mid-ex	As above	13/06/2019
20190613_114028.jpg	2i	SW	Mid-ex	As above	13/06/2019
20190613_135048.jpg	2i	N	Mid-ex	Excavation following removal of gravel (2211) showing upper and lower portion of Box Drain A	13/06/2019
20190613_135058.jpg	2i	N	Mid-ex	Detail of above shot	13/06/2019
20190613_135358.jpg	2i	E	Post-ex	Eastern baulk with Box Drain A continuing	13/06/2019
20190613_135400.jpg	2i	E	Post-ex	As above	13/06/2019
20190614_074636.jpg	2i	NW	Mid-ex	SW baulk showing termination of Box Drain A	14/06/2019
20190614_074641.jpg	2i	NW	Mid-ex	As above	14/06/2019
20190614_074643.jpg	2i	NW	Mid-ex	As above	14/06/2019
20190614_103229.jpg	2i	SE	Mid-ex	Working shot showing alignment of Box Drain A and shallow depth of base	14/06/2019
20190614_103251.jpg	2i	NE	Mid-ex	As above	14/06/2019
20190617_121919.jpg	2i	NW	Mid-ex	General shot during excavation of upper portion of Box Drain A	17/06/2019
20190617_121922.jpg	2i	NW	Mid-ex	As above	17/06/2019
20190617_121931.jpg	2i	NW	Mid-ex	As above	17/06/2019
20190617_121938.jpg	2i	NW	Post-ex	Middle section of Box Drain A showing likely impact from grading works	17/06/2019
20190617_121951.jpg	2i	NW	Post-ex	As above	17/06/2019
20190617_121955.jpg	2i	NE	Post-ex	As above	17/06/2019
20190617_122025.jpg	2i	SE	Post-ex	As above	17/06/2019
20190617_122033.jpg	2i	SE	Post-ex	As above	17/06/2019

File Name	Area	Direction	Phase	Description	Date
20190617_122037.jpg	2i	SE	Post-ex	As above	17/06/2019
20190617_122124.jpg	2i	NE	Post-ex	Portion of Box Drain A with showing irregular base and wide cut on northern side	17/06/2019
20190617_122127.jpg	2i	NE	Post-ex	As above	17/06/2019
20190617_122158.jpg	2i	SE	Post-ex	View along Box Drain A	17/06/2019
20190617_122208.jpg	2i	SE	Post-ex	As above	17/06/2019
20190617_122211.jpg	2i	SE	Post-ex	As above	17/06/2019
20190617_122219.jpg	2i	SW	Post-ex	Portion of Box Drain A showing irregular base and wide cut on northern side	17/06/2019
20190617_122234.jpg	2i	N	Post-ex	Detail of section of Box Drain A affected by grading works	17/06/2019
20190617_122237.jpg	2i	N	Post-ex	As above	17/06/2019
20190617_122257.jpg	2i	NE	Post-ex	SE termination of Box Drain A at location of gravel and service	17/06/2019
20190617_122300.jpg	2i	NE	Post-ex	As above	17/06/2019
20190618_113106.jpg	2i	E	Mid-ex	Initial identification of Box Drain 1 in service trench	18/06/2019
20190618_113129.jpg	2i	SE	Mid-ex	As above	18/06/2019
20190618_143411.jpg	2i	SE	Post-ex	Full length of Box Drain A	18/06/2019
20190618_143434.jpg	2i	SE	Post-ex	As above	18/06/2019
20190618_143436.jpg	2i	SE	Post-ex	As above	18/06/2019
20190618_143536.jpg	2i	NE	Post-ex	General view of Box Drain A and surrounding natural clay	18/06/2019
20190618_143543.jpg	2i	NE	Post-ex	As above	18/06/2019
20190618_143649.jpg	2i	NW	Post-ex	View along Box Drain A showing the abrupt termination in the foreground	18/06/2019
20190618_143654.jpg	2i	NW	Post-ex	As above	18/06/2019
20190618_143705.jpg	2i	NW	Post-ex	General shot showing upper and lower portions of Box Drain A and parts of gravel (2211)	18/06/2019
20190618_143708.jpg	2i	NW	Post-ex	As above	18/06/2019
20190618_143709.jpg	2i	NW	Post-ex	As above	18/06/2019
20190618_143743.jpg	2i	SW	Post-ex	General view showing middle section of Box Drain A and natural clay deposit	18/06/2019
20190618_143747.jpg	2i	SW	Post-ex	As above	18/06/2019
20190618_143820.jpg	2i	SW	Post-ex	Detail of section of Box Drain A affected by grading works	18/06/2019
20190618_143833.jpg	2i	SW	Post-ex	As above	18/06/2019
20190618_143845.jpg	2i	SW	Post-ex	Extreme detail of section of Box Drain A affected by grading works	18/06/2019
20190618_143902.jpg	2i	SW	Post-ex	Extreme detail showing contents of cut alongside Box Drain A, including shell fragments and slate fragment	18/06/2019
20190618_143922.jpg	2i	NE	Post-ex	Detail of section of Box Drain A affected by grading works	18/06/2019
20190618_143931.jpg	2i	NE	Post-ex	As above	18/06/2019
20190618_143952.jpg	2i	NE	Post-ex	Detail of NW end of Box Drain A showing damage from grading as ground level rises	18/06/2019
20190618_144006.jpg	2i	NE	Post-ex	As above	18/06/2019

File Name	Area	Direction	Phase	Description	Date
20190618_144015.jpg	2i	SW	Post-ex	As above	18/06/2019
20190618_144025.jpg	2i	SW	Post-ex	Detail from NW end of Box Drain A following removal of bricks	18/06/2019
20190618_144028.jpg	2i	SW	Post-ex	As above	18/06/2019
20190619_112403.jpg	2i			3 bricks identified as having frogs in the form of fingers indented into the clay. Only such examples noted	19/06/2019
20190619_133941.jpg	2i	NE	Post-ex	View of "false base" of Box Drain A identified after removal of bricks	19/06/2019
20190619_133942.jpg	2i	NE	Post-ex	As above	19/06/2019
20190619_133959.jpg	2i	NW	Post-ex	Detail of false base identified following removal of overlying bricks from Box Drain A	19/06/2019
20190619_134020.jpg	2i	NW	Post-ex	As above	19/06/2019
20190619_134027.jpg	2i	NW	Post-ex	As above	19/06/2019
20190619_134029.jpg	2i	NW	Post-ex	As above	19/06/2019
20190619_134045.jpg	2i	NW	Post-ex	As above	19/06/2019
20190619_134046.jpg	2i	NW	Post-ex	As above	19/06/2019
20190619_134102.jpg	2i	NW	Post-ex	As above	19/06/2019
20190619_134108.jpg	2i	NW	Post-ex	As above	19/06/2019
20190619_134206.jpg	2i	NE	Post-ex	Evidence of second course of bricks in base of Box Drain A	19/06/2019
20190619_134217.jpg	2i	NE	Post-ex	As above	19/06/2019
20190619_134219.jpg	2i	NE	Post-ex	As above	19/06/2019
20190619_134226.jpg	2i	SE	Post-ex	As above	19/06/2019
20190619_134235.jpg	2i	NW	Post-ex	As above	19/06/2019
20190619_134238.jpg	2i	NW	Post-ex	As above	19/06/2019
20190619_134240.jpg	2i	NW	Post-ex	As above	19/06/2019
20190620_082453.jpg	2i	SW	Post-ex	Evidence of second course of bricks in base of Box Drain A where the upper courses were damaged by grading	20/06/2019
20190620_082455.jpg	2i	SW	Post-ex	As above	20/06/2019
20190620_082507.jpg	2i	SE	Post-ex	As above	20/06/2019
20190620_082708.jpg	2i			3 bricks identified as having frogs in the form of fingers indented into the clay. Only such examples noted	20/06/2019
20190620_082710.jpg	2i			Detail of above shot	20/06/2019
20190620_083848.jpg	2i	SE	Mid-ex	General shot during removal of bricks from Box Drain A	20/06/2019
20190620_084315.jpg	2i	SW	Post-ex	Evidence of second course of bricks in base of Box Drain A where the upper courses were damaged by grading	20/06/2019
20190620_084318.jpg	2i	SW	Post-ex	As above	20/06/2019
20190620_084321.jpg	2i	SW	Post-ex	As above	20/06/2019
20190620_084326.jpg	2i	SW	Post-ex	As above	20/06/2019
20181023_141122.jpg	2i			Various photos of the results of using a vacuum truck within the footpath area including the identification of several services	23/10/2018
20181023_141124.jpg	2i			As above	23/10/2018
20181023_141254.jpg	2i			As above	23/10/2018

File Name	Area	Direction	Phase	Description	Date
20181023_141900.jpg	2i			As above	23/10/2018
20181023_141916.jpg	2i			As above	23/10/2018
20181023_144118.jpg	2i			As above	23/10/2018
20181023_144119.jpg	2i			As above	23/10/2018
20181023_144305.jpg	2i			As above	23/10/2018
20181025_130143.jpg	2i			As above	23/10/2018
20190523_091639.jpg	2i			As above	23/10/2018
20190523_091644.jpg	2i			As above	23/10/2018
20190523_094913.jpg	2i			As above	23/10/2018
20190523_095042.jpg	2i			As above	23/10/2018
20190523_095053.jpg	2i			As above	23/10/2018
20190523_103414.jpg	2i			As above	23/10/2018
20190523_103419.jpg	2i			As above	23/10/2018
20190523_103422.jpg	2i			As above	23/10/2018
20190523_103424.jpg	2i			As above	23/10/2018
20190523_103429.jpg	2i			As above	23/10/2018
20190523_103437.jpg	2i			As above	23/10/2018
20190523_103442.jpg	2i			As above	23/10/2018
20190523_121004.jpg	2i			As above	23/10/2018
20190523_121341.jpg	2i			As above	23/10/2018
20190523_121351.jpg	2i			As above	23/10/2018
20190523_121353.jpg	2i			As above	23/10/2018
20190523_121402.jpg	2i			As above	23/10/2018
20190523_125550.jpg	2i			As above	23/10/2018
20190523_125600.jpg	2i			As above	23/10/2018
20190527_070422.jpg	2i			As above	27/05/2019
IMG_20191209_143454.jpg	2ii	N	Mid-ex	Initial monitoring of area adjacent to 10 Bridge Street	9/12/2019
IMG_20191209_155726.jpg	2ii	N	Post-ex	Section of wall extending W from the fenceline before terminating	9/12/2019
IMG_20191209_155739.jpg	2ii	N	Post-ex	As above	9/12/2019
IMG_20191209_155746.jpg	2ii	N	Post-ex	Same as above, from wider angle for context	9/12/2019
IMG_20191209_155838.jpg	2ii	E	Post-ex	Same as above, from different direction	9/12/2019
IMG_20191209_155846.jpg	2ii	E	Post-ex	As above	9/12/2019
IMG_20191209_155852.jpg	2ii	E	Post-ex	As above	9/12/2019
IMG_20191209_155902.jpg	2ii	S	Post-ex	As above	9/12/2019
IMG_20191209_155920.jpg	2ii	S	Post-ex	As above	9/12/2019
IMG_20191210_080327.jpg	2ii	E	Post-ex	As above	10/12/2019
IMG_20191210_080331.jpg	2ii	NE	Post-ex	As above	10/12/2019
20190530_071948.jpg	2ii	E	Pre-ex	Cobble deposit (2102) following initial cleaning	30/05/2019
20190530_072039.jpg	2ii	E	Pre-ex	As above	30/05/2019
20190530_072056.jpg	2ii	S	Pre-ex	As above	30/05/2019
20190530_072113.jpg	2ii	W	Pre-ex	As above	30/05/2019
20190530_072124.jpg	2ii	W	Pre-ex	As above	30/05/2019

File Name	Area	Direction	Phase	Description	Date
20190530_072128.jpg	2ii	W	Pre-ex	As above	30/05/2019
20190530_072144.jpg	2ii	NW	Mid-ex	Showing relationship between cobble deposits (2102) and (2103)	30/05/2019
20190530_072158.jpg	2ii	N	Mid-ex	As above	30/05/2019
20190530_072332.jpg	2ii	W	Mid-ex	Cobble deposit (2103) with sondage through adjacent silt	30/05/2019
20190530_072334.jpg	2ii	W	Mid-ex	As above	30/05/2019
20190530_072344.jpg	2ii	W	Mid-ex	As above	30/05/2019
20190531_092534.jpg	2ii	W	Post-ex	Sondage through cobbles (2102) onto sand (2104)	31/05/2019
20190531_092540.jpg	2ii	W	Post-ex	As above	31/05/2019
20190531_092542.jpg	2ii	W	Post-ex	As above	31/05/2019
20190531_092545.jpg	2ii	W	Post-ex	As above	31/05/2019
20190531_092555.jpg	2ii	W	Post-ex	As above	31/05/2019
20190531_092557.jpg	2ii	W	Post-ex	As above	31/05/2019
20190531_092644.jpg	2ii	S	Post-ex	As above	31/05/2019
20190531_092647.jpg	2ii	S	Post-ex	As above	31/05/2019
20190531_092712.jpg	2ii	E	Post-ex	Second sondage through cobbles (2102) onto sand (2104)	31/05/2019
20190531_092716.jpg	2ii	E	Post-ex	As above	31/05/2019
20190408_134806.jpg	3i	SW	Mid-ex	Working shot following removal of overburden	8/04/2019
20190408_134809.jpg	3i	S	Mid-ex	As above	8/04/2019
20190408_134812.jpg	3i	SW	Mid-ex	Working shot during initial cleanback	8/04/2019
20190408_134818.jpg	3i	SW	Mid-ex	As above	8/04/2019
20190408_152250.jpg	3i	SW	Pre-ex	Working shot of entire area following removal of overburden	8/04/2019
20190408_152304.jpg	3i	SW	Mid-ex	General shot showing compacted road surface (306) overlaying earlier deposits abutting the kerbs	8/04/2019
20190408_152310.jpg	3i	SW	Mid-ex	General shot of SW end of trench following initial cleaning	8/04/2019
20190408_152317.jpg	3i	SW	Mid-ex	View of compacted road surface (306) with patches of later repair (307) and metal water pipe	8/04/2019
20190408_152327.jpg	3i	NW	Mid-ex	General shot of central portion of trench following initial cleaning	8/04/2019
20190408_152335.jpg	3i	S	Mid-ex	Initial identification of brick wall (310)	8/04/2019
20190408_152342.jpg	3i	NE	Mid-ex	General shot of NE part of the trench following removal of the overburden	8/04/2019
20190409_090133.jpg	3i	SE	Mid-ex	View along brick wall (310) during cleanback	9/04/2019
20190409_104620.jpg	3i	NW	Mid-ex	As above	9/04/2019
20190409_104632.jpg	3i	N	Mid-ex	As above	9/04/2019
20190409_104639.jpg	3i	NE	Mid-ex	As above	9/04/2019
20190409_143818.jpg	3i	SW	Post-ex	SW corner of the site following initial cleaning	9/04/2019

File Name	Area	Direction	Phase	Description	Date
20190409_143829.jpg	3i	S	Post-ex	As above	9/04/2019
20190409_143842.jpg	3i	E	Mid-ex	Working shot during cleaning of site showing different road surfaces	9/04/2019
20190410_070226.jpg	3i	SW	Post-ex	SW end of site following cleaning showing compacted road surfaces	10/04/2019
20190410_070234.jpg	3i	SW	Post-ex	As above	10/04/2019
20190410_070256.jpg	3i	NE	Post-ex	As above	10/04/2019
20190410_070315.jpg	3i	NE	Post-ex	As above	10/04/2019
20190410_070334.jpg	3i	NW	Post-ex	As above	10/04/2019
20190410_070344.jpg	3i	SW	Post-ex	As above	10/04/2019
20190410_070441.jpg	3i	SE	Post-ex	Detailed view of wall (310) showing grading marks from road construction	10/04/2019
20190410_070442.jpg	3i	SE	Post-ex	As above	10/04/2019
20190410_070515.jpg	3i	SW	Post-ex	Detailed view of wall (310) following cleanback	10/04/2019
20190410_070605.jpg	3i	SW	Post-ex	As above	10/04/2019
20190410_070629.jpg	3i	SW	Post-ex	Detailed view of grading lines into compacted road surface (306)	10/04/2019
20190410_070640.jpg	3i	NE	Post-ex	As above	10/04/2019
20190410_070727.jpg	3i	NW	Post-ex	Compacted road surface (306) and patches of later repair (307)	10/04/2019
20190410_070738.jpg	3i	SE	Post-ex	As above	10/04/2019
20190410_070805.jpg	3i	SW	Post-ex	NW corner of trench following initial cleanback	10/04/2019
20190410_070833.jpg	3i	NE	Post-ex	View along kerb showing various phases of road repair	10/04/2019
20190410_070841.jpg	3i	NE	Post-ex	As above	10/04/2019
20190410_070915.jpg	3i	SW	Post-ex	As above	10/04/2019
20190410_070924.jpg	3i	SW	Post-ex	As above	10/04/2019
20190410_070940.jpg	3i	NW	Post-ex	As above	10/04/2019
20190410_070945.jpg	3i	NW	Post-ex	As above	10/04/2019
20190410_071030.jpg	3i	SE	Post-ex	Patch of road repair containing brickwork	10/04/2019
20190410_071048.jpg	3i	NE	Post-ex	As above	10/04/2019
20190410_071053.jpg	3i	NE	Post-ex	As above	10/04/2019
20190410_071128.jpg	3i	NE	Post-ex	Patch of road repair containing ash	10/04/2019
20190410_071130.jpg	3i	NE	Post-ex	As above	10/04/2019
20190410_071136.jpg	3i	NE	Post-ex	As above	10/04/2019
20190410_071147.jpg	3i	W	Post-ex	General view of W end of trench	10/04/2019
20190410_091009.jpg	3i	NW	Post-ex	Detailed view of patch of clay E of brick wall	10/04/2019
20190410_091035.jpg	3i	NE	Post-ex	As above	10/04/2019
20190410_091111.jpg	3i	NE	Post-ex	As above	10/04/2019
20190410_091120.jpg	3i	NE	Post-ex	As above	10/04/2019
20190410_091128.jpg	3i	NE	Post-ex	As above	10/04/2019

File Name	Area	Direction	Phase	Description	Date
20190410_091157 (1).jpg	3i	NE	Post-ex	As above	10/04/2019
20190410_091157.jpg	3i	NE	Post-ex	As above	10/04/2019
20190410_091206.jpg	3i	NE	Post-ex	As above	10/04/2019
20190410_091219.jpg	3i	NW	Post-ex	As above	10/04/2019
20190410_091230.jpg	3i	NE	Post-ex	Further detail on SE end of deposit	10/04/2019
20190410_091302.jpg	3i	NW	Post-ex	As above	10/04/2019
20190410_143833.jpg	3i	NE	Post-ex	Sondage through later levelling fill (306) showing compacted road surface and natural sand	10/04/2019
20190410_143838.jpg	3i	NE	Post-ex	As above	10/04/2019
20190411_073342.jpg	3i	SW	Post-ex	Sondage adjacent to wall (310) showing natural sand (331) and brick rubble on interface	11/04/2019
20190411_073355.jpg	3i	NE	Post-ex	As above	11/04/2019
20190411_073420.jpg	3i	NW	Post-ex	As above	11/04/2019
20190411_073437.jpg	3i	NW	Post-ex	As above	11/04/2019
20190411_073525.jpg	3i	NE	Post-ex	As above	11/04/2019
20190411_073529.jpg	3i	NE	Post-ex	As above	11/04/2019
20190411_073647.jpg	3i	SW	Post-ex	Second sondage excavated against wall (310)	11/04/2019
20190411_073653.jpg	3i	SW	Post-ex	As above	11/04/2019
20190411_073704.jpg	3i	NW	Post-ex	As above	11/04/2019
20190411_073706.jpg	3i	NW	Post-ex	Detail showing brickwork in sondage	11/04/2019
20190411_105929.jpg	3i	NW	Post-ex	Sondage against former test trench through clay levelling fill	11/04/2019
20190411_105937.jpg	3i	NW	Post-ex	As above	11/04/2019
20190411_105947.jpg	3i	NW	Post-ex	As above	11/04/2019
20190411_105950.jpg	3i	NW	Post-ex	As above	11/04/2019
20190411_110006.jpg	3i	SE	Post-ex	As above	11/04/2019
20190411_110015.jpg	3i	SW	Post-ex	As above	11/04/2019
20190411_110017.jpg	3i	SW	Post-ex	As above	11/04/2019
20190411_110026.jpg	3i	NE	Post-ex	As above	11/04/2019
20190411_110031.jpg	3i	NE	Post-ex	As above	11/04/2019
20190411_110100.jpg	3i	SW	Post-ex	As above	11/04/2019
20190411_110122.jpg	3i	SE	Post-ex	As above	11/04/2019
20190411_120932.jpg	3i	N	Mid-ex	General shot of cleaning road surface near wall (310)	11/04/2019
20190411_121357.jpg	3i	SE	Mid-ex	As above	11/04/2019
20190411_121407.jpg	3i	N	Mid-ex	As above	11/04/2019
20190411_121424.jpg	3i	SE	Mid-ex	As above	11/04/2019
20190415_115740.jpg	3i	N	Mid-ex	General view of wall (310) showing wall cut [313]	15/04/2019
20190415_121138.jpg	3i	W	Mid-ex	General view of wall (310) during excavation	15/04/2019
20190415_121140.jpg	3i	W	Mid-ex	As above	15/04/2019

File Name	Area	Direction	Phase	Description	Date
20190415_121158.jpg	3i	W	Mid-ex	As above	15/04/2019
20190415_121203.jpg	3i	W	Mid-ex	As above	15/04/2019
20190415_121209.jpg	3i	NW	Mid-ex	As above	15/04/2019
20190415_121233.jpg	3i	N	Mid-ex	As above	15/04/2019
20190415_121242.jpg	3i	N	Mid-ex	As above	15/04/2019
20190415_121313.jpg	3i	S	Mid-ex	Southern termination of northern section of wall (310)	15/04/2019
20190415_121319.jpg	3i	S	Mid-ex	As above	15/04/2019
20190415_121325.jpg	3i	S	Mid-ex	As above	15/04/2019
20190415_121333.jpg	3i	N	Mid-ex	As above	15/04/2019
20190415_121339.jpg	3i	N	Mid-ex	As above	15/04/2019
20190415_121348.jpg	3i	W	Mid-ex	As above	15/04/2019
20190415_121404.jpg	3i	S	Mid-ex	Overview of northern section of wall	15/04/2019
20190415_121411.jpg	3i	S	Mid-ex	As above	15/04/2019
20190415_121420.jpg	3i	S	Mid-ex	As above	15/04/2019
20190415_121442.jpg	3i	S	Mid-ex	Detail of northern end of northern section of wall	15/04/2019
20190415_121444.jpg	3i	S	Mid-ex	As above	15/04/2019
20190416_094537.jpg	3i	N	Mid-ex	Initial view of area between sections of wall showing post hole locations	15/04/2019
20190416_094540.jpg	3i	N	Mid-ex	As above	16/04/2019
20190416_094555.jpg	3i	N	Mid-ex	As above	16/04/2019
20190416_094602.jpg	3i	E	Mid-ex	As above	16/04/2019
20190416_094603.jpg	3i	E	Mid-ex	As above	16/04/2019
20190416_094606.jpg	3i	E	Mid-ex	As above	16/04/2019
20190416_130840.jpg	3i	SW	Mid-ex	General shot during excavation along southern section of wall	16/04/2019
20190416_131009.jpg	3i	E	Mid-ex	As above	16/04/2019
20190416_131014.jpg	3i	E	Mid-ex	As above	16/04/2019
20190416_131018.jpg	3i	E	Mid-ex	As above	16/04/2019
20190416_131039.jpg	3i	NE	Mid-ex	As above	16/04/2019
20190416_131048.jpg	3i	S	Mid-ex	As above	16/04/2019
20190416_132050.jpg	3i	E	Mid-ex	Detail of area between wall sections showing post holes, voids, and patch of mortar	16/04/2019
20190416_132053.jpg	3i	E	Mid-ex	As above	16/04/2019
20190416_132059.jpg	3i	E	Mid-ex	As above	16/04/2019
20190416_132102.jpg	3i	E	Mid-ex	As above	16/04/2019
20190416_132105.jpg	3i	E	Mid-ex	As above	16/04/2019
20190416_132108.jpg	3i	E	Mid-ex	As above	16/04/2019
20190416_132548.jpg	3i	W	Mid-ex	Detail shot of S terminus of northern end of wall, focussing on post hole 334/335	16/04/2019
20190416_132600.jpg	3i	W	Mid-ex	As above	16/04/2019
20190416_132605.jpg	3i	W	Mid-ex	As above	16/04/2019

File Name	Area	Direction	Phase	Description	Date
20190416_132625.jpg	3i	N	Mid-ex	As above	16/04/2019
20190416_132654.jpg	3i	N	Mid-ex	As above	16/04/2019
20190416_132700.jpg	3i	E	Mid-ex	Same as above, also including post hole (333)	16/04/2019
20190416_132702.jpg	3i	E	Mid-ex	As above	16/04/2019
20190416_132704.jpg	3i	E	Mid-ex	As above	16/04/2019
20190416_132712.jpg	3i	S	Mid-ex	View along southern portion of wall	16/04/2019
20190416_132715.jpg	3i	S	Mid-ex	As above	16/04/2019
20190416_132723.jpg	3i	SE	Mid-ex	As above	16/04/2019
20190416_132725.jpg	3i	SE	Mid-ex	As above	16/04/2019
20190416_135537.jpg	3i	SE	Post-ex	Sondage through various compacted road surfaces showing shallow depth of natural sand (331)	16/04/2019
20190416_135538.jpg	3i	SW	Post-ex	As above	16/04/2019
20190416_135546.jpg	3i	NE	Post-ex	As above	16/04/2019
20190416_135554.jpg	3i	NE	Post-ex	As above	16/04/2019
20190416_135711.jpg	3i	NE	Post-ex	As above	16/04/2019
20190416_135715.jpg	3i	NE	Post-ex	As above	16/04/2019
20190416_135721.jpg	3i	NE	Post-ex	Detail showing fill layers in undulation in level of the natural sand	16/04/2019
20190416_135731.jpg	3i	NE	Post-ex	As above	16/04/2019
20190416_135733.jpg	3i	NE	Post-ex	As above	16/04/2019
20190416_135738.jpg	3i	NE	Post-ex	As above	16/04/2019
20190416_135806.jpg	3i	NE	Post-ex	As above	16/04/2019
20190416_135810.jpg	3i	NE	Post-ex	As above	16/04/2019
20190416_135815.jpg	3i	NE	Post-ex	As above	16/04/2019
20190416_135823.jpg	3i	NE	Post-ex	As above	16/04/2019
20190416_135824.jpg	3i	NE	Post-ex	As above	16/04/2019
20190417_072809.jpg	3i			General construction shot	17/04/2019
20190417_072825.jpg	3i			As above	17/04/2019
20190417_081639.jpg	3i	SW	Post-ex	Grading marks cutting through earlier road levelling fills	17/04/2019
20190417_081643.jpg	3i	SW	Post-ex	As above	17/04/2019
20190417_100357.jpg	3i	NW	Post-ex	General view of various compacted road deposits in the NE end of the site	17/04/2019
20190417_100400.jpg	3i	NW	Post-ex	As above	17/04/2019
20190417_100402.jpg	3i	NW	Post-ex	As above	17/04/2019
20190417_110759.jpg	3i	W	Mid-ex	Working shot during cleanback	17/04/2019
20190417_110811.jpg	3i	SW	Mid-ex	As above	17/04/2019
20190417_121904.jpg	3i	SW	Mid-ex	Working shot during cleanback showing initial identification of various services	17/04/2019
20190417_121907.jpg	3i	SW	Mid-ex	As above	17/04/2019
20190417_121945.jpg	3i	E	Mid-ex	As above	17/04/2019

File Name	Area	Direction	Phase	Description	Date
20190417_141320.jpg	3i	N	Post-ex	Potential void/post pipe within southern portion of wall alignment	17/04/2019
20190417_141323.jpg	3i	N	Post-ex	As above	17/04/2019
20190417_141328.jpg	3i	S	Post-ex	As above	17/04/2019
20190417_145928.jpg	3i	E	Post-ex	Metal service and patch of levelling fill in central, eastern portion of site	17/04/2019
20190417_145936.jpg	3i	SE	Post-ex	As above	17/04/2019
20190417_145940.jpg	3i	SE	Post-ex	As above	17/04/2019
20190417_145943.jpg	3i	SE	Post-ex	As above	17/04/2019
20190417_150010.jpg	3i	SW	Post-ex	General view showing undulations in natural sand (331) following removal of patches of levelling and road repair	17/04/2019
20190417_150012.jpg	3i	SW	Post-ex	As above	17/04/2019
20190417_150014.jpg	3i	SW	Post-ex	As above	17/04/2019
20190417_150044.jpg	3i	NE	Post-ex	General view of central northern portion of site	17/04/2019
20190417_150046.jpg	3i	NE	Post-ex	As above	17/04/2019
20190417_150048.jpg	3i	NE	Post-ex	As above	17/04/2019
20190417_150049.jpg	3i	NE	Post-ex	As above	17/04/2019
20190417_150108.jpg	3i	SW	Post-ex	Overview of various services and repairs to compacted road surface in the northern, central and eastern portions of the site	17/04/2019
20190417_150111.jpg	3i	SW	Post-ex	As above	17/04/2019
20190417_150222.jpg	3i	NE	Post-ex	As above	17/04/2019
20190417_150226.jpg	3i	NE	Post-ex	As above	17/04/2019
20190417_150237.jpg	3i	NE	Post-ex	As above	17/04/2019
20190417_150255.jpg	3i	NW	Post-ex	Various services in the eastern portion of the road corridor	17/04/2019
20190417_150301.jpg	3i	NW	Post-ex	As above	17/04/2019
20190417_150340.jpg	3i	SE	Post-ex	As above	17/04/2019
20190417_150342.jpg	3i	SE	Post-ex	As above	17/04/2019
20190417_150349.jpg	3i	SW	Post-ex	As above	17/04/2019
20190417_150355.jpg	3i	SW	Post-ex	As above	17/04/2019
20190418_072940.jpg	3i	N	Post-ex	Full length of wall (310)	18/04/2019
20190418_072941.jpg	3i	N	Post-ex	As above	18/04/2019
20190418_072944.jpg	3i	N	Post-ex	As above	18/04/2019
20190418_072946.jpg	3i	N	Post-ex	As above	18/04/2019
20190418_073006.jpg	3i	N	Post-ex	Northern section of wall (310)	18/04/2019
20190418_073007.jpg	3i	N	Post-ex	As above	18/04/2019
20190418_073016.jpg	3i	E	Post-ex	General shot showing terminus of northern and southern end of wall	18/04/2019
20190418_073018.jpg	3i	E	Post-ex	As above	18/04/2019
20190418_073037.jpg	3i	S	Post-ex	General view of wall	18/04/2019

File Name	Area	Direction	Phase	Description	Date
20190418_073038.jpg	3i	S	Post-ex	As above	18/04/2019
20190418_073039.jpg	3i	S	Post-ex	As above	18/04/2019
20190418_073048.jpg	3i	S	Post-ex	As above	18/04/2019
20190418_073103.jpg	3i	E	Post-ex	Working shot showing length of wall	18/04/2019
20190418_073104.jpg	3i	E	Post-ex	As above	18/04/2019
20190418_073105.jpg	3i	SW	Post-ex	As above	18/04/2019
20190418_073119.jpg	3i		Post-ex	Fisheye lens of wall	18/04/2019
20190418_073239.jpg	3i	NE	Post-ex	Detail of northern end of northern section of wall showing brick fragments in wall cut	18/04/2019
20190418_073240.jpg	3i	NE	Post-ex	As above	18/04/2019
20190418_073242.jpg	3i	NE	Post-ex	As above	18/04/2019
20190418_073244.jpg	3i	NE	Post-ex	As above	18/04/2019
20190418_073258.jpg	3i	E	Post-ex	Detail of damaged section of wall near southern terminus of northern wall section	18/04/2019
20190418_073259.jpg	3i	E	Post-ex	As above	18/04/2019
20190418_073302.jpg	3i	E	Post-ex	As above	18/04/2019
20190418_073305.jpg	3i	E	Post-ex	As above	18/04/2019
20190418_073308.jpg	3i	E	Post-ex	As above	18/04/2019
20190418_073348(0).jpg	3i	NW	Post-ex	Northern termination of northern section of wall	18/04/2019
20190418_073348(1).jpg	3i	NW	Post-ex	As above	18/04/2019
20190418_073348(2).jpg	3i	NW	Post-ex	As above	18/04/2019
20190418_073348.jpg	3i	NW	Post-ex	As above	18/04/2019
20190418_073349(0).jpg	3i	NW	Post-ex	As above	18/04/2019
20190418_073349(1).jpg	3i	NW	Post-ex	As above	18/04/2019
20190418_073349.jpg	3i	NW	Post-ex	As above	18/04/2019
20190418_073350(0).jpg	3i	NW	Post-ex	As above	18/04/2019
20190418_073350(1).jpg	3i	NW	Post-ex	As above	18/04/2019
20190418_073350.jpg	3i	NW	Post-ex	As above	18/04/2019
20190418_073352.jpg	3i	NW	Post-ex	As above	18/04/2019
20190418_073353(0).jpg	3i	NW	Post-ex	As above	18/04/2019
20190418_073353(1).jpg	3i	NW	Post-ex	As above	18/04/2019
20190418_073353.jpg	3i	NW	Post-ex	As above	18/04/2019
20190418_073354(0).jpg	3i	NW	Post-ex	As above	18/04/2019
20190418_073354(1).jpg	3i	NW	Post-ex	As above	18/04/2019
20190418_073354.jpg	3i	NW	Post-ex	As above	18/04/2019
20190418_073357(0).jpg	3i	S	Post-ex	As above	18/04/2019
20190418_073357.jpg	3i	S	Post-ex	As above	18/04/2019
20190418_073358(0).jpg	3i	S	Post-ex	As above	18/04/2019
20190418_073358.jpg	3i	S	Post-ex	As above	18/04/2019
20190418_073359(0).jpg	3i	S	Post-ex	As above	18/04/2019
20190418_073359.jpg	3i	S	Post-ex	As above	18/04/2019
20190418_073400.jpg	3i	SE	Post-ex	As above	18/04/2019

File Name	Area	Direction	Phase	Description	Date
20190418_073401(0).jpg	3i	SE	Post-ex	As above	18/04/2019
20190418_073401.jpg	3i	SE	Post-ex	As above	18/04/2019
20190418_073402.jpg	3i	SE	Post-ex	As above	18/04/2019
20190418_073403.jpg	3i	S	Post-ex	As above	18/04/2019
20190418_080335.jpg	3i	SE	Post-ex	Various deposits of road repair in the eastern portion of the study area	18/04/2019
20190418_080338.jpg	3i	SE	Post-ex	As above	18/04/2019
20190418_080357.jpg	3i	SW	Post-ex	As above	18/04/2019
20190418_080359.jpg	3i	SW	Post-ex	As above	18/04/2019
20190418_080400.jpg	3i	SW	Post-ex	As above	18/04/2019
20190418_080425.jpg	3i	SW	Post-ex	As above	18/04/2019
20190418_080452.jpg	3i	SE	Post-ex	General shot showing a service trench in the eastern part of the site	18/04/2019
20190418_080513.jpg	3i	NE	Post-ex	Levelling and road repair fills in the eastern part of the site containing brick fragments	18/04/2019
20190418_080514.jpg	3i	NE	Post-ex	As above	18/04/2019
20190418_080528.jpg	3i	NE	Post-ex	As above	18/04/2019
20190418_080533.jpg	3i	NE	Post-ex	As above	18/04/2019
20190418_080547.jpg	3i	NE	Post-ex	As above	18/04/2019
20190418_080548.jpg	3i	NE	Post-ex	As above	18/04/2019
20190418_080604.jpg	3i	NE	Post-ex	As above	18/04/2019
20190418_090711.jpg	3i	NW	Post-ex	As above	18/04/2019
20190418_090712.jpg	3i	NW	Post-ex	As above	18/04/2019
20190418_090719.jpg	3i	NW	Post-ex	As above	18/04/2019
20190418_091409.jpg	3i	W	Post-ex	Working shot across the site with compacted road deposits in foreground	18/04/2019
20190418_091415.jpg	3i	W	Post-ex	As above	18/04/2019
20190418_091440.jpg	3i	NW	Post-ex	As above	18/04/2019
20190418_091506.jpg	3i	W	Post-ex	As above	18/04/2019
20190418_091518.jpg	3i	NE	Post-ex	Detail of patch of road repair with compacted natural sand (331) either side	18/04/2019
20190418_091855.jpg	3i	NW	Mid-ex	Working shot showing various patches of repair to road surface and service trenches	18/04/2019
20190418_091900.jpg	3i	NW	Mid-ex	As above	18/04/2019
20190418_091904.jpg	3i	NW	Mid-ex	As above	18/04/2019
20190418_091939.jpg	3i	SW	Mid-ex	Working shot showing patches of road repair and various modern services	18/04/2019
20190418_091952.jpg	3i	SW	Mid-ex	As above	18/04/2019
20190418_152125.jpg	3i	NW	Post-ex	Various service trenches in the eastern end of the site	18/04/2019
20190418_152145.jpg	3i	SW	Post-ex	As above	18/04/2019
20190418_152213.jpg	3i	SW	Post-ex	As above	18/04/2019
20190418_152217.jpg	3i	SW	Post-ex	As above	18/04/2019

File Name	Area	Direction	Phase	Description	Date
20190418_152230.jpg	3i	SE	Post-ex	As above	18/04/2019
20190418_152232.jpg	3i	SE	Post-ex	As above	18/04/2019
20190418_152238.jpg	3i	SE	Post-ex	As above	18/04/2019
20190418_152254.jpg	3i	NE	Post-ex	As above	18/04/2019
20190418_152256.jpg	3i	NE	Post-ex	As above	18/04/2019
20190418_152423.jpg	3i	NW	Post-ex	As above	18/04/2019
20190418_152428.jpg	3i	NW	Post-ex	As above	18/04/2019
20190418_152502.jpg	3i	NE	Post-ex	As above	18/04/2019
20190418_152504.jpg	3i	NE	Post-ex	As above	18/04/2019
20190418_152517.jpg	3i	NE	Post-ex	As above	18/04/2019
20190418_152520.jpg	3i	NE	Post-ex	As above	18/04/2019
20190418_152525.jpg	3i	NE	Post-ex	As above	18/04/2019
20190418_152532.jpg	3i	NE	Post-ex	As above	18/04/2019
20190418_152533.jpg	3i	NE	Post-ex	As above	18/04/2019
				Various photos from photogrammetry of wall (331)	29/05/2019
					3/06/2019
20190529_121247.jpg	3i	NE	Post-ex	Profile of deposits between pavers (386) and natural sand (389)	3/06/2019
20190529_121251.jpg	3i	NE	Post-ex	As above	3/06/2019
20190529_121254.jpg	3i	NE	Post-ex	As above	3/06/2019
20190529_141922.jpg	3i	NE	Post-ex	Wider angle of previous photos	3/06/2019
20190529_141925.jpg	3i	NE	Post-ex	As above	3/06/2019
20190529_141932.jpg	3i	NE	Post-ex	Wider angle of previous photos	3/06/2019
20190529_141934.jpg	3i	NE	Post-ex	As above	5/06/2019
20190529_142048.jpg	3i	NE	Post-ex	As above	5/06/2019
20190529_142053.jpg	3i	NE	Post-ex	As above	5/06/2019
20190529_142056.jpg	3i	NE	Post-ex	As above	5/06/2019
20190529_142558.jpg	3i	SW	Post-ex	Same, showing base and limit of excavation	5/06/2019
20190529_142602.jpg	3i	SW	Post-ex	As above	5/06/2019
20190529_142634.jpg	3i	NE	Post-ex	As above	5/06/2019
20190529_142638.jpg	3i	NE	Post-ex	As above	5/07/2019
20190603_085740.jpg	3i	W	Post-ex	General overview of excavation along corner area	5/07/2019
20190603_085743.jpg	3i	W	Post-ex	As above	5/07/2019
20190603_085757.jpg	3i	NW	Post-ex	As above	5/07/2019
20190603_085801.jpg	3i	NW	Post-ex	As above	5/07/2019
20190603_085833.jpg	3i	NE	Post-ex	As above	5/07/2019
20190603_085838.jpg	3i	NE	Post-ex	As above	5/07/2019
20190603_085842.jpg	3i	NE	Post-ex	As above	5/07/2019
20190605_140348.jpg	3i	NE	Post-ex	Same, following removal of remaining pavers	5/07/2019
20190605_140354.jpg	3i	NE	Post-ex	As above	6/12/2019
20190605_140400.jpg	3i	NE	Post-ex	As above	6/12/2019

File Name	Area	Direction	Phase	Description	Date
20190605_140434.jpg	3i	SW	Post-ex	As above	6/12/2019
20190605_140441.jpg	3i	SW	Post-ex	As above	6/12/2019
20190605_140442.jpg	3i	SW	Post-ex	As above	6/12/2019
20190605_140510.jpg	3i	NW	Post-ex	As above	6/12/2019
20190705_095623.jpg	3i	NW	Mid-ex	Silty sand (392) and crushed bluestone (391) from trenching works in the footpath	6/12/2019
20190705_095625.jpg	3i	NW	Mid-ex	As above	6/12/2019
20190705_095628.jpg	3i	NW	Mid-ex	Detail of above photo showing shell present in silty sand (392)	6/12/2019
20190705_095634.jpg	3i	E	Mid-ex	As above	6/12/2019
20190705_095638.jpg	3i	NE	Mid-ex	As above	6/12/2019
20190705_100229.jpg	3i	NE	Mid-ex	Working shot of sondage excavated through silty sand (392)	6/12/2019
20190705_100230.jpg	3i	NE	Mid-ex	As above	6/12/2019
20190705_130027.jpg	3i	NE	Post-ex	Final trench depth following completion of excavation	6/12/2019
20190705_130028.jpg	3i	NE	Post-ex	As above	6/12/2019
20191206_085914.jpg	3i	NW	Mid-ex	Initial excavation following removal of topsoil and subsoil along fenceline	6/12/2019
20191206_085922.jpg	3i	NE	Mid-ex	As above	6/12/2019
20191206_085923.jpg	3i	NE	Mid-ex	As above	6/12/2019
20191206_102146.jpg	3i	NE	Post-ex	As above	6/12/2019
20191206_115331.jpg	3i	E	Mid-ex	Excavation in footpath adjacent to fence of 10 Bridge Street showing rectangular feature with clay pipe fragments at limit of excavation depth (# TBC)	6/12/2019
20191206_122814.jpg	3i	NE	Mid-ex	As above	6/12/2019
20191206_132649.jpg	3i	NE	Post-ex	As above	6/12/2019
20191206_132651.jpg	3i	E	Post-ex	As above	6/12/2019
20191206_132706.jpg	3i	SW	Post-ex	As above	6/12/2019
20191206_132707.jpg	3i	SW	Post-ex	As above	6/12/2019
20191206_132748.jpg	3i	W	Post-ex	As above	6/12/2019
20191206_132750.jpg	3i	W	Post-ex	As above	6/12/2019
20191206_132751.jpg	3i	W	Post-ex	As above	6/12/2019
20191206_132822.jpg	3i	N	Post-ex	Potential fence post hole in section (# TBC)	6/12/2019
20191206_132823.jpg	3i	N	Post-ex	As above	6/12/2019
IMG_20191206_122838.jpg	3i	W	Mid-ex	Various services and occupational deposits present at the limit of excavation within the footpath area	6/12/2019
IMG_20191206_134913.jpg	3i	N	Mid-ex	Post hole possibly associated with former fenceline (# TBC)	6/12/2019
IMG_20191206_134924.jpg	3i	N	Mid-ex	As above	6/12/2019
IMG_20191206_134936.jpg	3i	N	Mid-ex	General context view of post hole	6/12/2019

File Name	Area	Direction	Phase	Description	Date
IMG_20191206_141010.jpg	3i	SW	Mid-ex	Post hole possibly associated with former fenceline (# TBC)	6/12/2019
IMG_20191206_141035.jpg	3i	N	Mid-ex	As above	6/12/2019
IMG_20191206_142839.jpg	3i	S	Post-ex	Post hole following removal of pipe material	6/12/2019
IMG_20191206_142850.jpg	3i	S	Post-ex	As above	6/12/2019
IMG_20191206_142911.jpg	3i	N	Post-ex	As above	6/12/2019
IMG_20191206_142956.jpg	3i	N	Post-ex	As above	6/12/2019
IMG_20191206_143017.jpg	3i	N	Post-ex	As above	6/12/2019
IMG_20191206_143035.jpg	3i	N	Post-ex	As above	6/12/2019
IMG_20191206_144943.jpg	3i	NW	Post-ex	Natural sand (331) following removal of lense of occupation material	6/12/2019
IMG_20191206_144951.jpg	3i	NE	Post-ex	As above	6/12/2019
IMG_20191206_145008.jpg	3i	NE	Post-ex	As above	6/12/2019
IMG_20191206_145027.jpg	3i	NE	Post-ex	As above	9/12/2019
IMG_20191206_145125.jpg	3i	SW	Post-ex	As above	9/12/2019
IMG_20191206_145138.jpg	3i	NE	Post-ex	As above	9/12/2019
IMG_20191206_150051.jpg	3i	N	Mid-ex	Second post hole identified along potential former fenceline	9/12/2019
IMG_20191206_150107.jpg	3i	N	Mid-ex	Second post hole identified along potential former fenceline	9/12/2019
IMG_20191206_150120.jpg	3i	N	Mid-ex	Context for second post hole	9/12/2019
IMG_20191206_150232.jpg	3i	N	Mid-ex	Relationship of post holes identified along potential fenceline	9/12/2019
IMG_20191206_153158.jpg	3i	N	Post-ex	Excavation of second post hole	9/12/2019
IMG_20191206_153255.jpg	3i	N	Post-ex	As above	9/12/2019
IMG_20191206_153310.jpg	3i	N	Post-ex	As above	10/12/2019
IMG_20191206_153316.jpg	3i	N	Post-ex	As above	10/12/2019
IMG_20191206_153320.jpg	3i	N	Post-ex	As above	10/12/2019
IMG_20191206_153328.jpg	3i	N	Post-ex	As above	10/12/2019
IMG_20191206_153421.jpg	3i	N	Post-ex	Relationship of post holes identified along potential fenceline	10/12/2019
IMG_20191206_153440.jpg	3i	N	Post-ex	As above	10/12/2019
IMG_20191209_110819.jpg	3i	NE	Post-ex	Footpath area on completion of excavation	10/12/2019
IMG_20191209_110931.jpg	3i	NE	Post-ex	As above	10/12/2019
IMG_20191209_110943.jpg	3i	SE	Post-ex	As above	10/12/2019
IMG_20191209_110949.jpg	3i	NW	Post-ex	As above	10/12/2019
IMG_20191209_111001.jpg	3i	NW	Post-ex	As above	10/12/2019
IMG_20191209_110645.jpg	3i	SW	Post-ex	As above	12/12/2019
IMG_20191209_110703.jpg	3i	SW	Post-ex	As above	12/12/2019
IMG_20191209_110721.jpg	3i	SW	Post-ex	As above	12/12/2019
IMG_20191209_110817.jpg	3i	SE	Post-ex	As above	12/12/2019
IMG_20191210_085541.jpg	3i	N	Mid-ex	During additional excavation in vicinity of post hole	12/12/2019

File Name	Area	Direction	Phase	Description	Date
IMG_20191210_085553.jpg	3i	N	Mid-ex	As above	12/12/2019
IMG_20191210_085601.jpg	3i	N	Mid-ex	As above	12/12/2019
IMG_20191210_085615.jpg	3i	N	Mid-ex	Same as above, showing bricks held in fill	
IMG_20191210_085620.jpg	3i	N	Mid-ex	As above	8/05/2019
IMG_20191210_085700.jpg	3i	N	Post-ex	As above	5/05/2019
IMG_20191210_100641.jpg	3i	N	Post-ex	Following excavation of remainder of post hole	5/05/2019
IMG_20191210_100642.jpg	3i	N	Post-ex	As above	5/05/2019
IMG_20191210_100656.jpg	3i	N	Post-ex	As above	5/05/2019
IMG_20191210_100711.jpg	3i	N	Post-ex	As above	9/05/2019
IMG_20191210_100722.jpg	3i	S	Post-ex	As above	9/05/2019
IMG_20191212_143902.jpg	3i			General shot of construction	9/05/2019
IMG_20191212_143908.jpg	3i			General shot of construction	9/05/2019
IMG_20191212_143912.jpg	3i			General shot of construction	9/05/2019
IMG_20191212_144009.jpg	3i			General shot of construction	9/05/2019
IMG_20191212_144022.jpg	3i			General shot of construction	9/05/2019
IMG_20191212_144033.jpg	3i			General shot of construction	9/05/2019
IMG_20191212_144034.jpg	3i			General shot of construction	9/05/2019
20190508_104235.jpg	3ii	SW	Mid-ex	Working shot following removal of overburden	9/05/2019
20190508_112607.jpg	3ii	NE	Mid-ex	Working shot following removal of overburden	9/05/2019
20190508_112611.jpg	3ii	NE	Mid-ex	As above	10/05/2019
20190508_112613.jpg	3ii	NE	Mid-ex	As above	10/05/2019
20190508_131709.jpg	3ii	NE	Mid-ex	As above	10/05/2019
20190509_071245.jpg	3ii	SW	Post-ex	General shot showing compacted road surface and various services bisecting the area	10/05/2019
20190509_071254.jpg	3ii	SW	Post-ex	As above	10/05/2019
20190509_071257.jpg	3ii	SW	Post-ex	As above	10/05/2019
20190509_071329.jpg	3ii	N	Post-ex	Gravel feature (408) cut by service (406)	10/05/2019
20190509_071338.jpg	3ii	E	Post-ex	As above	10/05/2019
20190509_071349.jpg	3ii	N	Post-ex	As above	10/05/2019
20190509_071417.jpg	3ii	N	Post-ex	General shot showing wall (409) as first identified	10/05/2019
20190509_071445.jpg	3ii	N	Post-ex	As above	10/05/2019
20190509_071528.jpg	3ii	N	Post-ex	As above	10/05/2019
20190509_071536.jpg	3ii	N	Post-ex	As above	10/05/2019
20190509_071539.jpg	3ii	NE	Post-ex	General shot showing various services in eastern part of site	10/05/2019
20190509_134341.jpg	3ii		Mid-ex	Detailed shot following excavation of brickwork from wall (409)	13/05/2019

File Name	Area	Direction	Phase	Description	Date
20190510_140318.jpg	3ii	NE	Post-ex	Compacted natural sand deposit in eastern portion of trench bisected by modern service	13/05/2019
20190510_140329.jpg	3ii	NE	Post-ex	As above	13/05/2019
20190510_140346.jpg	3ii	N	Post-ex	As above	13/05/2019
20190510_140358.jpg	3ii	SW	Post-ex	General shot showing compacted natural sand and road repair deposits within the eastern portion of the site	13/05/2019
20190510_140438.jpg	3ii	SW	Post-ex	As above	13/05/2019
20190510_140445.jpg	3ii	SW	Post-ex	As above	13/05/2019
20190510_140503.jpg	3ii	SW	Post-ex	Same as above, in vicinity of previous test pit	13/05/2019
20190510_140505.jpg	3ii	SW	Post-ex	As above	13/05/2019
20190510_140508.jpg	3ii	SW	Post-ex	As above	13/05/2019
20190510_140530.jpg	3ii	NE	Post-ex	Same as above, showing various services	13/05/2019
20190510_140541.jpg	3ii	NE	Post-ex	As above	13/05/2019
20190510_140557.jpg	3ii	N	Post-ex	As above	13/05/2019
20190510_140602.jpg	3ii	N	Post-ex	As above	13/05/2019
20190510_140603.jpg	3ii	N	Post-ex	As above	13/05/2019
20190513_084557.jpg	3ii	N	Post-ex	General shot of wall (409) in poor state of preservation	13/05/2019
20190513_084558.jpg	3ii	N	Post-ex	As above	13/05/2019
20190513_084602.jpg	3ii	N	Post-ex	As above	13/05/2019
20190513_084606.jpg	3ii	N	Post-ex	As above	13/05/2019
20190513_084616.jpg	3ii	NW	Post-ex	As above	13/05/2019
20190513_084619.jpg	3ii	NW	Post-ex	As above	13/05/2019
20190513_084640.jpg	3ii	N	Post-ex	As above	13/05/2019
20190513_084711.jpg	3ii	N	Post-ex	As above	13/05/2019
20190513_084713.jpg	3ii	N	Post-ex	As above	13/05/2019
20190513_084723.jpg	3ii	E	Post-ex	As above	13/05/2019
20190513_084741.jpg	3ii	S	Post-ex	As above	13/05/2019
20190513_084809.jpg	3ii	N	Post-ex	As above	13/05/2019
20190513_084914.jpg	3ii	N	Post-ex	As above	13/05/2019
20190513_084916.jpg	3ii	N	Post-ex	As above	13/05/2019
20190513_084924.jpg	3ii	W	Post-ex	As above	13/05/2019
20190513_084927.jpg	3ii	W	Post-ex	As above	13/05/2019
20190513_084934.jpg	3ii	SW	Post-ex	As above	14/05/2019
20190513_084958.jpg	3ii	W	Post-ex	As above	14/05/2019
20190513_085000.jpg	3ii	W	Post-ex	As above	14/05/2019
20190513_141234(0).jpg	3ii	S	Post-ex	General shot following removal of gravel (408)	14/05/2019
20190513_141234.jpg	3ii	S	Post-ex	As above	14/05/2019
20190513_141237.jpg	3ii	S	Post-ex	As above	14/05/2019
20190513_141241.jpg	3ii	S	Post-ex	As above	14/05/2019

File Name	Area	Direction	Phase	Description	Date
20190513_141245.jpg	3ii	N	Post-ex	Detail of northern baulk showing compacted surface overlying natural	14/05/2019
20190513_141404.jpg	3ii	NE	Post-ex	Sondage through road repair deposit (414)	14/05/2019
20190513_141406.jpg	3ii	NE	Post-ex	As above	14/05/2019
20190513_141413.jpg	3ii	SE	Post-ex	As above	14/05/2019
20190513_141423.jpg	3ii	SE	Post-ex	As above	14/05/2019
20190513_141622.jpg	3ii	NE	Post-ex	Sondage through brick rubble deposit (413)	14/05/2019
20190513_141623.jpg	3ii	NE	Post-ex	As above	14/05/2019
20190513_141624.jpg	3ii	NE	Post-ex	As above	14/05/2019
20190514_071302.jpg	3ii	NE	Post-ex	General shot of site following completion of excavation	14/05/2019
20190514_071538.jpg	3ii	N	Post-ex	General shot of brick wall following removal of upper course of damaged bricks	14/05/2019
20190514_071541.jpg	3ii	N	Post-ex	As above	14/05/2019
20190514_071551.jpg	3ii	W	Post-ex	As above	14/05/2019
20190514_071558.jpg	3ii	W	Pre-ex	Initial identification of post hole (# TBC) below brick wall (409)	14/05/2019
20190514_073300.jpg	3ii	W	Post-ex	General shot following excavation of post hole [416]	14/05/2019
20190514_073302.jpg	3ii	W	Post-ex	As above	14/05/2019
20190514_083055.jpg	3ii	N	Post-ex	General shot following excavation of post hole [418]	14/05/2019
20190514_083100.jpg	3ii	N	Post-ex	As above	14/05/2019
20190514_083110.jpg	3ii	N	Post-ex	As above	14/05/2019
20200611_164703.jpg	4	W	Pre-ex	Initial view upon arriving at site for unexpected find	11/06/2020
20200612_091227.jpg	4	W	Mid-ex	Working shot during removal of overburden	12/06/2020
20200612_092130.jpg	4	W	Mid-ex	Working shot during removal of overburden	12/06/2020
20200612_092135.jpg	4	N	Mid-ex	Initial identification of wall from barrel drain	12/06/2020
20200612_092259.jpg	4	SW	Mid-ex	Working shot during removal of overburden	12/06/2020
20200612_133919.jpg	4	N	Mid-ex	Working shot following identification of both walls of the drain	12/06/2020
20200612_140026.jpg	4	N	Mid-ex	As above	12/06/2020
20200612_140029.jpg	4	N	Mid-ex	As above	12/06/2020
20200612_140031.jpg	4	N	Mid-ex	As above	12/06/2020
20200612_140039.jpg	4	W	Mid-ex	As above	12/06/2020
20200612_140043.jpg	4	S	Mid-ex	As above	12/06/2020
20200612_142026.jpg	4	E	Mid-ex	As above	12/06/2020
20200612_142031.jpg	4	E	Mid-ex	As above	12/06/2020
20200612_142150.jpg	4	SE	Mid-ex	As above	12/06/2020
20200612_142203.jpg	4	N	Post-ex	View of interior of drain filled with brick rubble and silty clay	12/06/2020
20200612_142233.jpg	4	N	Post-ex	As above	12/06/2020

File Name	Area	Direction	Phase	Description	Date
20200612_142236.jpg	4	N	Post-ex	As above	12/06/2020
20200612_142239.jpg	4	N	Post-ex	As above	12/06/2020
20200612_142245.jpg	4	N	Post-ex	As above	12/06/2020
20200612_142341.jpg	4	S	Post-ex	As above	12/06/2020
20200612_142343.jpg	4	S	Post-ex	As above	12/06/2020
20200612_142523.jpg	4	S	Post-ex	North facing section overlying drain	12/06/2020
20200612_142528.jpg	4	S	Post-ex	As above	12/06/2020
20200612_142530.jpg	4	S	Post-ex	As above	12/06/2020
20200612_142534.jpg	4	S	Post-ex	As above	12/06/2020
IMG_20200612_142035.jpg	4	E	Mid-ex	View across drain during excavation	12/06/2020
IMG_20200612_142121.jpg	4	E	Mid-ex	As above	12/06/2020
IMG_20200612_142126.jpg	4	E	Mid-ex	As above	12/06/2020
IMG_20200612_142148.jpg	4	NE	Mid-ex	Northern end of drain prior to removal of internal deposit	12/06/2020
IMG_20200612_142153.jpg	4	N	Mid-ex	As above	12/06/2020
IMG_20200612_142301.jpg	4	N	Mid-ex	As above	12/06/2020
IMG_20200612_142324.jpg	4	NE	Mid-ex	As above	12/06/2020
IMG_20200612_142346.jpg	4	NE	Mid-ex	As above	12/06/2020
IMG_20200612_144702.jpg	4	W	Mid-ex	Vicinity of the buttress prior to detailed cleaning	12/06/2020
IMG_20200612_144704.jpg	4	W	Mid-ex	As above	12/06/2020
resize 1.jpg	4	S	Mid-ex	Southern section prior to cleaning of interior	12/06/2020
20200615_154141.jpg	4	N	Mid-ex	Working shot showing curve of drain	15/06/2020
20200616_104634.jpg	4	S	Mid-ex	Working shot during excavation of drain	16/06/2020
20200616_104635.jpg	4	S	Mid-ex	As above	16/06/2020
20200616_105758.jpg	4	N	Mid-ex	As above	16/06/2020
20200616_105801.jpg	4	N	Mid-ex	As above	16/06/2020
20200616_105812.jpg	4	N	Mid-ex	As above	16/06/2020
20200616_105820.jpg	4	N	Mid-ex	As above	16/06/2020
20200616_105822.jpg	4	N	Mid-ex	As above	16/06/2020
20200616_142523.jpg	4	NE	Mid-ex	As above	16/06/2020
20200616_142606.jpg	4	NE	Mid-ex	As above	16/06/2020
20200616_151524.jpg	4	S	Mid-ex	As above	16/06/2020
20200616_151535.jpg	4	S	Mid-ex	As above	16/06/2020
20200616_151556.jpg	4	N	Post-ex	View along drain showing south facing section of interior fill	16/06/2020
20200616_151601.jpg	4	N	Post-ex	As above	16/06/2020
20200616_151606.jpg	4	N	Post-ex	As above	16/06/2020
20200616_151615.jpg	4	N	Post-ex	Detail of south facing section of interior of drain	16/06/2020
20200616_152400.jpg	4	N	Mid-ex	Working shot during cleaning of drain	16/06/2020
20200616_152701.jpg	4	N	Post-ex	View along drain showing south facing section of interior fill	16/06/2020

File Name	Area	Direction	Phase	Description	Date
20200617_102553.jpg	4	N	Mid-ex	Working shot during cleaning of drain	17/06/2020
20200617_103642.jpg	4	N	Mid-ex	As above	17/06/2020
20200617_103644 (1).jpg	4	N	Mid-ex	As above	17/06/2020
20200617_103644.jpg	4	N	Mid-ex	As above	17/06/2020
20200617_103647.jpg	4	N	Mid-ex	As above	17/06/2020
20200617_103649.jpg	4	N	Mid-ex	As above	17/06/2020
20200617_103651.jpg	4	N	Mid-ex	As above	17/06/2020
20200617_103659.jpg	4	NE	Mid-ex	As above	17/06/2020
20200617_103701.jpg	4	NE	Mid-ex	As above	17/06/2020
20200617_144703.jpg	4	W	Post-ex	View of Barrel Drain following excavation	17/06/2020
20200617_144706.jpg	4	W	Post-ex	As above	17/06/2020
20200617_144717.jpg	4	NW	Post-ex	As above	17/06/2020
20200617_144728.jpg	4	N	Post-ex	As above	17/06/2020
20200617_144734.jpg	4	N	Post-ex	As above	17/06/2020
20200617_144743.jpg	4	N	Post-ex	As above	17/06/2020
20200617_144756.jpg	4	NE	Post-ex	As above	17/06/2020
20200617_144806.jpg	4	E	Post-ex	As above	17/06/2020
20200617_144821.jpg	4	SE	Post-ex	As above	17/06/2020
20200617_144831.jpg	4	S	Post-ex	As above	17/06/2020
20200617_144837.jpg	4	S	Post-ex	As above	17/06/2020
20200617_144842.jpg	4	S	Post-ex	As above	17/06/2020
20200617_145054.jpg	4	S	Post-ex	As above	17/06/2020
20200617_145056.jpg	4	S	Post-ex	As above	17/06/2020
20200617_145225.jpg	4	S	Post-ex	Detail of north facing section showing infill of brick in drain	17/06/2020
20200617_145236.jpg	4	S	Post-ex	As above	17/06/2020
20200617_145240.jpg	4	S	Post-ex	As above	17/06/2020
20200617_145334.jpg	4	N	Post-ex	Interior of drain and south facing section	17/06/2020
20200617_145405.jpg	4	N	Post-ex	As above	17/06/2020
20200617_145407.jpg	4	N	Post-ex	As above	17/06/2020
20200617_145410.jpg	4	N	Post-ex	As above	17/06/2020
20200617_145454.jpg	4	E	Post-ex	General shot showing curvature of eastern wall	17/06/2020
20200617_145457.jpg	4	E	Post-ex	As above	17/06/2020
20200617_150010.jpg	4	S	Post-ex	North facing section showing redeposited sand overlying natural soil profile adjacent to drain	17/06/2020
20200617_150012.jpg	4	S	Post-ex	As above	17/06/2020
20200617_150115.jpg	4	W	Post-ex	Detail of bricks and buttress support adjacent to drain on eastern side	17/06/2020
20200617_150118.jpg	4	W	Post-ex	As above	17/06/2020

File Name	Area	Direction	Phase	Description	Date
20200617_150146.jpg	4	S	Post-ex	Overhead shot showing brick buttress keyed into main drain and loose bricks adjacent to drain	17/06/2020
20200617_150155.jpg	4	W	Post-ex	Wide angle shot showing keyed in buttress support	17/06/2020
20200617_150237.jpg	4	N	Post-ex	General shot of south facing section showing redeposited soil overlying natural soil profile	17/06/2020
20200617_150243.jpg	4	N	Post-ex	As above	17/06/2020
20200617_150248.jpg	4	N	Post-ex	As above	17/06/2020
20200617_150249.jpg	4	N	Post-ex	As above	17/06/2020
20200617_150308.jpg	4	E	Post-ex	Overhead view showing mortar remnants on brickwork	17/06/2020
IMG_20200603_230857.jpg		NE	Mid-Ex	Trenching works from eastern side of Bridge Street to western side at traffic lights immediately north of junction with Macquarie Street. Excavation in verge and under footpath	3/06/2020
IMG_20200603_230904.jpg		NE	Mid-Ex	As above	3/06/2020
IMG_20200603_231020.jpg		NW	Mid-Ex	As above	3/06/2020
IMG_20200603_231555.jpg			Mid-Ex	Example of large, unworked stone found in trench	3/06/2020
IMG_20200603_234117.jpg		SW	Mid-Ex	Excavation of trench through southbound lane	3/06/2020
IMG_20200603_234121.jpg		SW	Mid-Ex	As above	3/06/2020
IMG_20200603_234122.jpg		SW	Mid-Ex	As above	3/06/2020
IMG_20200603_234124.jpg		SW	Mid-Ex	As above	3/06/2020
IMG_20200603_234841.jpg		SW	Mid-Ex	As above	3/06/2020
IMG_20200604_002223.jpg		SW	Mid-Ex	Trench following completion of main excavation	4/06/2020
IMG_20200604_225708.jpg			Post-ex	Overhead shot showing sandstone rubble at depth of excavation in southbound lane along southern side of trench	4/06/2020
IMG_20200604_225712.jpg			Post-ex	As above	4/06/2020
IMG_20200604_225715.jpg			Post-ex	As above	4/06/2020
IMG_20200604_225720.jpg			Post-ex	As above	4/06/2020
IMG_20200604_225723.jpg			Post-ex	As above	4/06/2020
IMG_20200604_225727.jpg			Post-ex	As above	4/06/2020
IMG_20200604_225732.jpg			Post-ex	Overhead shot showing sandstone rubble at depth of excavation in southbound lane at eastern limit of excavation within road alignment	4/06/2020
IMG_20200604_225736.jpg			Post-ex	Overhead shot showing sandstone rubble at depth of excavation in southbound lane along northern side of trench	4/06/2020
IMG_20200604_225740.jpg			Post-ex	As above	4/06/2020
IMG_20200604_225743.jpg			Post-ex	As above	4/06/2020
IMG_20200604_225747.jpg			Post-ex	As above	4/06/2020
IMG_20200604_225750.jpg			Post-ex	As above	4/06/2020
IMG_20200604_232047.jpg		SW	Mid-Ex	Construction shot during excavation of trench through northbound lane	4/06/2020

File Name	Area	Direction	Phase	Description	Date
IMG_20200604_232049.jpg		SW	Mid-Ex	As above	4/06/2020
IMG_20200604_232120.jpg		SW	Mid-Ex	As above	4/06/2020
IMG_20200604_232125.jpg		SW	Mid-Ex	As above	4/06/2020
IMG_20200604_232217.jpg		SW	Mid-Ex	As above	4/06/2020
IMG_20200604_234828.jpg		SW	Mid-Ex	General shot at depth of excavation	4/06/2020
IMG_20200604_234926.jpg		SW	Mid-Ex	As above	4/06/2020
IMG_20200605_001609.jpg		NW	Post-ex	Trench at completion of excavation	5/06/2020
IMG_20200605_001615.jpg		NW	Post-ex	As above	5/06/2020
IMG_20200605_001621.jpg		NE	Post-ex	As above	5/06/2020
IMG_20200605_001624.jpg		NE	Post-ex	As above	5/06/2020
IMG_20200605_001638.jpg		N	Post-ex	As above	5/06/2020
IMG_20200605_001713.jpg		N	Post-ex	As above	5/06/2020
IMG_20200605_001726.jpg		N	Post-ex	As above	5/06/2020
IMG_20200605_001737.jpg		N	Post-ex	As above	5/06/2020
IMG_20200605_001809.jpg		N	Post-ex	As above	5/06/2020
IMG_20200605_001814.jpg		N	Post-ex	As above	5/06/2020
IMG_20200605_003100.jpg		N	Post-ex	Laying of cable in trench	5/06/2020
IMG_20200921_081614.jpg		E	Mid-Ex	Trenching and excavation works for a new lightpole in Thompson Square to the east of the Doctor's House. Sucker truck trench, with buried 20th century kerb and guttering present	21/09/2020
IMG_20200921_081617.jpg		E	Mid-Ex	As above	21/09/2020
IMG_20200921_081642.jpg		N	Mid-Ex	As above	21/09/2020
IMG_20200921_081645.jpg		N	Mid-Ex	As above	21/09/2020
IMG_20200921_081646.jpg		N	Mid-Ex	As above	21/09/2020
IMG_20200921_081719.jpg		E	Mid-Ex	Section and scale showing depth of kerb and gutter	21/09/2020
IMG_20200921_081721.jpg		E	Mid-Ex	As above	21/09/2020
IMG_20200921_082047.jpg		N	Post-ex	South facing section of sucker truck trench	21/09/2020
IMG_20200921_082051.jpg		N	Post-ex	As above	21/09/2020
IMG_20200921_082054.jpg		N	Post-ex	As above	21/09/2020
IMG_20200921_082059.jpg		N	Post-ex	As above	21/09/2020
IMG_20200921_082135.jpg		N	Post-ex	As above	21/09/2020
IMG_20200921_082147.jpg		N	Post-ex	As above	21/09/2020
IMG_20200921_082149.jpg		N	Post-ex	As above	21/09/2020
IMG_20200921_082225.jpg		N	Post-ex	As above	21/09/2020
IMG_20200921_082230.jpg		N	Post-ex	As above	21/09/2020
IMG_20200921_085432.jpg		W	Post-ex	Sucker truck trench at location of lightpole	21/09/2020
IMG_20200921_085435.jpg		W	Post-ex	As above	21/09/2020
IMG_20200921_085437.jpg		W	Post-ex	As above	21/09/2020
IMG_20200921_085447.jpg		E	Post-ex	As above	21/09/2020
IMG_20200921_085452.jpg		E	Post-ex	As above	21/09/2020
IMG_20200921_085500.jpg		E	Post-ex	As above	21/09/2020
IMG_20200921_085603.jpg		E	Post-ex	Sucker trench after backfilling	21/09/2020
IMG_20200921_085612.jpg		W	Post-ex	As above	21/09/2020

File Name	Area	Direction	Phase	Description	Date
IMG_20200921_085614.jpg		W	Post-ex	As above	21/09/2020
IMG_20200921_085624.jpg		N	Post-ex	As above	21/09/2020
IMG_20200921_091509.jpg		N	Mid-Ex	Excavation for subsurface cable showing topsoil	21/09/2020
IMG_20200921_091510.jpg		N	Mid-Ex	As above	21/09/2020
IMG_20200921_091558.jpg		N	Mid-Ex	Excavation showing bitumen/bluemetal layer below topsoil	21/09/2020
IMG_20200921_091710.jpg		N	Mid-Ex	As above	21/09/2020
IMG_20200921_091842.jpg		N	Mid-Ex	Natural soil profile appearing in trench	21/09/2020
IMG_20200921_092600.jpg		N	Mid-Ex	As above	21/09/2020
IMG_20200921_092653.jpg		N	Post-ex	Same as above at limit of excavation	21/09/2020
IMG_20200921_092719.jpg		S	Post-ex	As above	21/09/2020
IMG_20200921_093046.jpg		S	Post-ex	As above	21/09/2020
IMG_20200921_093238.jpg		SW	Post-ex	As above	21/09/2020
IMG_20200921_093243.jpg		SW	Post-ex	As above	21/09/2020
IMG_20200921_103856.jpg		NE	Mid-Ex	Lifting of concrete kerb and gutter	21/09/2020
IMG_20200921_104532.jpg		NE	Mid-Ex	General shot of area following lifting of concrete kerb and gutter	21/09/2020
IMG_20200921_113843.jpg		NE	Mid-Ex	Working shot during excavation of remainder of trench; note service crossing trench and in background	21/09/2020
IMG_20200921_124241.jpg		NW	Post-ex	Trench at completion of excavation	21/09/2020
IMG_20200921_124243.jpg		E	Post-ex	As above	21/09/2020
IMG_20200921_124313.jpg		E	Post-ex	As above	21/09/2020
IMG_20200921_124315.jpg		E	Post-ex	As above	21/09/2020
IMG_20200921_124317.jpg		NE	Post-ex	As above	21/09/2020
IMG_20200921_124319.jpg		E	Post-ex	As above	21/09/2020
IMG_20200921_124334.jpg		E	Post-ex	As above	21/09/2020
IMG_20200921_124335.jpg		E	Post-ex	As above	21/09/2020
IMG_20200921_124337.jpg		E	Post-ex	As above	21/09/2020
IMG_20200921_124422.jpg		SE	Post-ex	As above	21/09/2020
IMG_20200921_124428.jpg		E	Post-ex	As above	21/09/2020
IMG_20200921_124429.jpg		NE	Post-ex	As above	21/09/2020
20190828_002754.jpg		S	Post-ex	Nightworks trenching along the western side of Bridge Street between George Street and Macquarie Street and in the footpath on the SW corner of Bridge Street and George Street. Section of Telford paving present below current road surface outside 68 George Street	28/08/2019
20190828_002805.jpg		S	Post-ex	As above	28/08/2019
20190828_002807.jpg		S	Post-ex	As above	28/08/2019
20190828_002823.jpg		N	Post-ex	As above	28/08/2019
20190828_002831.jpg		N	Post-ex	As above	28/08/2019
20190828_002900.jpg		W	Post-ex	As above	28/08/2019
20190828_002905.jpg		W	Post-ex	As above	28/08/2019
20190828_005226.jpg		S	Post-ex	Limit of excavation	28/08/2019
20190828_005232.jpg		S	Post-ex	As above	28/08/2019

File Name	Area	Direction	Phase	Description	Date
20190828_005242.jpg		N	Post-ex	As above	28/08/2019
20190828_005256.jpg		W	Post-ex	As above	28/08/2019
20190828_011928.jpg		SW	Mid-Ex	General shot following removal of pavers and underlying sand within footpath at George Street and Bridge Street	28/08/2019
20190828_011945.jpg		SW	Mid-Ex	As above	28/08/2019
20190828_013410.jpg		S	Post-ex	Section of Telford paving identified below footpath	28/08/2019
20190828_013418.jpg		S	Post-ex	As above	28/08/2019
20190828_013430.jpg		E	Post-ex	As above	28/08/2019
20190828_013716.jpg		S	Mid-Ex	General shot during excavation through paving	28/08/2019
20190828_020804.jpg		E	Post-ex	Excavation at completion of works	28/08/2019
20190828_020807.jpg		E	Post-ex	As above	28/08/2019
20190828_020810.jpg		E	Post-ex	As above	28/08/2019
				Grading works along George Street to the west of the intersection with Bridge Street	
20201111_212051.jpg		SE	Mid-Ex	Grading works along George Street to the west of the intersection with Bridge Street. Road following initial pass with the grading machine	11/11/2020
20201111_212053.jpg		S	Mid-Ex	As above	11/11/2020
20201111_214547.jpg		NE	Mid-Ex	General shot during grading works	11/11/2020
20201111_214548.jpg		NE	Mid-Ex	As above	11/11/2020
20201111_214603.jpg		NW	Mid-Ex	As above	11/11/2020
20201111_214618.jpg		NW	Mid-Ex	As above	11/11/2020
20201111_214619.jpg		NW	Mid-Ex	As above	11/11/2020
20201111_214626.jpg		NW	Mid-Ex	As above	11/11/2020
20201111_215424.jpg		NE	Mid-Ex	As above	11/11/2020
20201111_215433.jpg		NE	Mid-Ex	As above	11/11/2020
20201111_215434.jpg		NE	Mid-Ex	As above	11/11/2020
20201111_215548.jpg			Post-ex	Detailed shot of road surface at completion of grading	11/11/2020
20201111_215553.jpg			Post-ex	As above	11/11/2020
20201111_215558.jpg			Post-ex	As above	11/11/2020
20201111_215617.jpg		NW	Mid-Ex	General construction shot during grading near kerb	11/11/2020
20201111_215619.jpg		NW	Mid-Ex	As above	11/11/2020
20201111_220605.jpg		N	Mid-Ex	As above	11/11/2020
20201111_220608.jpg		NW	Mid-Ex	As above	11/11/2020
20201111_220610.jpg		NW	Mid-Ex	General construction shot	11/11/2020
20201111_221108.jpg		SE	Post-ex	As above	11/11/2020
20201111_221110.jpg		SE	Post-ex	As above	11/11/2020
20201111_221112.jpg		SE	Post-ex	As above	11/11/2020
20201111_221125.jpg		NE	Post-ex	As above	11/11/2020
20201111_221132.jpg		NE	Post-ex	As above	11/11/2020
20201111_221137.jpg		NE	Post-ex	As above	11/11/2020

File Name	Area	Direction	Phase	Description	Date
20201111_221142.jpg		NE	Post-ex	Detailed shot showing cobblestones present near gutter of Thompson Square/the Terrace and Bridge Street	11/11/2020
20201111_221146.jpg		N	Post-ex	General construction shot	11/11/2020
20201111_221148.jpg		NE	Post-ex	As above	11/11/2020
20201111_221150.jpg		NE	Post-ex	As above	11/11/2020
20201111_221154.jpg		SE	Post-ex	As above	11/11/2020
20201111_221204.jpg		N	Post-ex	As above	11/11/2020
20201111_221206.jpg		NW	Post-ex	As above	11/11/2020
20201111_221208.jpg		N	Post-ex	As above	11/11/2020
20201111_221211.jpg		NE	Post-ex	As above	11/11/2020
20201111_221342.jpg		NE	Post-ex	As above	11/11/2020
20201111_221350.jpg		NE	Post-ex	Detailed shot showing natural soil profile lying below asphalt	11/11/2020
20201111_224744.jpg		NW	Post-ex	General construction shot	11/11/2020
20201111_224746.jpg		NW	Post-ex	As above	11/11/2020
20201111_224811.jpg		W	Post-ex	As above	11/11/2020
20201111_224815.jpg		NW	Post-ex	As above	11/11/2020
20201111_224816.jpg		NE	Post-ex	As above	11/11/2020
20201111_224818.jpg		NE	Post-ex	As above	11/11/2020
20201111_224828.jpg		SW	Post-ex	As above	11/11/2020
20201111_224831.jpg		NW	Post-ex	As above	11/11/2020
20201111_224841.jpg		NE	Post-ex	As above	11/11/2020
20201111_224843.jpg		NE	Post-ex	As above	11/11/2020
20201111_224846.jpg		E	Post-ex	As above	11/11/2020
20201111_224857.jpg		NW	Post-ex	As above	11/11/2020
20201111_224901.jpg		NW	Post-ex	As above	11/11/2020
20201111_224904.jpg		N	Post-ex	As above	11/11/2020
20201111_224908.jpg		NE	Post-ex	As above	11/11/2020
20201111_224911.jpg		N	Post-ex	As above	11/11/2020
20201111_224914.jpg		NE	Post-ex	As above	11/11/2020
20201111_224916.jpg		E	Post-ex	As above	11/11/2020
20201111_224918.jpg		SE	Post-ex	As above	11/11/2020
20201111_224955.jpg		NE	Post-ex	As above	11/11/2020
20201111_225001.jpg		SW	Post-ex	As above	11/11/2020
20201111_225003.jpg		S	Post-ex	As above	11/11/2020
20201111_225334.jpg		NE	Post-ex	As above	11/11/2020
20201111_225336.jpg		NE	Post-ex	As above	11/11/2020
20201111_225337.jpg		NE	Post-ex	As above	11/11/2020
20201111_225340.jpg		E	Post-ex	As above	11/11/2020
20201111_225342.jpg		NE	Post-ex	As above	11/11/2020
				General shots taken around site during various inspections which now document various aspects of the site	
20190904_090253.jpg		NW	Mid-Ex	. Trenching in footpath at location of Telford paving	4/09/2019

File Name	Area	Direction	Phase	Description	Date
20190904_090259.jpg		NW	Mid-Ex	As above	4/09/2019
20190904_090303.jpg		SE	Mid-Ex	Installation of services in vicinity of Telford paving location	4/09/2019
20190904_090455.jpg		SE	Mid-Ex	Reinstatement of footpath following earlier nightworks	4/09/2019
20190904_090504.jpg		NW	Mid-Ex	As above	4/09/2019
20191028_081243.jpg		NW		Underneath of new bridge	28/10/2019
20191028_083111.jpg		NW		General shot during construction of new bridge	28/10/2019
20191028_083316.jpg		NW		As above	28/10/2019
20191028_083345.jpg		NW		As above	28/10/2019
20191106_111528.jpg		SE	Mid-Ex	Following construction on corner of Bridge Street and George Street	6/11/2019
20191106_111537.jpg		E	Mid-Ex	As above	6/11/2019
20191106_111631.jpg		E	Mid-Ex	View towards School of Art building during construction	6/11/2019
20191106_111637.jpg		E	Mid-Ex	As above	6/11/2019
20191106_111719.jpg		SW	Mid-Ex	Following construction on corner of Bridge Street and George Street	6/11/2019
20200520_101900.jpg		NW		View of new bridge	20/05/2020
20200520_101918.jpg		NW		As above	20/05/2020
20200520_101923.jpg		NW		View down western side of new bridge	20/05/2020
20200520_101924.jpg		NW		As above	20/05/2020
20200520_102058.jpg		SE		As above	20/05/2020
20200520_102431.jpg		NW		View over old bridge	20/05/2020
20200520_102432.jpg		NW		As above	20/05/2020
20200520_102942.jpg		NW		View from northern bank of new bridge	20/05/2020
20200520_102948.jpg		E		General shot of landscaping on northern side of bridge	20/05/2020
20200520_103004.jpg		W		View back towards new bridge	20/05/2020
20200520_103022.jpg		S		General shot of landscaping on northern side of bridge	20/05/2020
20200522_142226.jpg		NE	Mid-Ex	Potential unexpected find (was related to construction of concrete for earlier bridge)	22/05/2020
20200522_142744.jpg		NE	Mid-Ex	General context shot for unexpected find	22/05/2020
20200522_142747.jpg		N	Mid-Ex	As above	22/05/2020
20200304_122427.jpg		SE	Mid-Ex	Excavation of large wall identified below The Terrace to the west of the old bridge. General shot during excavation adjacent to the wall	4/03/2020
20200304_122557.jpg		SE	Mid-Ex	As above	4/03/2020
20200304_122620.jpg		NE	Mid-Ex	As above	4/03/2020
20200309_114723.jpg		NE	Post-ex	View along wall	9/03/2020
20200309_114730.jpg		E	Post-ex	As above	9/03/2020
20200309_114733.jpg		E	Post-ex	As above	9/03/2020
20200309_114739.jpg		E	Post-ex	As above	9/03/2020
20200309_114838.jpg		N	Post-ex	Western termination of wall	9/03/2020
20200309_114854.jpg		N	Post-ex	As above	9/03/2020

File Name	Area	Direction	Phase	Description	Date
20200309_114859.jpg		Various	Post-ex	General shots for photogrammetry model	9/03/2020
20200309_114919.jpg		Various	Post-ex	As above	9/03/2020
20200309_114922.jpg		Various	Post-ex	As above	9/03/2020
20200309_114926.jpg		Various	Post-ex	As above	9/03/2020
20200309_114929.jpg		Various	Post-ex	As above	9/03/2020
20200309_114932.jpg		Various	Post-ex	As above	9/03/2020
20200309_114937.jpg		Various	Post-ex	As above	9/03/2020
20200309_114943.jpg		Various	Post-ex	As above	9/03/2020
20200309_114947.jpg		Various	Post-ex	As above	9/03/2020
20200309_114953.jpg		Various	Post-ex	As above	9/03/2020
20200309_114958.jpg		Various	Post-ex	As above	9/03/2020
20200309_115004.jpg		Various	Post-ex	As above	9/03/2020
20200309_115014.jpg		Various	Post-ex	As above	9/03/2020
20200309_115018.jpg		Various	Post-ex	As above	9/03/2020
20200309_115036.jpg		Various	Post-ex	As above	9/03/2020
20200309_115039.jpg		Various	Post-ex	As above	9/03/2020
20200309_115041.jpg		Various	Post-ex	As above	9/03/2020
20200309_115043.jpg		Various	Post-ex	As above	9/03/2020
20200309_115046.jpg		Various	Post-ex	As above	9/03/2020
20200309_115050.jpg		Various	Post-ex	As above	9/03/2020
20200309_115053.jpg		Various	Post-ex	As above	9/03/2020
20200309_115056.jpg		Various	Post-ex	As above	9/03/2020
20200309_115100.jpg		Various	Post-ex	As above	9/03/2020
20200309_115103.jpg		Various	Post-ex	As above	9/03/2020
20200309_115106.jpg		Various	Post-ex	As above	9/03/2020
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20200309_115208.jpg		Various	Post-ex	As above	9/03/2020
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20200309_115228.jpg		Various	Post-ex	As above	9/03/2020
20200309_115234.jpg		Various	Post-ex	As above	9/03/2020
20200309_115237.jpg		Various	Post-ex	As above	9/03/2020
20200309_115246.jpg		Various	Post-ex	As above	9/03/2020
20200309_115313.jpg		Various	Post-ex	As above	9/03/2020
20200309_115317.jpg		Various	Post-ex	As above	9/03/2020
20200309_115348.jpg		W	Post-ex	Detail of metal pin in the wall	9/03/2020
20200309_115401.jpg		W	Post-ex	Detail of hole likely missing metal pin	9/03/2020
20200309_115414.jpg		W	Post-ex	Detail of corroded metal pin in the wall	9/03/2020
20200309_115451.jpg		N	Post-ex	Detail of concretion against the southern side of the wall	9/03/2020
20200309_115637.jpg		SW	Post-ex	Overview of wall	9/03/2020

File Name	Area	Direction	Phase	Description	Date
20200309_115639.jpg		SW	Post-ex	As above	9/03/2020
20200309_115734.jpg		S	Post-ex	Detail of wall showing general mortarwork	9/03/2020
20200309_115738.jpg		S	Post-ex	As above	9/03/2020
20200309_133945.jpg		NE	Post-ex	Working shot showing continuation of wall	9/03/2020

APPENDIX 3. CONTEXT SCHEDULE

Context	Area	Description
1401	1A	Top soil
1402	1A	Mixed fill with sporadic SS bricks and river stone
1403	1A	Cut of posthole
1404	1A	Fill of posthole (1403)
1405	1A	Cut of posthole
1406	1A	Fill of posthole (1405)
1407	1A	Concrete pad, western ridge, south of manhole
1408	1A	Creamy sand deposit, western ridge
1409	1A	VOID - See 1408
1410	1A	Ashy sand deposit, western ridge
1411	1A	Mottled grey white sand deposit, west ridge
1412	1A	Red brown sand deposit, west ridge 1930
1413	1A	Cut of pit, western ridge
1414	1A	Fill of pit (1413)
1415	1A	Natural sand - AW's sand
1416	1A	Cut of pit, western ridge
1417	1A	Fill of pit (1416)
1418	1A	Mid brown sandy deposit, west ridge
1419	1A	VOID - See 1408
1420	1A	VOID - See 1427
1421	1A	Pit cut, western ridge
1422	1A	Pit fill of 1421
1423	1A	Pit cut, western ridge
1424	1A	Fill of pit 1423
1425	1A	Posthole cut
1426	1A	VOID - See 1425
1427	1A	Box drain 2 continued western ridge fill
1428	1A	Box drain 2 continued western ridge structure (shaft)
1429	1A	Box drain 2, western ridge rubble
1430	1A	Post hole cut A1, western ridge
1431	1A	Post pipe + fill of western ridge
1432	1A	Pale grey sand western ridge
1433	1A	Second fill of pit (1421)
1434	1A	Pit cut, A1, western ridge
1435	1A	Fill of pit 1434, A1 western ridge
1436	1A	Pit cut, A1 west ridge
1437	1A	Pit fill (1436) (Unexcavated)
1438	1A	Post pipe in 1437
1439	1A	Pit cut, posthole, A1, west ridge
1440	1A	Fill of 1439, A1, west ridge
1441	1A	Post pipe in 1440 west ridge
1442	1A	Cut in west section drain 1428
1443	1A	Fill of 1442

Context	Area	Description
1444	1A	Cut for drain 1428 + fill 1427
1445	1A	Cut west end drain 1428
1446	1A	Fill of 1445
1447	1A	Pit cut, A1, west ridge
1448	1A	Pit fill of 1447, A1, west ridge
1449	1A	Top of box drain, west of shaft
1450	1A	Cut for western box drain 2
1451	1A	Fill of cut 1450 (external to 1449 walls)
1452	1A	Deposit contained by 1449
1453	1A	Deposit yellow sandstone contained by 1449
1454	1A	Mottled deposit, contained by 1449
1455	1A	Compact at base of 1449
1456	1A	Dark deposit in Indigenous pit
1457	1A	Dark deposit west ridge around road-marker
1458	1A	Road marker west ridge
1459	1A	VOID
1460	1A	Pit cut
1461	1A	Fill of 1460, A1, West ridge
1462	1A	Pit cut
1463	1A	Fill of 1462, A1, west ridge
1464	1A	Pit cut
1465	1A	Fill of 1464
1466	1A	N Box drain
1467	1A	Cut of 1466
1468	1A	VOID- See 1475- 1476
1469	1A	VOID- See 1475- 1476
1470	1A	Box drain timbers and fill
1471	1A	Redeposited natural over (1466)
1472	1A	Test trench
1473	1A	Pit cut
1474	1A	Fill of 1473, A1, west ridge
1475	1A	Pit cut
1476	1A	Fill of 1475, A1, West ridge
1477	1A	Post hole cut
1478	1A	Post hole fill
1479	1A	Post pipe/ post pipe in pit
1480	1A	Box drain 3 shaft
1481	1A	Box drain 3 east of shaft
1482	1A	Cut of post hole
1483	1A	Fill of 1482
1484	1A	Post pipe of 1482
1485	1A	Silt deposit above brick base, Box Drain 3
1486	1A	Compact deposit at base of BD 3

Context	Area	Description
1487	1A	Roughly rectangular deposit - cut west ridge south
1488	1A	Roughly rectangular deposit - fill west ridge south
1489	1A	Section with box drain 1 + relationships
1490	1A	Post hole cut A1 west ridge south
1491	1A	Post hole fill A1 west ridge south
1492	1A	Post hole fill A1 west ridge south
1493	1A	Post hole cut A1 west ridge north of oviform drain
1494	1A	Post pipe in 1493
1495	1A	Loose brick fill packing in 1493
1496	1A	Dense packing around post pipe 1494
1497	1A	Cobble fill of brick oviform drain
1498	1A	Oviform drain (structure)
1499	1A	Post hole within box drain 1
1500	1A	Post hole fill within box drain 1
1501	1A	Box drain 1 north base
1502	1A	Box drain 1 southern extent
1503	1A	Box drain 1 southern extent fill
1504	1A	Box drain 1 northern extent
1505	1A	Box drain 1 northern extent fill
1506	1A	Box drain south east of salvage area
1507	1A	Fill within 1506
1508	1A	Road base above 1506
1509	1A	Concrete above 1500, below 1508
1510	1A	Concrete beams
1511	1A	Cut for concrete base
1512	1A	Concrete base
1513	1A	Packing in cut 1511
1514	1A	Machine bed
1515	1A	Concrete and crushed brick channel
1516	1A	Cap stone
1517	1A	Angled pipe cut
1518	1A	Black timber (?) feature
1519	1A	post hole cut north west cover of concrete base
1520	1A	Post packing of 1519
1521	1A	Post hole cut centre north side of concrete base
1522	1A	Post pipe in 1521
1523	1A	Post pipe in 1521
1524	1A	Circular feature on southern side of concrete base
1525	1A	Mottled black rectangular feature east of 1512
1526	1A	Rectangular cut in south east corner of 1522
1527	1A	Loose fill of cut 1526
1528	1A	Pipe cut in concrete base (southern side)
1529	1A	Dark feature west of concrete base

Context	Area	Description
1530	1A	North bank natural
1531	1A	Cut for large black under capping stone
1532	1A	Large stone in 1531
1533	1A	Compact black brown fill in brick channel
1534	1A	Asphalt surface area 2 (old bridge st)
1535	1A	Crushed sandstone road bed area 2
1536	1A	Red sand area 2 (fill)
1537	1A	Grey clay area 2
1538	1A	Asphalt surface lower car park
1539	1A	Pink crushed sand stone
1540	1A	Buff clay and gravel (row stone)
1541	1A	Laminated silts brown and buff
1542	1A	Red brown and clay silt + round pebbles
1543	1A	Road base of gutter 1544
1544	1A	Concrete gutter lower carpark
1545	1A	Wooden plank (spacer) btw rails west
1546	1A	Timber log parallel to oviform drain
1547	1A	Timber log 2 in section
1548	1A	East spacer wood btw concrete 1510
1549	1A	Silty contents/fill of 1546
1550	1A	VOID
1551	1A	Timber section, red sand
1552	1A	Timber section, silty grey sand
1553	1A	Timber section, backfill
1554	1A	Timber section, silt deposits
1555	1A	Timber section, brown sand
1556	1A	Timber section, grey sand
1557	1A	Timber section, mixed sand
1558	1A	Timber section, brown/grey sandy silt
1559	1A	Timber section, white grey clay
1560	1A	Timber section, dark brown sandy silt
1561	1A	Timber section, loose natural sand
1562	1A	Timber section, compact sand
1563	1A	Fill of log (1547)
1564	1A	VOID
1565	1A	VOID
1566	1A	VOID
1567	1A	Section east carpark - top soil
1568	1A	Section east carpark - dark silty sand
1569	1A	Section east carpark - orange/grey clay
1570	1A	Section east carpark - natural sand
1571	1A	Section east carpark - sand
1572	1A	Section east carpark - light silty grey sand

Context	Area	Description
1573	1A	Section east carpark - gravel
1574	1A	Section east carpark - mid brown soil
1575	1A	Section east carpark - light/mid grey silty soil
1576	1A	Section east carpark - light sand
1577	1A	Section east carpark - dark grey/brown sand
1578	1A	Section east carpark - light sand
1579	1A	Section east carpark - mid orange sand
1580	1A	Section east carpark - mid/dark silty sand
1581	1A	Section east carpark - sand/soil granules
1582	1A	Section east carpark - mid orange/red clay/sand
1583	1A	Section east carpark - lens of 1592 + 1568
1584	1A	Section east carpark - sandstone
1585	1A	East of carpark north - top soil
1586	1A	East of carpark north - gravel
1587	1A	East of carpark north - mid orange/red clay/sand
1588	1A	East of carpark north - light grey silty soil with stone
1589	1A	East of carpark north - light grey silty soil
1590	1A	Rubbish dump - near drain 3 - east
1591	1A	Yellow brown soil in 1593
1592	1A	Gravel fill within 1593 and below 1591
1593	1A	Cut of a feature (garden bed)
1594	1A	Natural pinkish red sand
1595	1A	Timber remnant (west) east car park
1596	1A	Timber remnant (east) east car park
1597	1A	Timber remnant (west of 1595) east car park
1598	1A	Cut of pit adjacent to asbestos pipes
1599	1A	Fill of 1598
1600	1A	Fill of asbestos cut
1601	1A	Brown silty gravel east of carpark
1602	1A	Yellow silty gravel east of carpark
1603	1A	Laminated silts east of carpark
1604	1A	Pit cut, A1
1605	1A	Pit fill of 1604
1606	1A	Pit cut, A1
1607	1A	Pit fill of 1606
1608	1A	Timber log in drawing no. 27 a/b
1609	1A	Timber log in drawing no. 33a
1610	1A	Timber log in drawing no. 33a
1611	1A	Timber beam - north bank
1612	1A	Timber remnant west ridge
1613	1A	Soil grey fine sand inside 1612
1614	1A	Cut for concrete sewer line
1615	1A	Fill of 1614

Context	Area	Description
1616	1A	Concrete sewer line runs e/w across site
1617	1A	Loam deposit east side (4 bridges)
1618	1A	Grey sands (fine) west ridge
1619	1A	Red comfor sand west ridge
1620	1A	Terrace wall deposit
2101	2ii	Fill over rubble (sheet missing - damaged by flood)
2102	2ii	Cobbles in centre of trench
2103	2ii	Cobble + brick to SW
2104	2ii	Sand below (2102)
2105	2ii	Sand across site area
2106	2ii	Sandstone (bedrock?) base
2107	2ii	Sand below (2103)
2108	2ii	sand below (2105) sondage
2201	2i	Sheet missing - damaged by flood
2202	2i	Sheet missing - damaged by flood
2203	2i	Sheet missing - damaged by flood
2204	2i	Sheet missing - damaged by flood
2205	2i	Current road surface
2206	2i	Road base and plastic pipe
2207	2i	Orangey yellow clay
2208	2i	Red brown clayey sand
2209	2i	Dense sand, gravel fill
2210	2i	cut for traffic lights (2209)
2211	2i	Redeposited red brown sandy clay
2212	2i	Cut for service trench (2211)
2213	2i	Dark grey red silty sand
2214	2i	Redeposited pale grey red sand
2215	2i	Redeposited pale grey red sand
2216	2i	Concrete base for sign
2217	2i	Cut for sign (2216)
2218	2i	Topsoil
2219	2i	Medium grained sand lens
2220	2i	Fine dark grey clayey sand
2221	2i	Coarse grey sand + well sorted gravel
2222	2i	Cut for early power pole (2223)
2223	2i	Mixed fill, many inclusions in cut (2222)
2224	2i	Demolition fill, shell mortar
2225	2i	Fine silty sand with dense charcoal
2226	2i	Cut for unknown reason (2227)
2227	2i	Silty sand with red brick frags
2228	2i	Sandstone block
2229	2i	Orangey clayey sand
2230	2i	Orangey medium grained sand

Context	Area	Description
2231	2i	Coarse grey sand
2232	2i	Coarse grey brown sand
2233	2i	Medium grain dark grey sand
2234	2i	Bricks laid 2 parrallel rows (drain)
2235	2i	Fill between brick rows
2236	2i	Orangey clay
2237	2i	Topsoil
2238	2i	VOID - same as (2206)
2239	2i	VOID - same as (2205)
2240	2i	Bricks forming box drain
2241	2i	Fill in cut for box drain
2242	2i	Cut for box drain
2243	2i	Traffic island major disturbance
2244	2i	Cut for traffic island
2501	2i	Soft, brown sand deposit above shelf - mortar deposit in eastern edge of the site - adjacent to 4 old Bridge St.
2502	2i	Natural clay below 2501
2503	2i	Shell mortar deposit below 2501
2504	2i	Cut for service west of 2503
2505	2i	Fill for cut (2504)
2506	2i	Loose, brown sand with brick fragments below 2503
5022	2i	Bedding layer for concrete path
5023	2i	Concrete layer, former path?
5024	2i	Coarse sand bedding for concrete (5023)
5025	2i	Brick paving forming present path
5026	2i	Compact light brown soil possible occupation layer
5027	2i	Dark brown clayey silt deposit
5028	2i	Similar deposit to (5027) but containing fragments of brick and mortar
5029	2i	Dark brown silt with charcoal fragments
5030	2i	Potential brick wall
5031	2i	Cut for brick wall
300	3i	Asphalt of George St
301	3i	Blue metal road base
302	3i	Fill of modern service (303)
303	3i	Cut of modern service (302)
304	3i	Red cobbed surface
305	3i	Road surface
306	3i	Grey packing into road surface
307	3i	Grey packing with brick rubble
308	3i	Pale sand under 306
309	3i	Mottled deposit east of brick feature
310 - 315 + 319	3i	Brick wall
310	3i	Intact wall

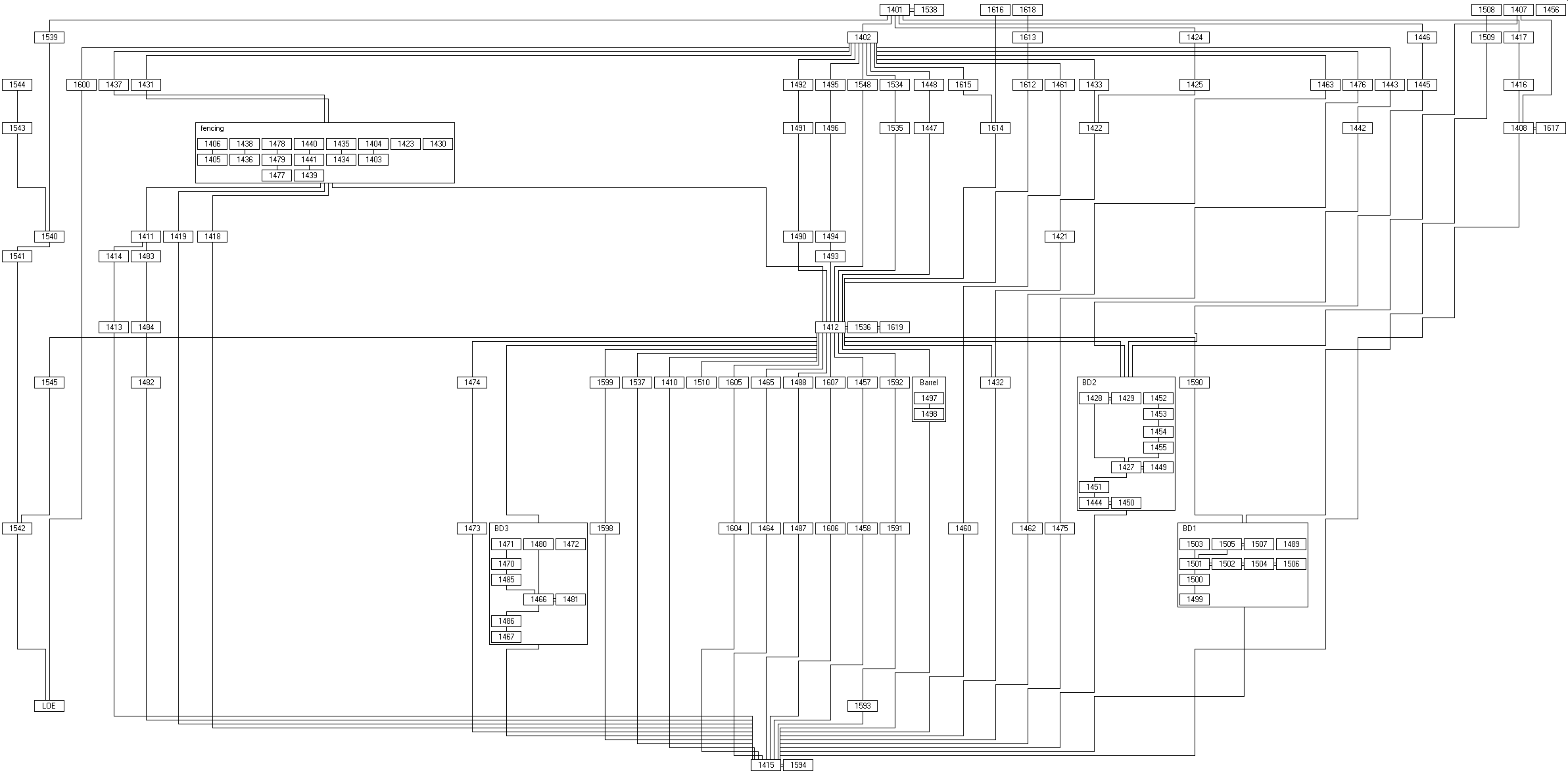
Context	Area	Description
311	3i	Broken bricks
312	3i	Mortar and broken brick
313	3i	Fill on eastern wall - cut 314
314	3i	Cut on eastern wall - fill 313
315	3i	Former road surface
316	3i	Fill of modern utility - cut 317
317	3i	Cut of modern utility - fill 316 + 318
318	3i	Packing of modern utility
319	3i	Sandy mortar bonding wall
320	3i	Red sand with brick cobbles
321	3i	Mottled clayey sand
322	3i	Yellow sand around modern utility
323	3i	Yellow brown sand with charcoal fragments
324	3i	Mottled pink grey surface
325	3i	Pale green-yellow clay
326	3i	Fine grained charcoal deposit
327	3i	Charcoal, brick and ash deposit
328	3i	Mottled clay and charcoal fragments
329	3i	Red sand
330	3i	Brick and cobble patch
331	3i	Natural sand
332	3i	Redeposited natural around brick wall
333	3i	Cut - post hole
334	3i	Fill - post hole
335	3i	Surface deposit and light - mid brown sand
336	3i	Mottled dark deposit
337	3i	Burnt deposit
338	3i	Light - mid grey sand
339	3i	Light - mid yellow orange clay
340	3i	Mottled ash/burnt deposit + brick fragments
341	3i	Light- mid ashy sand
342	3i	Mid brown/grey sandy
343	3i	Fill - post hole 344
344	3i	Cut - post hole 343
345	3i	Post pipe - post hole 343 + 344
346	3i	Post hole cut - 347
347	3i	Post hole fill - 346
348	3i	Post pipe in post hole - 347 346
349	3i	Post hole cut - 350
350	3i	Post hole fill - 351
351	3i	Cut for 337
352	3i	Mixed deposit under clay capping
353	3i	Rectangular deposit cut

Context	Area	Description
354	3i	Rectangular deposit fill
355	3i	Yellow mottled clay cut
356	3i	Yellow mottled clay fill
357	3i	Service trench - potential water pipe
358	3i	Irregular deposit - grey silty sand and lime
359	3i	See 373
360	3i	Service trench
361	3i	Service trench
362	3i	Service trench
363	3i	Light-mid grey silty sand deposit
364	3i	Charcoal deposit
365	3i	Modern electrical trench
366	3i	See 359
367	3i	Rectangular feature fill
368	3i	Rectangular feature cut
369	3i	Service trench
370	3i	Charcoal deposits
371	3i	VOID
372	3i	VOID
373	3i	Mottled charcoal and brick deposit
374	3i	Mid brown/grey sandy loamy sand deposit
375	3i	Brown sandy silt deposit
376	3i	Mid brown deposit with brick
377	3i	Light grey sand deposit
378	3i	Mottled brown/grey deposit
379	3i	Service trench
380	3i	Mottled brown/grey deposit
381	3i	Bore hole cut
382	3i	Bore hole fill
383	3i	Service trench cut - see 379
384	3i	Service trench fill - see 379
385	3i	Service trench cut
386	3i	Service trench fill
400	3ii	Asphalt of George St = 300
401	3ii	Blue metal road base = 301
402	3ii	Red cobbled surface = 304
403	3ii	Fill of cut 404
404	3ii	Cut of service running along George St
405	3ii	Fill of cut 406
406	3ii	Early cut running diagonally across
407	3ii	Fill of sub-square cut 408
408	3ii	Sub square cut impacted by 406
409	3ii	Wall = 310

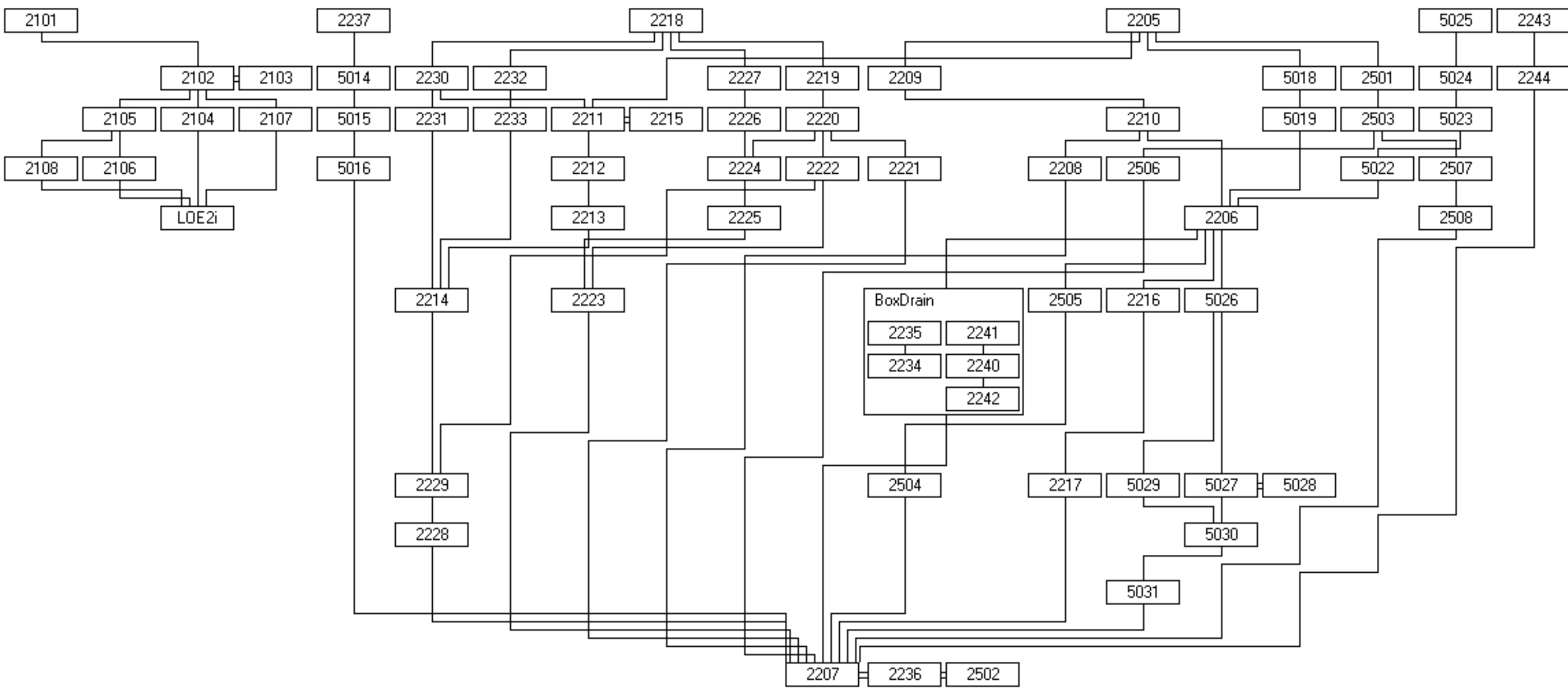
Context	Area	Description
410	3ii	Fill of wall cut
411	3ii	Square cut of wall
412	3ii	Burnt cinder over service 406
413	3ii	Broken brick surface
414	3ii	Grey fill with bricks
5001	3ii	Topsoil in pavement area
5002	3ii	Red brown clay fill
5003	3ii	Potential occupation layer below (5002)
5004	3ii	Cut of posthole against fence
5005	3ii	Fill of [5004]
5006	3ii	Cut of second posthole hard against fence
5007	3ii	Fill of posthole [5006]
5008	3ii	Cut of modern HV service
5009	3ii	Fill of service trench [5008]
5010	3ii	Cut of modern telecom line
5011	3ii	Fill of service [5010]
5012	3ii	Pipe within service [5010]
5013	3ii	Potential redeposit from adjacent services
5014	3ii	Orange brown clay potentially similar to (5002)
5015	3ii	Cut of vitreous ceramic service (5017)
5016	3ii	Fill of cut [5015]
5017	3ii	Vitreous ceramic stormwater pipe within cut [5015]
5018	3ii	Cut for traffic signal pit
5019	3ii	Fill of cut [5019]

APPENDIX 4. HARRIS MATRICES

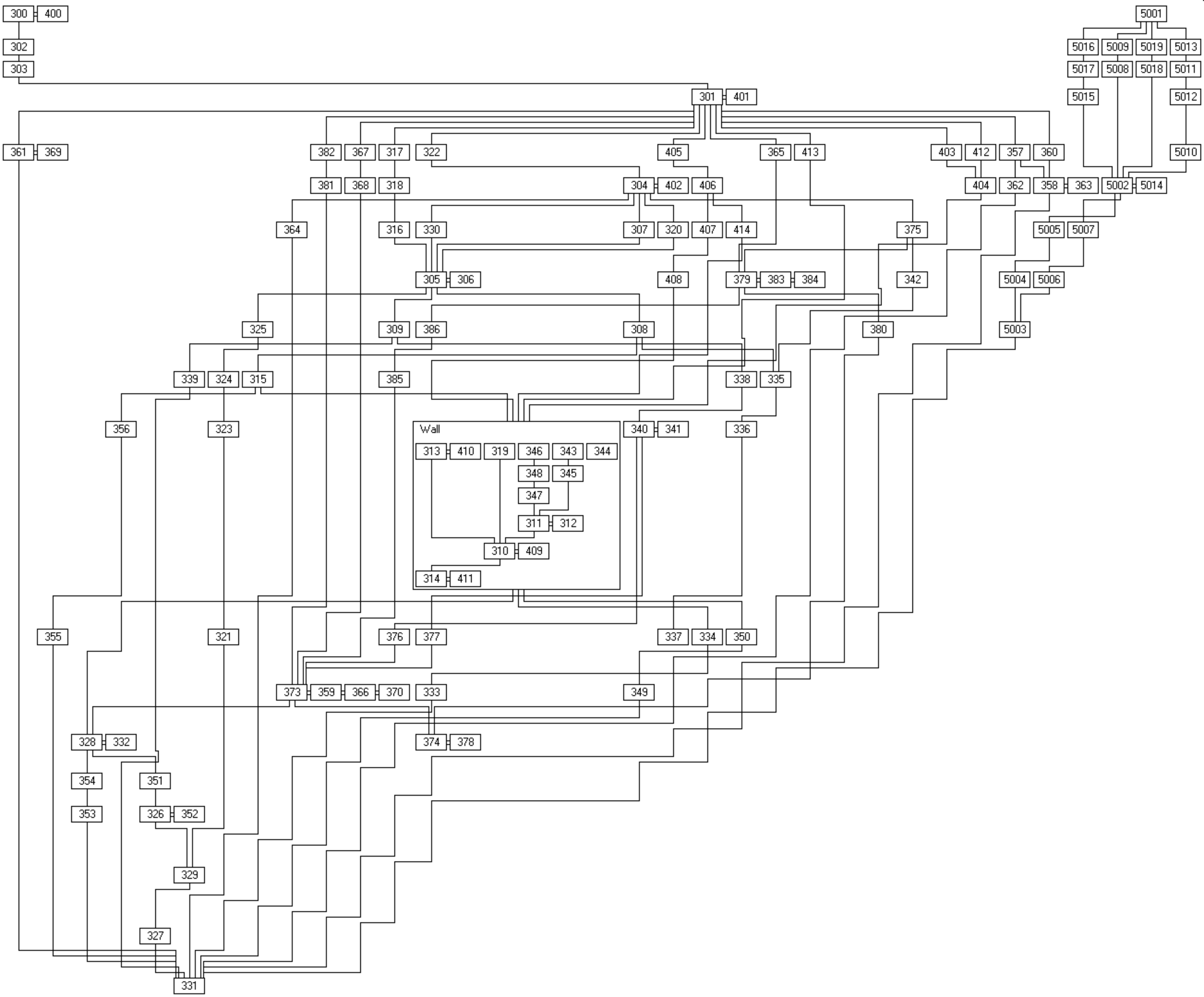
Appendix 4.1 Harris Matrix: Area 1A



Appendix 4.2 Harris Matrix: Area 2



Appendix 4.3 Harris Matrix: Area 3



Appendix 4.4 Harris Matrix: Area 4

At the time of issue, the Area 4 Harris Matrix was yet to be provided to Extent Heritage by Austral Archaeology. The Area 4 Harris Matrix will be included within the final report.

APPENDIX 5. THE DRAIN

AAJV



THOMPSON SQUARE BRICK DRAIN, WINDSOR, NSW

Heritage Mitigation and Options Report

AAJV
(an Austral & Extent Joint Venture)

Level 3, 73 Union Street

Pymont NSW 2009
ABN 39 785 858 339



Project Name: Windsor Bridge Replacement Project

PROJECT NUMBER: 190508

27 July 2023

Authors: Graham Wilson and Matthew Kelly

**Thompson Square Brick Drain, Windsor, NSW – Heritage
Mitigation and Options Report**

Prepared by AAJV on behalf of Transport for NSW

Document Control Page

AUTHOR/HERITAGE ADVISORS: Graham Wilson and Matthew Kelly

CLIENT: NSW Roads and Maritime Services

PROJECT NAME: THOMPSON SQUARE BRICK DRAIN, WINDSOR, NSW - HERITAGE
MITIGATION AND OPTIONS REPORT

27 July 2023

AAJV INTERNAL REVIEW/SIGN OFF				
WRITTEN BY	DATE	VERSION	REVIEWED	APPROVED
G Wilson and Matthew Kelly	9/3/18	Draft	M North/ J McCarthy	29 March 2018
G Wilson and Matthew Kelly	9/3/18	Final	M North	3 April 2018

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EXECUTIVE SUMMARY

Introduction

During the course of archaeological salvage works within the area identified as Area 1 in the Detailed Salvage Strategy for the Windsor Bridge Replacement Project impact zone, evidence of a brick barrel drain was located. This report analyses the drain and investigates mitigation measures for retaining its significance within the context of the approved bridge replacement project.

Investigation Results

Research has determined that this drain is the work of Howe and Magrath, who were contracted by Governor Macquarie to construct the drain between 1814-1815. The alignment of the drain falls directly in the alignment of the proposed new bridge abutment, which would largely, if not completely, remove the drain. An alternate footing design for the bridge abutment (Option 2) has been developed which would allow the barrel drain, though not all of the surface box culverts, to be retained in situ beneath the new bridge abutment. A range of mitigation measures are explored in this report, leading to the recommendations below.

Recommendations

In summary, the AAJV makes the following recommendations for the management of the barrel drain:

- Select Option 2 is the best option for conserving the maximum amount of historic drain fabric;
- Advice from Jacobs regarding vibration levels (Appendix D) should be implemented within the Construction Environmental Management Plan and monitored accordingly;
- Advice from Jacobs regarding the compression impacts (Appendix E) should be implemented within the Construction Environmental Management Plan and monitored accordingly;
- Advice from International Conservation Services regarding separation between the drain fabric and infill materials (Appendix F) should be implemented within the Construction Environmental Management Plan and monitored accordingly;
- The Heritage Manager verify and approve the position of the proposed footing pier locations prior to piling commencing;
- No machinery is to operate on top of the drain at any time, unless the potential compression impacts have been reviewed by an engineer and any necessary mitigation measures implemented;
- A section of box culvert could be carefully recorded by the archaeologists and removed by conservators for conservation and secure storage prior to future reinstatement in an indoor context (e.g. Windsor Museum or a Council-nominated location). This option should be discussed with key stakeholders prior to making a final decision to remove a section of culvert.
- Intact bricks and artefacts associated with the drain should be retained for future interpretation works, although this is likely to be off site interpretation due to the fragility of the items (refer to Interpretation Plan).
- Detailed proposals for interpreting the drain, and the story of its construction and role within the early town of Windsor should be integrated into the final Interpretation Plan for the project area.

CONTENTS

1	PROJECT SUMMARY	1
1.1	INTRODUCTION	1
1.2	Site Location and Identification	1
1.3	Limitations	1
1.4	Author Identification	2
2	Historical Background to the drain	5
3	Discussion of other Brick drains or similar structures previously investigated around Sydney	11
3.1	Early Examples of Drains	11
4	Analysis of the Thompson Square Drain	20
4.1	Physical Description of the Drain	20
4.2	Materials	36
5	Options for the barrel drain	52
6	Review of impacts of proposed Revised abutment design	54
7	Discussion of options and alternatives	57
8	Discussion of mitigation measures – option 2	Error! Bookmark not defined.
9	Comparative interpretations	Error! Bookmark not defined.
10	Discussion of interpretation options	59
11	Consultation	60
12	Recommendations	Error! Bookmark not defined.
13	Conclusions	61
14	References	63
	Appendices	65
	Appendix A - Howe and Magrath Contract (ML MSS 106 Item 37)	65
	Appendix B – Transcript of Howe and Magrath Contract	68

LIST OF FIGURES

Figure 1:	Map of the WBRP test excavation project area.	3
Figure 2:	Image of the southern Windsor Prodge Replacement Project area with the location of the drain and its general course indicated. (Source: Jacobs 2018)	4
Figure 3 -	Brick drain and possible pier pad (Source: AAJV 2018)	8
Figure 4 -	Brick drain showing cut for 1937 sewer line (Source: AAJV 2018)	9
Figure 5 -	Drain outlet adjacent to the location of the wharf in 1986 (Source: Higginbotham 1986 (2): 41)	10
Figure 6 -	Sydney's early combined sewer and stormwater system (Aird 1961: 134ff)	13
Figure 7 -	Brick barrel drain (10-12 RM2) at the First Government House site. (Source Bickford, 1983, Fig 21).	14
Figure 8 -	North face of the 1813-16 Royal Botanic Garden culvert showing original lower portions and later dry-pressed brick replacement above (Source: Wong (1999): Figure 18)	14
Figure 9 -	A complete section of the brick barrel drain, 1822-27, Parramatta, NSW in 1981. (Source: E. A Higginbotham and Associates (1981))	15
Figure 10 -	Intact section of the Port Macquarie barrel drain (Source: E. A Higginbotham and Associates (2009))	15
Figure 11 -	Headwall pit of the Port Macquarie barrel drain (Source: E. A Higginbotham and Associates (2009))	16
Figure 12 -	Remnant barrel drain (left) 1820-1840 feeder line into the Tank Stream (predating the Tank Stream Channel) and its later nineteenth century ceramic drain replacement (Source: GML (1998) vol 1 p. 59)	17
Figure 13 -	Conservatorium site, Sydney. Detail of the northern dish drain and the later phase pit during archaeological excavation. (Source: Casey and Lowe (2002): 156)	18
Figure 14 -	Elliptical drain, cross-section , Conservatorium site prior to removal (Source: NSW Department of Public Works and Services (2001)	18
Figure 15 -	Barrel drain excavated beneath Campbell's Stores in The Rocks, March 2018. This drain is 1400mm in diameter and a section approximately 3000mm long was exposed. It is to be retained in situ. (Courtesy Austral Archaeology)	19
Figure 16 -	Oviform brick drain (circa 500x700mm) found in Auckland, NZ, dating from c1865. (https://www.cityraillink.co.nz/crl-heritage/)	19
Figure 17 -	Overlay on White's 1827 Survey	22
Figure 18 -	Overlay on White's 1827 Plan	23
Figure 19 -	Overlay on Thompson's 1827 Plan	24
Figure 20 -	Overlay on Abbott's 1831 Sketch Plan	25
Figure 21 -	Overlay on the 1835 Town Plan	26

Figure 22 - Overlay on the 1841 Town Plan	27
Figure 23 - Overlay on the 1842 Allotment Plan	28
Figure 24 - Overlay on Hancock's 1871 Plan	29
Figure 25 - Overlay on the 1894 Survey Plan	30
Figure 26 - Overlay on the 1894 Road Resumption Plan	31
Figure 27 - Overlay on the 1948 Road Plan	32
Figure 28 - Overlay on the 2016 Aerial Photo, Prior to Archaeological Testing	33
Figure 29 - Overlay on the 2018 Aerial Photo Showing Archaeological Management Zones	34
Figure 30 - Overlay on the 2018 Aerial Photo	35
Figure 31 - Vertical view of exposed crown of brick drain with remnant lime rendering in Sondage 3. (Source: AAJV 2018)	38
Figure 32 - Feeder brick box drain for the main drain alignment. (Source AAJV 2018).	38
Figure 33 - Feeder brick box drain for main drain alignment. (Source AAJV 2018)	39
Figure 34 - Feeder line (foreground) crossing main drain showing slumping of the box drain above the shoulders of the main drain (Source: AAJV 2018)	39
Figure 35 - Brick shaft for the main drain alignment (Source RMS 2018)	40
Figure 36 - Vertical view of the blocked drain in Sondage 6. South is to top of image. Note the 'slumping' of the bricks at the crown of the drain indicating the collapse which blocked the drain and required physical intervention. (Source: AAJV 2018)	41
Figure 37 - View of brick drain in Sondage 6 with later (19 th /20 th century) headwall and vitrified ceramic pipe inserted at base. (Source: AAJV 2018)	42
Figure 38 - Diagram of interpreted elements of drain exposure. (Source: AAJV 2018)	42
Figure 39 - Diagram showing interpretation of exposed external surface of the drain	43
Figure 40 - Exposed section with cut for drain indicated. (Source: AAJV 2018)	44
Figure 41 - Plan of the exposures of the drain in Thompson Square. (Source: AAJV 2018)	45
Figure 42 - Elevation of the drain headwall in sondage 6 – looking south. (Source: AAJV 2018)	46
Figure 43 - Bed of sandstock Brick 1 from drain arch with cratered surface, probably from the expansion of water vapour during firing. Note the possible scribe line (indicated). (Source: AAJV 2018)	47
Figure 44 - Bed of sandstock Brick 1 from drain arch showing strike side. Note the uneven trimming of the brick with each point on the side indicated. (Source: AAJV 2018)	47
Figure 45 - Strike of sandstock Brick 2. (Source: AAJV 2018)	48
Figure 46 - Bed of sandstock Brick 2. (Source: AAJV, 2018)	48

Figure 47 - Detail of Sample 1 mud mortar showing inclusion of calcined shell and larger calcined shell fragment. (Source: AAJV 2018) 49

Figure 48 - Detail of Sample 1 mud mortar showing small charcoal fragments (red) and organic matter -sawdust/chaff (blue) inclusions. (Source: AAJV 2018) 49

Figure 49 - Sample 2 of Patent cement. C.f with mortar. Note the larger consistent sand grain size (Source: AAJV 2018) 50

Figure 50 - A section of one of the box culverts with evidence of former timber coverings. (AAJV March 2018) 51

Figure 51 - Typical cross section of abutment and drain (Jacobs) 55

Figure 52 - Detailed cross section (Jacobs) 55

Figure 53 - elevation showing drain and new abutment. The hatched areas are where the foam packers will be placed. In other areas, the existing soil will be left in situ. (Jacobs) 56

Figure 54 - Plan showing relationship of the piers to the drain (Jacobs) 56

Figure 55 - In situ exposed section of the 1822-27 brick barrel drain, Parramatta, NSW **Error! Bookmark not defined.**

Figure 56 - Section of the displaced Tank Stream located within the GPO as one of the interpretation stations. **Error! Bookmark not defined.**

Figure 57 - Tank Stream Walking Map **Error! Bookmark not defined.**

Figure 58 - Wheat Creek Culvert, Brisbane **Error! Bookmark not defined.**

Figure 59 - Wheat Creek Culvert, Brisbane **Error! Bookmark not defined.**

Figure 60 - Glass panel installed above a well at the Newcastle Convict Lumberyard. The viewing window is in such poor condition from physical damage and condensation that the well beneath is no longer visible. **Error! Bookmark not defined.**

Figure 61 - External viewing window for footings at Museum of Sydney. The small kiosk to the right of the photo houses a small display of the footings of First Government House. This is however in a managed museum context. **Error! Bookmark not defined.**

Figure 62 - Glass floor over drainage within the Museum of Sydney. Again this is within a managed, climate-controlled museum context. (Source: https://www.tripadvisor.com/LocationPhotoDirectLink-g255060-d256854-i84397826-Museum_of_Sydney-Sydney_New_South_Wales.html#84397826) **Error! Bookmark not defined.**

1 PROJECT SUMMARY

1.1 Introduction

The Windsor Bridge Replacement Project will construct a new three-lane bridge 35 metres downstream of the existing Windsor Bridge. Associated works include new approach roads and intersections to connect the new bridge to the existing road network. The work will entail the removal and backfilling of the existing bridge approach roads and the removal of the existing bridge once the new bridge is operational. Landscaping and urban design work is to be undertaken throughout the project footprint including the Thompson Square Conservation Area.

As part of a program of archaeological works, site inspections of the study area were carried out between April and July 2016. This was followed by a program of archaeological testing undertaken between August and November 2016. The results of this testing were then used to inform the Historical Archaeology Report and the Detailed Salvage Strategy that provided guidance for archaeological salvage works (now complete).

During the course of salvage excavation in Area 1 conducted between October 2017 and March 2018, the remains of an early nineteenth-century drainage system servicing Thompson Square were exposed. This system of brick and timber drainage lines is the subject of this report, which considers the significance, Conservation and interpretation options for the drains.

The AAJV (a joint venture of Austral Archaeology and Extent Heritage [formerly AHMS]) has been commissioned by NSW Roads and Maritime Services (hereafter 'RMS' or 'the proponent'), to prepare a Heritage Mitigation and Options report on the drain.

1.2 Site Location and Identification

The subject area is located at Windsor, within the Hawkesbury Local Government Area (LGA), approximately 57 kilometres north-west of Sydney. The town is situated on the southern bank of the Hawkesbury River, close to the foothills of the Blue Mountains (Figure 1).

The southern archaeological excavation project area incorporates part of Thompson Square (Figure 2).

1.3 Limitations

Investigation of the drain was limited to exposures within Area 1. Any information regarding the location of the line of the drain outside Area 1 is inferred. This report does not review the Aboriginal cultural heritage values of the subject area.

1.4 Author Identification

This report was prepared by Graham Wilson and Matthew Kelly, Senior Archaeologists at Extent Heritage (part of the AAJV). The site drawings were completed and digitised by James McGuinness of Austral Archaeology (part of AAJV). GIS overlays were prepared by Tom Sapienza of Extent Heritage. Excavation Directors David Marcus (Austral) and Anita Yousif (Extent) also made input to the report.

This report was reviewed by Dr MacLaren North, NSW Director of Extent Heritage Pty Ltd and Justin McCarthy, Director of Austral Archaeology Pty Ltd, Co-Principals of the AAJV.



Figure 1: Map of the WBRP test excavation project area.



Figure 2: Image of the southern Windsor Proodge Replacement Project area with the location of the drain and its general course indicated. (Source: Jacobs 2018)

2 HISTORICAL BACKGROUND TO THE DRAIN

Underground drainage and sewer works do not figure prominently in the documented history of the early Colony. Underground drainage systems were constructed for Government House, Sydney at an early date (1788 and 1797). These drains were primarily brick or stone box drains. The system was later complimented between 1795 and 1800 with underground sewers by which time the privies were connected to a brick barrel drain that discharged off site.¹

The first completed major public drainage program appears to be that constructed by Rowland Hassall at Parramatta in 1814-1815. The drain extended from George Street to the Parramatta River. The contract was for a drain and tunnel thus:

GOVERNMENT AND GENERAL ORDERS. Head Quarters, Sydney, Saturday, 22 April, 1815

Mr. Rowland Hassall Amount of his Contract for making a Drain and Tunnel from George Street to the River at Parramatta £147.13 .0. ²

This was an example of public works being undertaken by private contractors, a system that was favoured by Governor Macquarie, though the construction of this drain was not the first, or only example of this occurring. Three years after the construction of Hassall's drain the death of a child is reported at Parramatta where the body was discovered in a cavity of a brick barrel drain that crosses Phillip Street.³

The Thompson Square drain was preceded by Hassall's Parramatta drain which was completed while the Thompson Square drain was still under construction. The drain at Thompson Square was undertaken between 1814 and 1816 by private contractors John Howe and James Magrath.⁴ On 8 August 1814 Howe and Magrath signed an agreement with the Government for an integrated program of works at Thompson Square that included the construction of a wharf, the reduction of the gradient in Thompson Square from the river to George Street and the construction of a sewer.⁵ Construction was to be completed within twelve calendar months and was to include a system of channels that fed the drain. The cost of the work was £350 and 350 gallons of Bengal Rum (or other spirits). The full contract and a transcription are appended as Appendices 12.1 and 12.2 respectively.

This first contract was followed by a second contract dated 24 April 1815. This was essentially a variation on the first contract providing greater details on how the wharf should be constructed – the cost of this additional work was £600.⁶ Part payments for the work were as follows:

Quarter ending 10 September 1814 £100

Quarter ending 31 December 1814 £75

¹ Proudfoot (1991): 52

² Sydney Gazette and New South Wales Advertiser 22 Apr 1815 p.2

³ Sydney Gazette and New South Wales Advertiser 5 December 1818 p 1

⁴ Note there are various spellings of this name as "Magrath" and "McGrath". We have adopted the Magrath spelling as that is the spelling used in the 1814 contract (See Appendix A).

⁵ SLNSW ML MSS 106 Article 37 (Howe papers)

⁶ SLNSW ML MSS 106 Article 88 24 April 1815

Quarter ending 30 June 1815

£100

Quarter ending 30 September 1815 £200

Quarter ending 31 December 1816 £150

The works were well in hand in early 1816 when Howe and Magrath's work at Windsor became a concern. In a letter from March 1816 the Colonial Secretary J T Campbell, wrote to James Mileham JP and Richard Fitzgerald Esq of Windsor.

"It having been lately represented to the Governor that a very inferior and bad description of timber and other materials having been latterly used in the construction of the Government wharf at Windsor, by Messrs Howe and Magrath the contractors for that works and the square leading thereto, in the town of Windsor and it being further stated that the workmanship is very slight and insufficient, contrary to the true intent of the contracts,"

"H.E is herein pleased to herein order and direct that you shall constitute yourselves into a committee of Survey on the said Public Works, calling to your assistance any well qualified respectable Carpenter in your neighbourhood and that you proceed with such assistance with Survey and inspect the materials and workmanship thereof at whatever time or times you may deem expedient, reporting thereon in writing to His Exc, And in the event of your discovering any deficiency in either in the materials or workmanship you are to require the Contractors to replace such insufficient work or materials at their peril and to replace it or them with such other as you may consider conformable to the terms of the contract itself."

"For reference to said contract you are entitled to call upon and demand of the contractors to show the contract itself - and should they refuse to alter bad materials or bad workmanship and to render them conformable to the true spirit and meaning of the original contract you are hereby authorised and directed to put a stop to the work altogether until His Exc's pleasure shall be made known".⁷

Mileham and Fitzgerald responded with the view that the labourers had been left largely unsupervised and that significant elements should have been supervised by the employers. Some of the materials themselves were also deemed to be unfit for purpose and needing replacing. It may be suggested that the same situation may have existed with the drain – badly supervised work utilising materials not designed for the job. However, by the time the committee was formed to investigate the work the drain was presumably buried. The work undertaken by Howe and Magrath appears to have generally been problematic and was one of the shortcomings in Macquarie's policy of using private contractors in this context. In June 1816 the Hawkesbury district was affected by a major flood that swept a portion of the troublesome wharf away. In November 1816 as a response to this situation Macquarie wrote:

In consideration of the greater part of the Govt. Quay or Wharf already erected by the contractors having been carried away or destroyed by the late Floods of the Hawkesbury, I have this day agreed on an estimate made out and submitted to me by Mr. Greenway the Govt. Civil Architect of the additional Expense of repairing and Completing the same in solid and durable material (agreeably to a Plan thereof made out by Mr. Greenway), to allow and pay unto Messrs. Howe and Magrath the additional sum of Two Hundred and Twenty

⁷ Col. Sec. March, 1816 Report of committee of survey re new Government wharf at Windsor (Reel 6046; 4/1736 pp.61-3.

*(including Twenty Pounds for Mr. Greenway's trouble in planning and directing the Work) Pounds Sterling; allowing them also for payment such Iron and Spike Nails from the stores as can be spared - with a carpenter and Pair of Sawyers off the store; the Contractors now engaging to complete the said Quay or Wharf in Eight months from this date.*⁸

There is no indication that any further works or repairs were undertaken on the drain, or whether it had been affected by the flood. The contractors were paid £150 for works undertaken up to 31 December 1816 but the final payment of £316.10.- was not made until the Quarter ending 31 March 1820.⁹

The investigation of the drain currently being undertaken has revealed at least two instances where the drain was perforated and one are of collapse and reconfiguration. The drain was also pierced, or at least modified in the nineteenth century by square hole designed to accommodate a possible pier pad (Figure 3). The precise date of this work and its associations have yet to be determined. The drain was also cut through by the construction of a new concrete line in 1937 (Figure 4).

The subsequent history and the origin of the drain has been subject to much speculation including a range of stories identifying the drain as a 'smuggler's tunnel'. The first instance of this story appearing in print dates to 1924. George Reeve in the Windsor and Richmond Gazette 18 January 1924 linked the structure to the smuggling of illicitly-distilled alcohol:

*the large bricked 8 x 10 conduit or tunnel leading from where Thompson's store site was to the river, parts of which can still be seen by an observant eye was constructed specially to draw up the barrels containing the rum which was illicitly manufactured on a wholesale scale.*¹⁰

The same spurious anecdote was re-told two years later in the same publication:

*It is not generally known that in Windsor there is a: secret underground tunnel. It commences at the corner of the upper park in Thompson Square, and apparently runs for some distance towards George-street. Though the inlet can now hardly be detected it conveys the impression that an ordinary person could comfortably walk into the tunnel. It is certainly a relic of the past— the good old days' when considerable quantities of liquor were smuggled into the Hawkesbury district. It is close to the Windsor Wharf, and who knows whether a secret still is not hidden there? An investigation would no doubt prove interesting.*¹¹

The story was resurrected in 1976 by R. S. Arndell using the above newspaper reports as the basis for the supposed 'smuggler's tunnel'. This may have also been the source of the story linking the Macquarie Arms, Windsor, with the 'tunnel' since Arndell describes a similar tunnel at the former Macquarie Arms Inn, Pitt Town.

By 1980 the story had such currency that the then Windsor Council attempted to sponsor an investigation of the 'smuggler's tunnel' under a National Estate Program grant. Historian Douglas

⁸ L. Macquarie Journal 14 November 1816 SLNSW ML A773 p.64

⁹ Higginbotham (1986(2)): pp. 28-29

¹⁰ Windsor and Richmond Gazette 18 January 1924 p.1

¹¹ Windsor and Richmond Gazette 15 October 1926 p.4

Bowd however, intervened and gave a cogent explanation of the structure's true purpose.¹² In 1986 an investigation of Thompson Square's heritage values was undertaken by Edward Higginbotham in for the then Hawkesbury Shire Council.¹³ The survey identified the outlet of the drain adjacent to the wharf but the location was not mapped (Figure 5). The foreshore, and this portion of the drain if it survives, is now obscured by a gabion wall.



Figure 3 - Brick drain and possible pier pad (Source: AAJV 2018)

¹² See Hawkesbury Historical Society <http://hawkesburyhistoricalsociety.blogspot.com.au/2016/02/smuggles-tunnels.html>

¹³ Higginbotham, Edward, *Historical and Archaeological Investigation of Thompson Square, Windsor, NSW* for the Hawkesbury Shire Council Windsor, NSW, July 1986



Figure 4 - Brick drain showing cut for 1937 sewer line (Source: AAJV 2018)



Figure 5 - Drain outlet adjacent to the location of the wharf in 1986 (Source: Higginbotham 1986 (2): 41)

3 DISCUSSION OF OTHER BRICK DRAINS OR SIMILAR STRUCTURES PREVIOUSLY INVESTIGATED AROUND SYDNEY

3.1 Early Examples of Drains

The earliest identified use of brick drains and sewers in the colony of New South Wales are those referred to in Section 2 associated with First Government House Sydney. These were the earliest drain systems constructed in the Colony. Sewering and draining did not become significant elements in public works until the governorship of Lachlan Macquarie commencing in 1810. A small example that may have influenced the design of the Thompson Square drain was the construction of double-arch brick culvert carrying Mrs Macquarie's Road over a small stream in the Royal Botanic Gardens, Sydney. Construction took place between 1813 and 1816 using brick in the same configuration as that used later in the Thompson Square drain. The culvert was investigated by Higginbotham in 1992 and in terms of construction technique the following was observed:

The northern face of the culvert is showing distinct signs of imminent collapse. The brickwork over the arches on the northern face has lost a proportion of its bonding material, and has also detached itself from the brickwork forming the remaining length of the arched culverts. This is not surprising given the header bond predominantly used in the arches, which may have contributed to some longitudinal weaknesses in the overall structure. Other examples of similar construction are predominantly stretcher bond in two skins of brickwork, thereby overcoming this problem. The poor awareness of bonding suggested by the original brickwork may indicate the nature of labour in the early Colony, between 1813 and 1816, when only bricklayers with limited skill may have been available.¹⁴

The next reference to underground drains constructed at Government expense is that undertaken by Hassall at Parramatta in 1814-15 described in Section 2 above.

One of the best-known and most thoroughly investigated early brick drains in New South Wales is the brick barrel drain at Parramatta. This has been extensively described by Higginbotham who identified two phases of construction, 1820-27 for the brick barrel section and the 1840s for the sandstone box section.¹⁵ Higginbotham's dating of the brick section of the drain was based on a combination of evidence. Firstly, the presence of Government "broad-arrow" bricks in the fabric indicates it was a Government work. The reuse of bricks from the Convict Barracks suggests a date after 1820-22 and the absence of a mention of the installation of a drain in Parramatta in the "Blue Books" of the Colony after 1828 suggests that the drain dates to an earlier period. He therefore concludes that the likely date for the work is 1822-1827. The presence of bricks marked with a broad-arrow in the drain's construction may not preclude it being work conducted by a private contractor. In 1831 for example, calls for tenders were made for the installation of a brick barrel drain at Liverpool and the notice remarks that the Government will supply the bricks and the successful tenderer the labour and time for the work.¹⁶ The possibility remains that part of the drain may have been constructed in 1814-15 by Rowland Hassall. This earlier dating is unlikely to be resolved unless an earlier barrel drain in Parramatta is physically located and identified.

¹⁴ Higginbotham (1992): p. 4

¹⁵ Higginbotham (1983), p.37.

¹⁶ Sydney Gazette and New South Wales Advertiser, 10 September 1831. While the offer of bricks was later withdrawn it does open the possibility that Government produced materials may have been supplied to private contractors to complete jobs for Government sites.

In 2007 Higginbotham investigated one of two brick barrel drains associated with the convict settlement at Port Macquarie, NSW. The drain, constructed between 1839 and 1842, had an internal diameter of 1m and a surviving headwall pit. The drain is still a functioning stormwater conduit

Excavations undertaken by Casey and Lowe between 1998 and 2001 at the Conservatorium of Music, Sydney exposed a complex system of drains that included box drains, barrel drains and an elliptical drain dating to the 1840s. The system of drains was located around the former Government Stables and reveal changing design responses to the problem of ponding stormwater as well as waste-water removal. The elliptical drain constructed in the 1840s was removed in part and considered for interpretive display.

By the late 1830s brick barrel drains were a common feature of major public works programs. The style of construction remained a standard until the 1850s after which time civil sewerage and drainage programs employed larger drains with a range of geometries, primarily oviform and elliptical drains (such as the Tank Stream Channel, Sydney). These were generally bonded with a strong mortar and provided with an internal sealing layer of patent cement.

These early structures were generally combined sewer and stormwater drains, sometimes replacing earlier open channel drains or channelised natural watercourses. A major program of drain-building occurred in the 1850s in central Sydney, in response to the growing city and the risk of disease from open sewers. Five major combined sewer/stormwater drains were constructed in the 1850s, including the Tank Stream, Bennelong Sewer (also known as Fort Macquarie), Wattle Street Sewer and Hay Street Sewer (Figure 6).¹⁷ These consisted in various locations of arched stone channels and brick oviform structures. The Tank Stream, for example, was initially constructed in arched stonework in the 1850s and later extended to the south in brick oviform in the 1870s. The major Bondi Ocean Outfall Sewer was similarly constructed with a large central brick barrel in the 1880s.

As mass production and concrete technology emerged in the late nineteenth century, stone and brick construction gave way to the use of precast or cast in situ concrete structures, as well as a progressive separation of sewerage and stormwater. Technology continued to evolve, with steel and, later, plastic piping largely replacing masonry and concrete for all but the largest sewer structures.

¹⁷ Aird, (1961) pp 128-130.

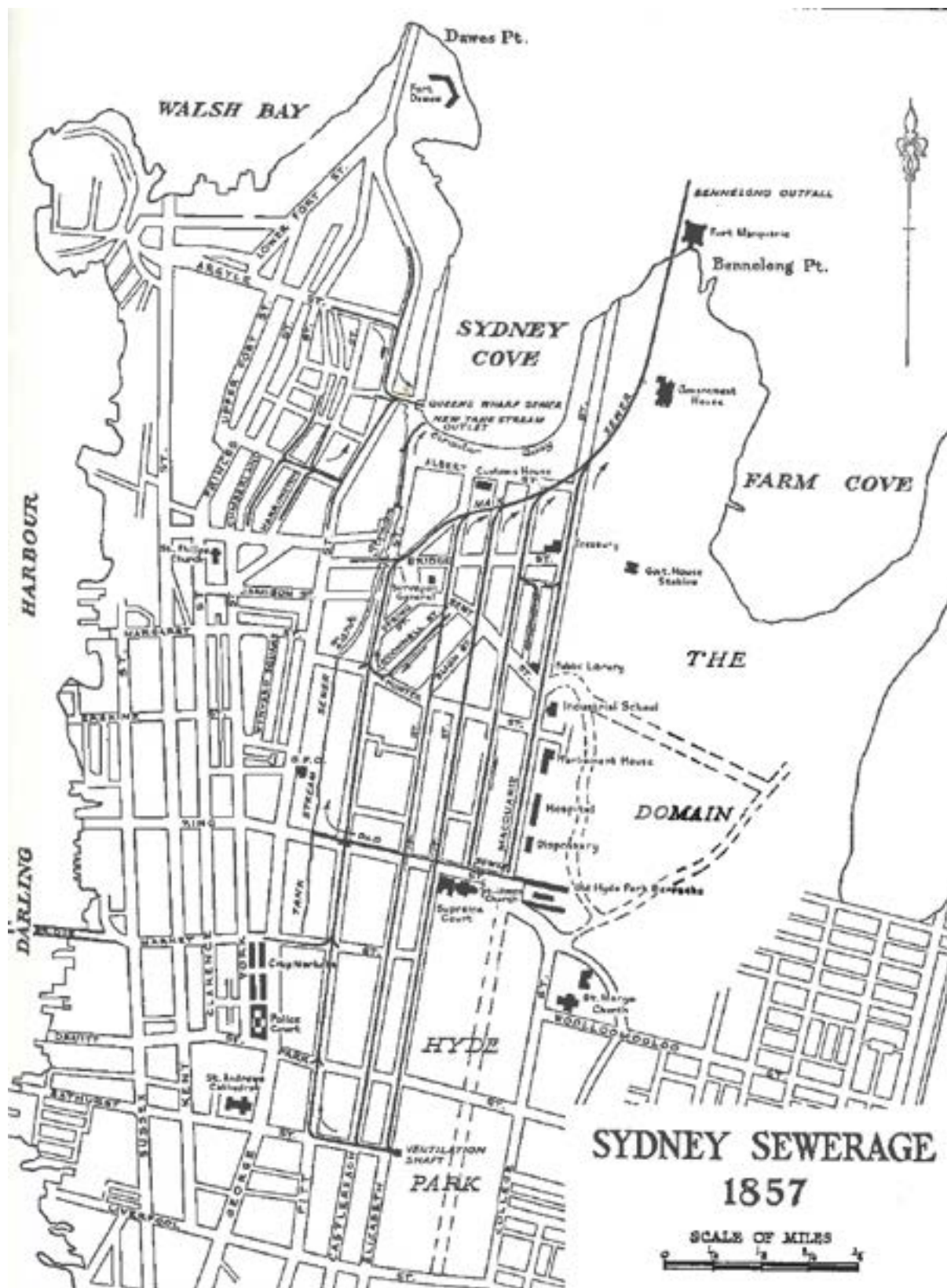


Figure 6 - Sydney's early combined sewer and stormwater system (Aird 1961: 134ff)

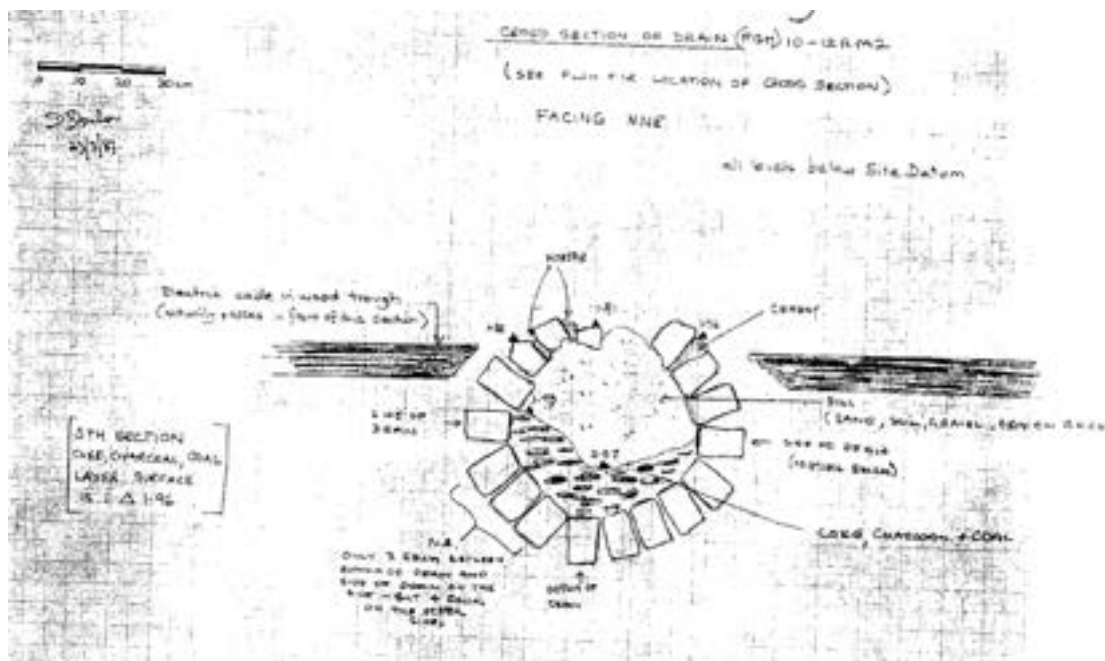




Figure 9 - A complete section of the brick barrel drain, 1822-27, Parramatta, NSW in 1981. (Source: E. A Higginbotham and Associates (1981))



Figure 10 - Intact section of the Port Macquarie barrel drain (Source: E. A Higginbotham and Associates (2009))



Figure 11 - Headwall pit of the Port Macquarie barrel drain (Source: E. A Higginbotham and Associates (2009))



Figure 12 - Remnant barrel drain (left) 1820-1840 feeder line into the Tank Stream (predating the Tank Stream Channel) and its later nineteenth century ceramic drain replacement (Source: GML (1998) vol 1 p. 59)

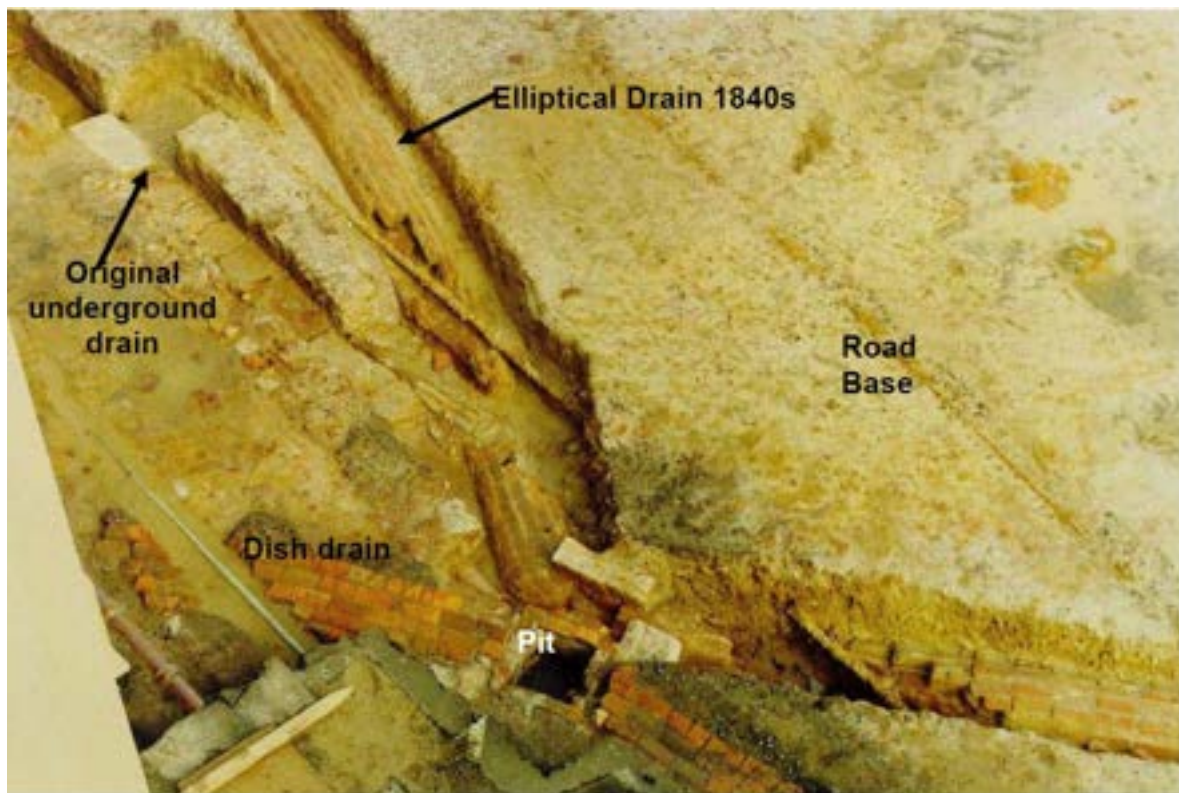


Figure 13 - Conservatorium site, Sydney. Detail of the northern dish drain and the later phase pit during archaeological excavation. (Source: Casey and Lowe (2002): 156)



Figure 14 - Elliptical drain, cross-section , Conservatorium site prior to removal (Source: NSW Department of Public Works and Services (2001))



Figure 15 - Barrel drain excavated beneath Campbell's Stores in The Rocks, March 2018. This drain is 1400mm in diameter and a section approximately 3000mm long was exposed. It is to be retained in situ. (Courtesy Austral Archaeology)



Figure 16 - Oviform brick drain (circa 500x700mm) found in Auckland, NZ, dating from c1865. (<https://www.cityraillink.co.nz/crl-heritage/>)

4 ANALYSIS OF THE THOMPSON SQUARE DRAIN

4.1 Physical Description of the Drain

Although described as a brick 'barrel' drain the structure was a combined sewer/stormwater drain that appears to have attempted an ovoid or ellipsoid form rather than a circular-sectioned barrel drain. The main drain structure consists of a shallow inverted segmental arch forming the base (invert). The walls are straight battered (receding slope) walls topped by a low, segmental arch in the south and a full arch in the north. The invert was constructed as a single skin of brick laid in stretcher bond. The walls were laid as two skins constructed using English bond. The arch is two skins thick with three courses laid in stretcher bond rising from the spring line with the remainder of the arch carried out in header bond. The single crown course is laid as a soldier course. The drain has an internal height of 1.30m an invert width of 700mm, a height from invert to the spring line of 800mm and a width at the spring line of 970mm.

In barrel and oviform drain construction all courses are usually laid in stretcher bond with the width of the drain and depth of invert determined by the expected carrying capacity in both dry-weather flow (daily discharge of effluvia without the addition of surface water) and stormwater flow. The invert of the Thompson Square drain is essentially a dish-drain that would not have operated efficiently as a sewer in dry-weather. The use of five different brick segments (stretcher invert, stretcher batter walls, stretcher arch segment from spring-line, header arch and soldier crown course) is a reasonable indication that the structural principles of drain construction were not well understood by the designer. The drain appears to be an attempt to construct an ovoid/ellipsoid drain without the knowledge of the geometry that provided drains of this type with strength and the ability to cope with variable flow regimes. The use of header courses for the vault is more typical of low-arched window and door heads rather than long vaults. The decision to use this form may have been driven by the designer's experience or by an inability to create long sections of formwork that would allow stretcher courses to be constructed. The exemplar for this type of construction appear to be the Lady Macquarie's Road culvert constructed between 1813 and 1816.

In the sections of the drain exposed to date all feeder lines discharged through the top of the vault rather than through the walls. The feeder lines themselves consist of simple brick box drains that were capped with timber slabs and then covered over. Gully traps may have been installed at intervals along the feeder lines to intercept surface water. Only the brick bases of the gully traps survive with the result that the depths of their columns and surface presentation are unknown. It is unclear if a system of surface drains was also installed adjacent to the roadways. The streets of Sydney were supplied with open drains designed to carry run-off but were used as a place for dumping refuse resulting in the issue of Government orders as early as 1810 to prevent the dumping of filth on the public roads or in drains.¹⁸ The feeder lines had also been subject to collapse. Settling of fill on the shoulders of the main drain had resulted in the slumping of the feeder lines on either side of the main drain, which likely made them inoperable.

Archaeological exposure of the drain has afforded good opportunity to observe the fabric and techniques of construction. Sondage 6 at the northern end of the archaeological excavation area located the drain at approximately 4.5m below the surface. The excavation of this sondage revealed that the drain had been accessed here at least once before during its operational life. At some stage after its initial construction the drain had collapsed at this point and had thus become blocked. This collapse was apparent from the slumping of some of the arch headers and soldier bricks towards the north. Part of the western lower wall of the drain had also collapsed in that location. The collapse and

¹⁸ Sydney Gazette and NSW Advertiser 22 September 1810 p. 1

consequent blockage had necessitated the excavation and repair of the drain at this point along its course. This repair consisted of the removal of the collapsed bricks, the insertion of a large vitreous ceramic pipe into the mouth of the drain and the construction of a new stabilising headwall to seal the collapse (see Sections 5.2 and 5.3 below). The materials associated with this repair are consistent with a late nineteenth or early twentieth century date.

The following series of images show the overlay of the barrel drain on various maps and aerial photographs ranging from 1827 to 2018. This sequence also assists in understanding the various changes to the roadways and topography which have led to some of the impacts observed on the barrel drain and adjacent surface culverts.

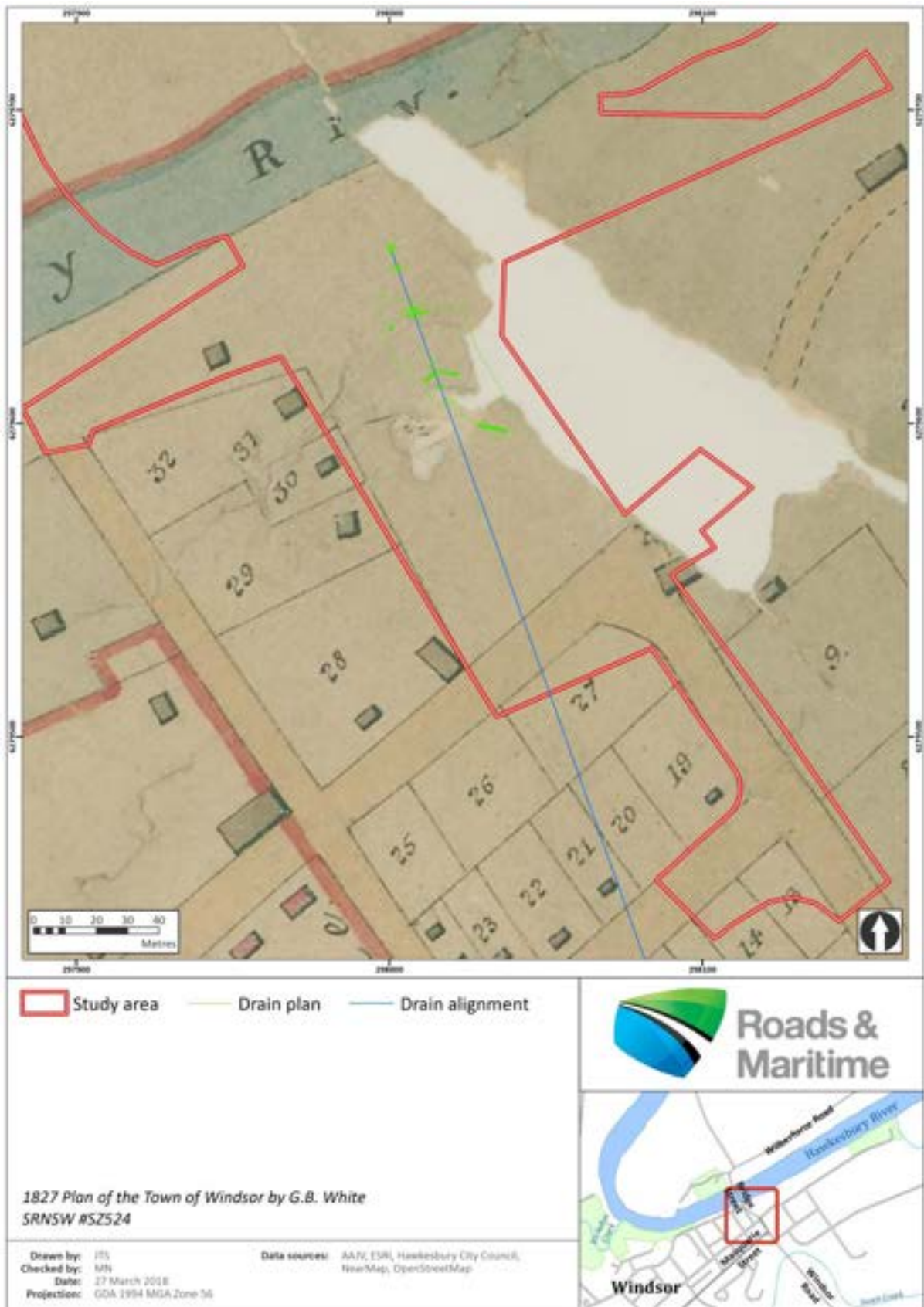


Figure 18 - Overlay on White's 1827 Plan

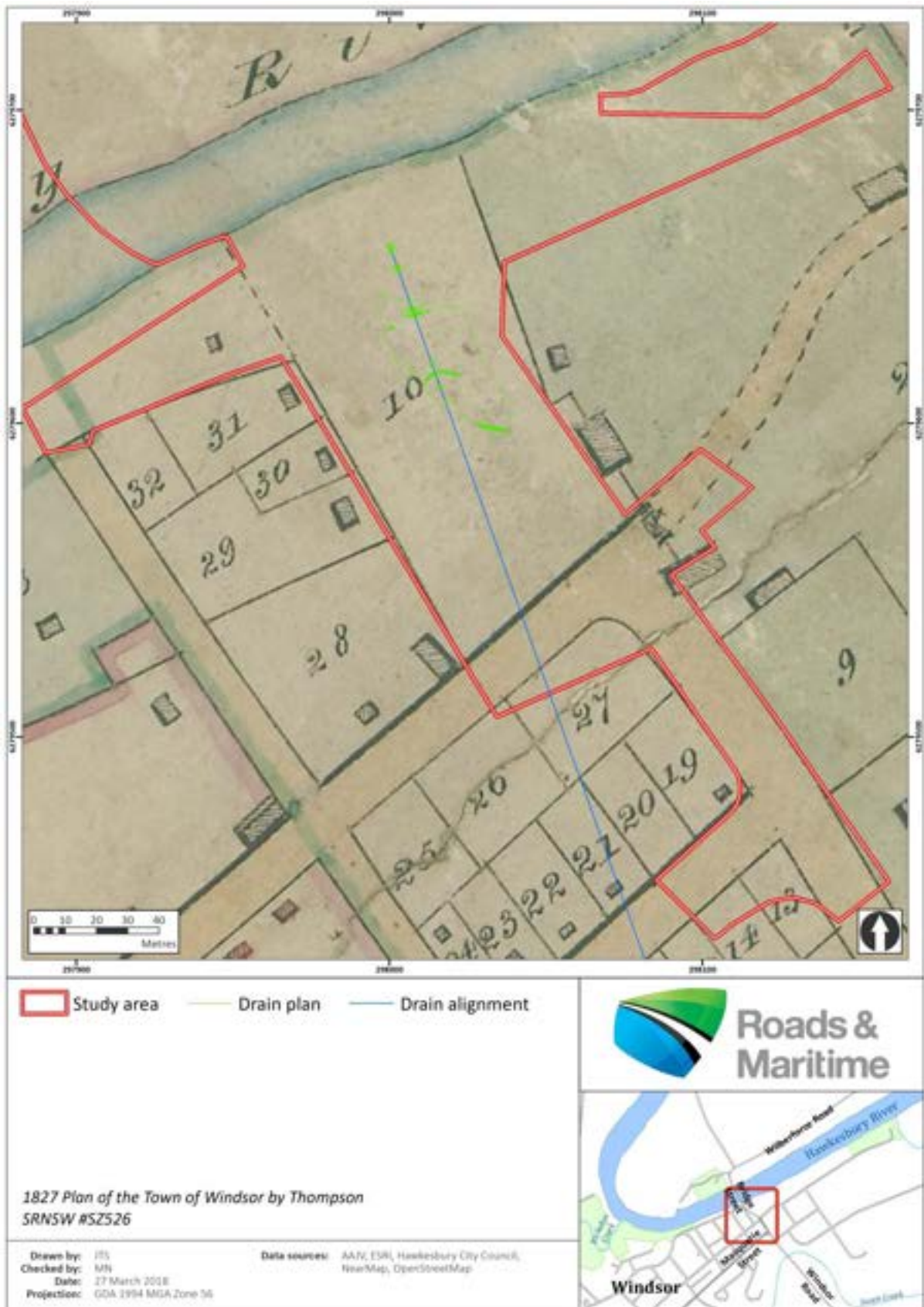


Figure 19 - Overlay on Thompson's 1827 Plan

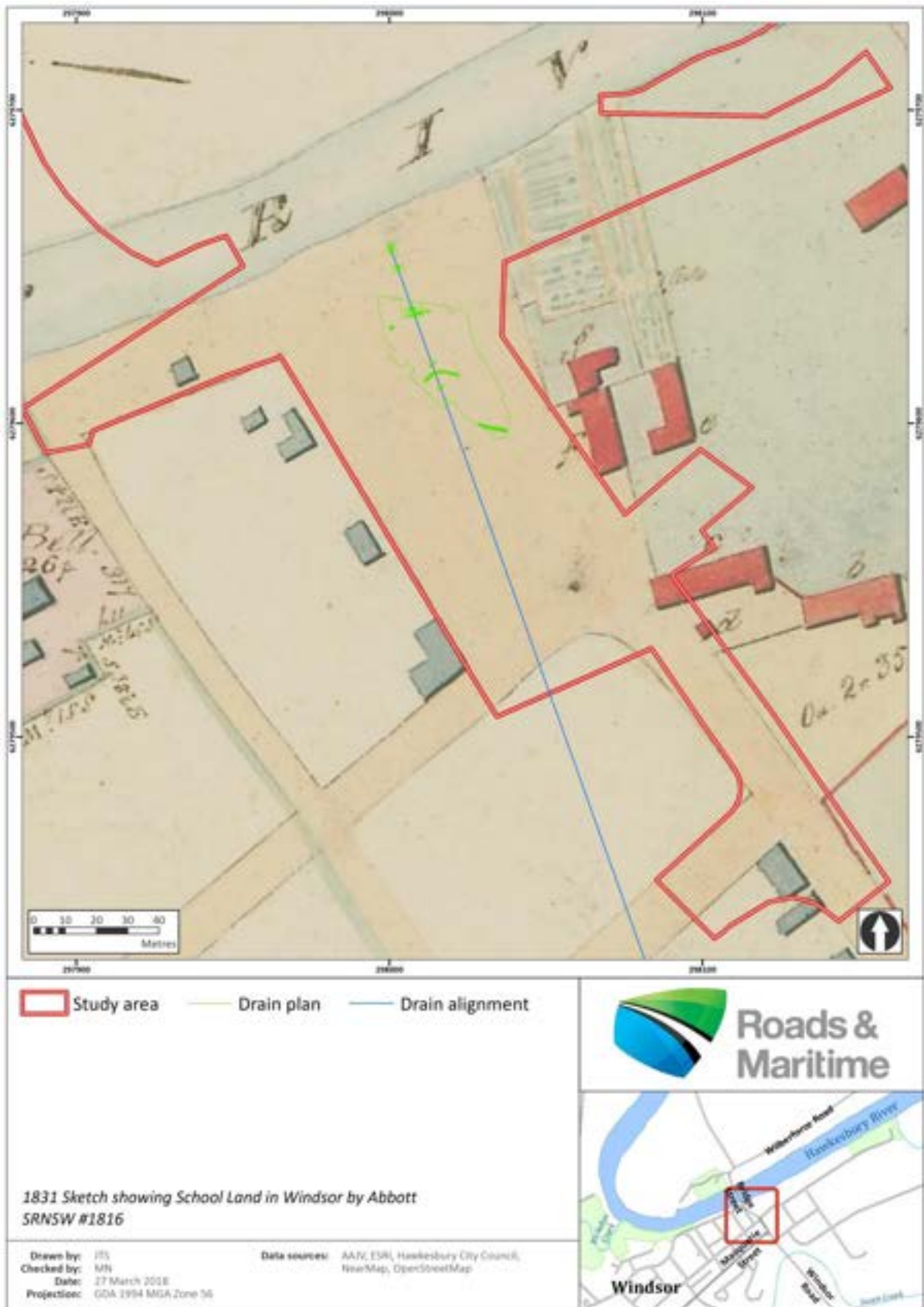


Figure 20 - Overlay on Abbott's 1831 Sketch Plan

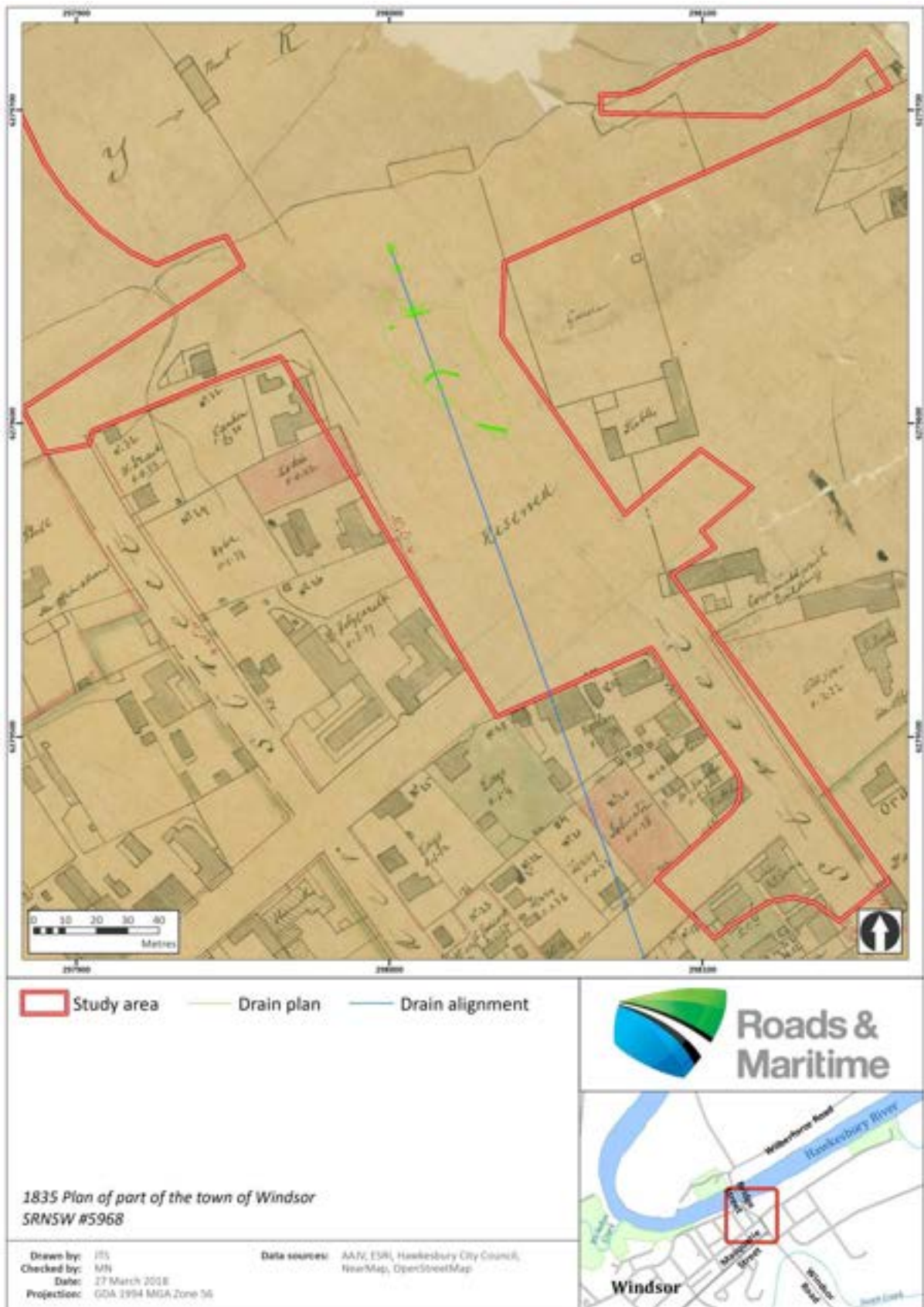


Figure 21 - Overlay on the 1835 Town Plan

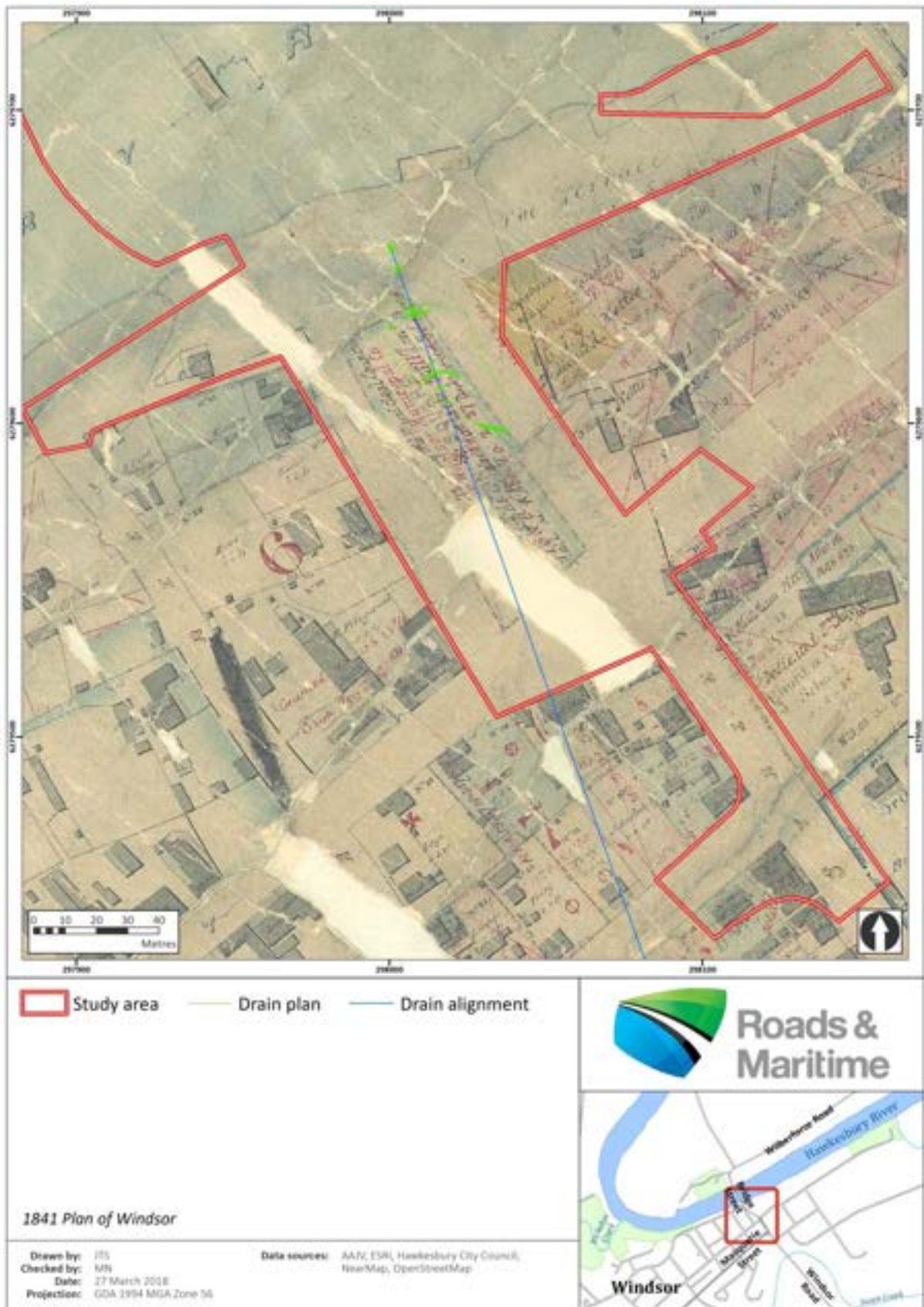


Figure 22 - Overlay on the 1841 Town Plan

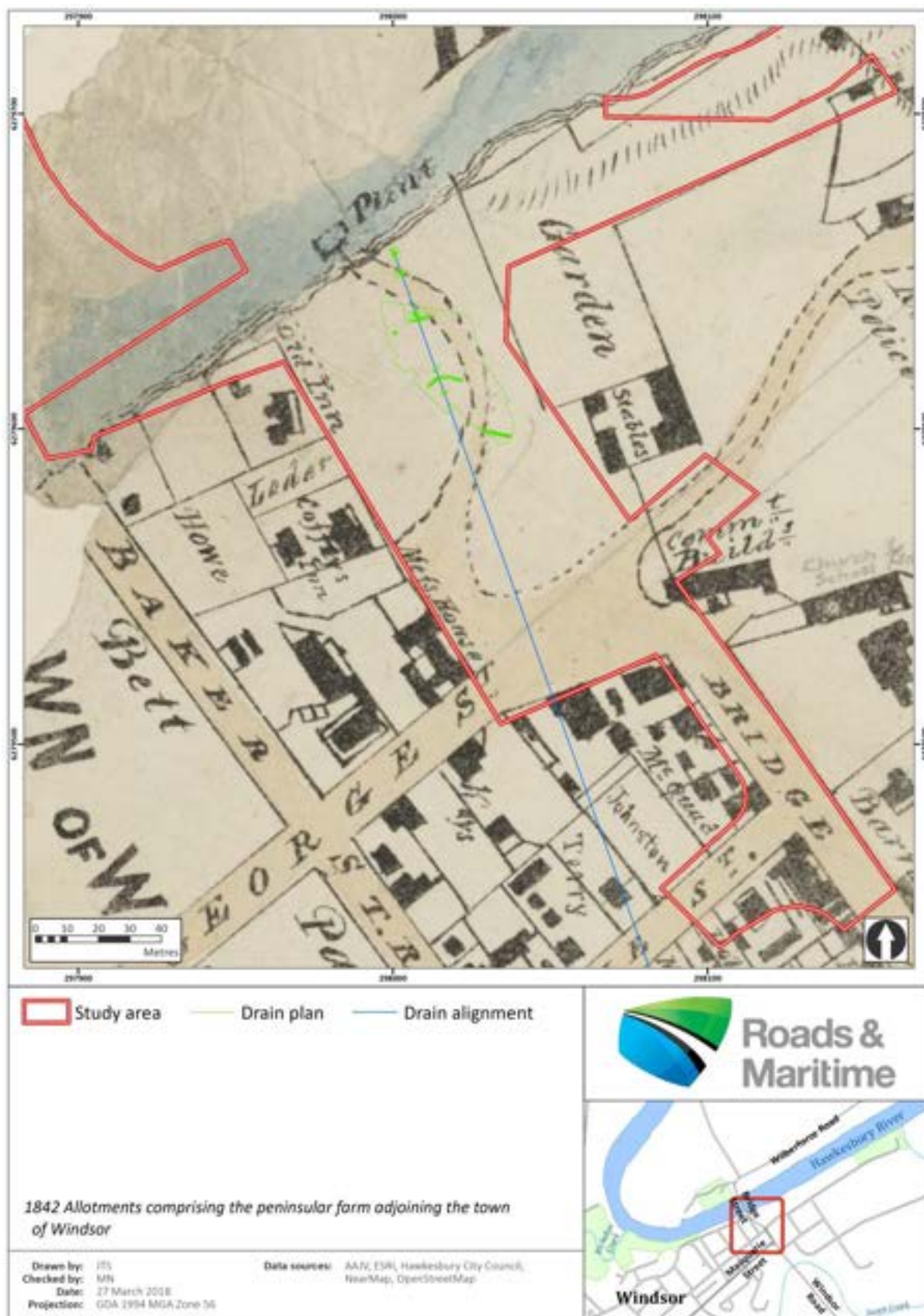


Figure 23 - Overlay on the 1842 Allotment Plan

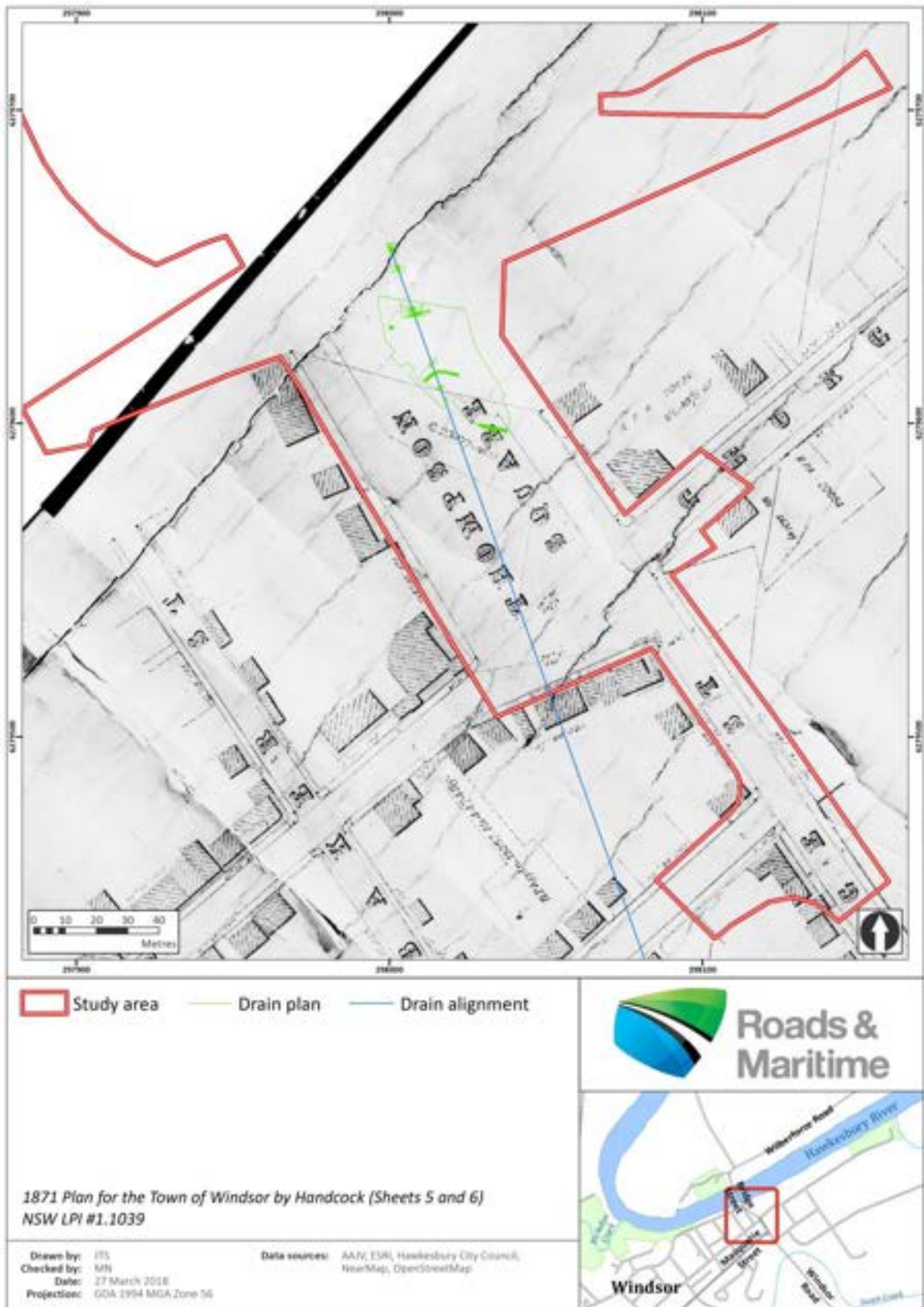


Figure 24 - Overlay on Hancock's 1871 Plan

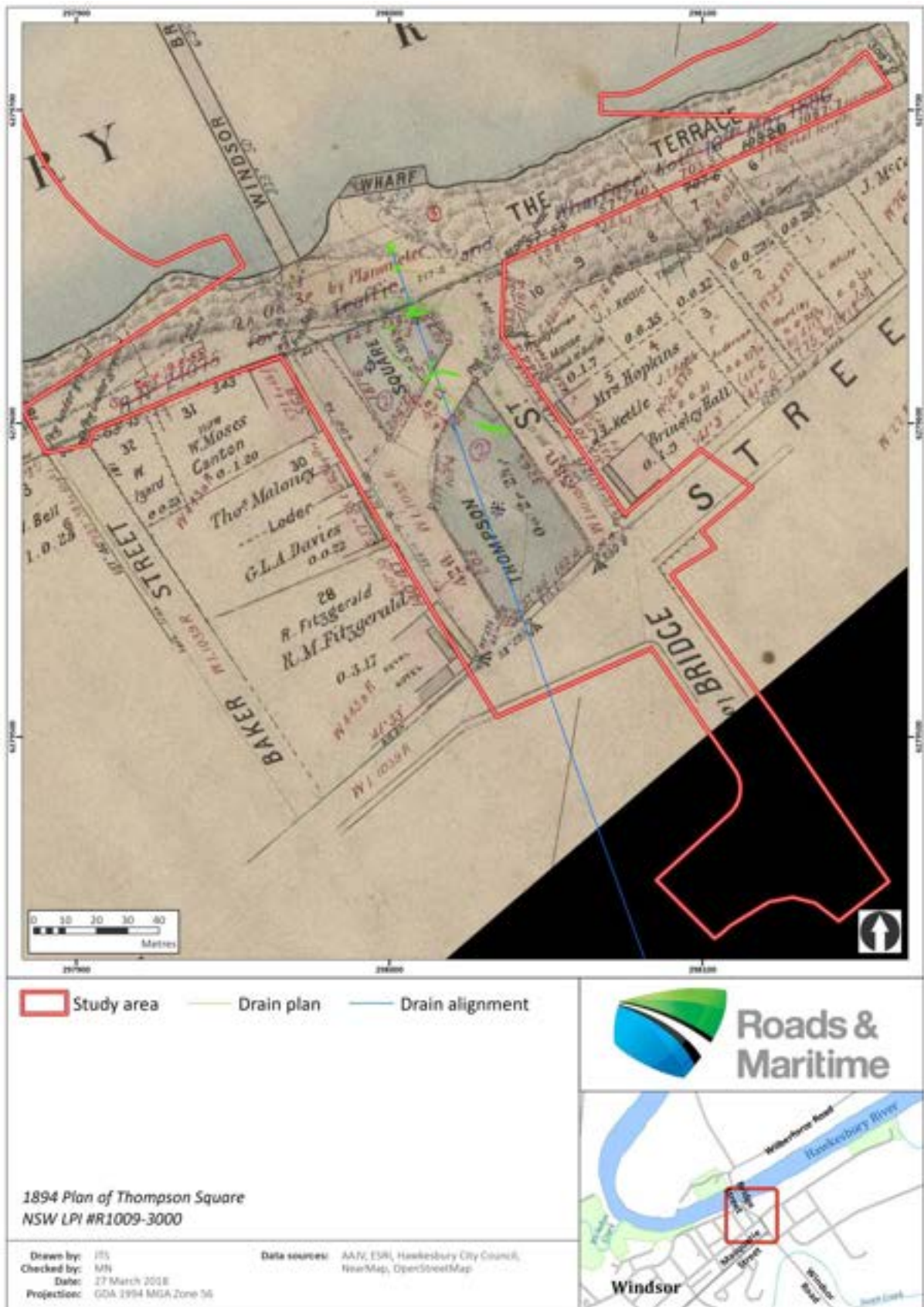


Figure 25 - Overlay on the 1894 Survey Plan

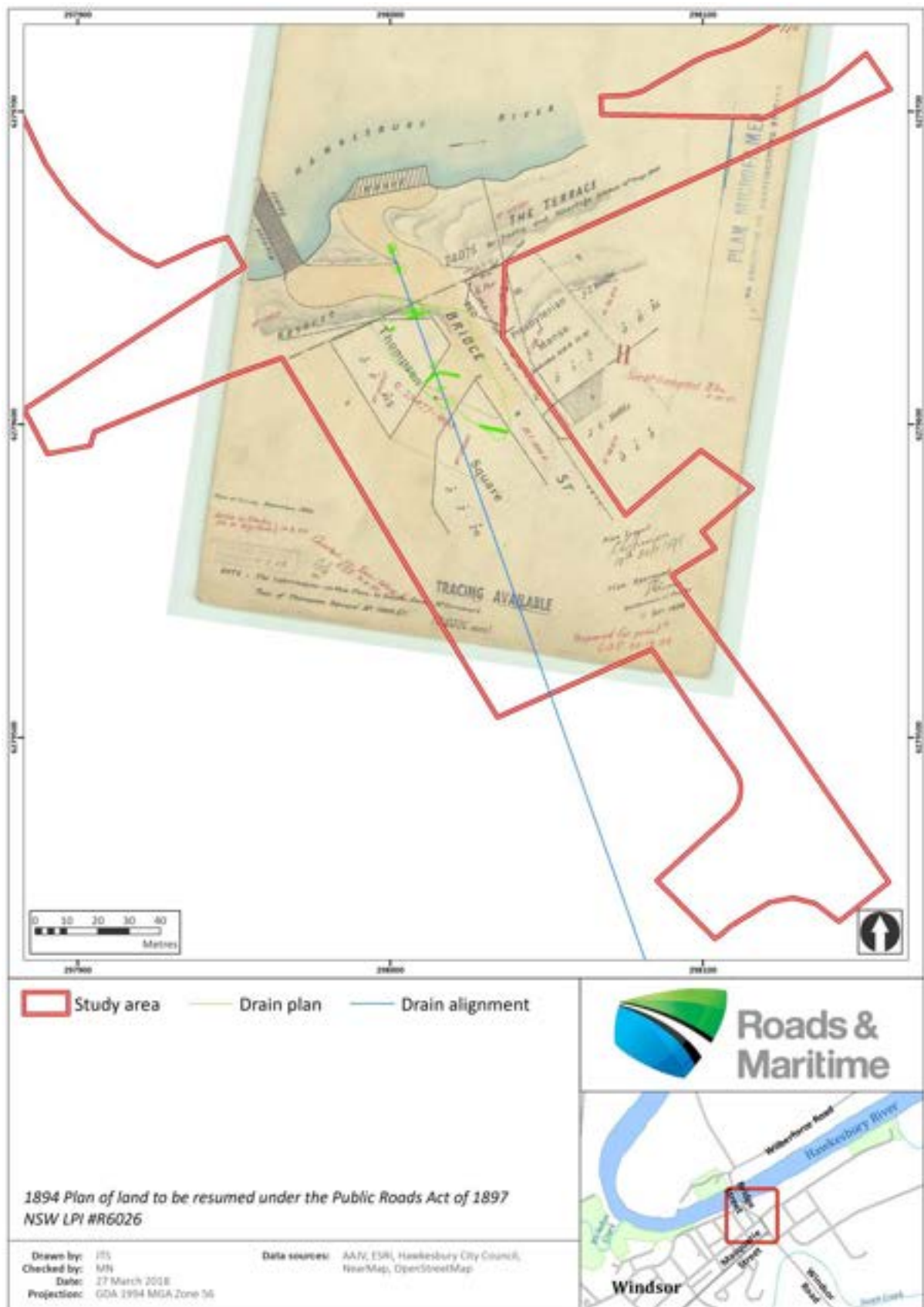


Figure 26 - Overlay on the 1894 Road Resumption Plan

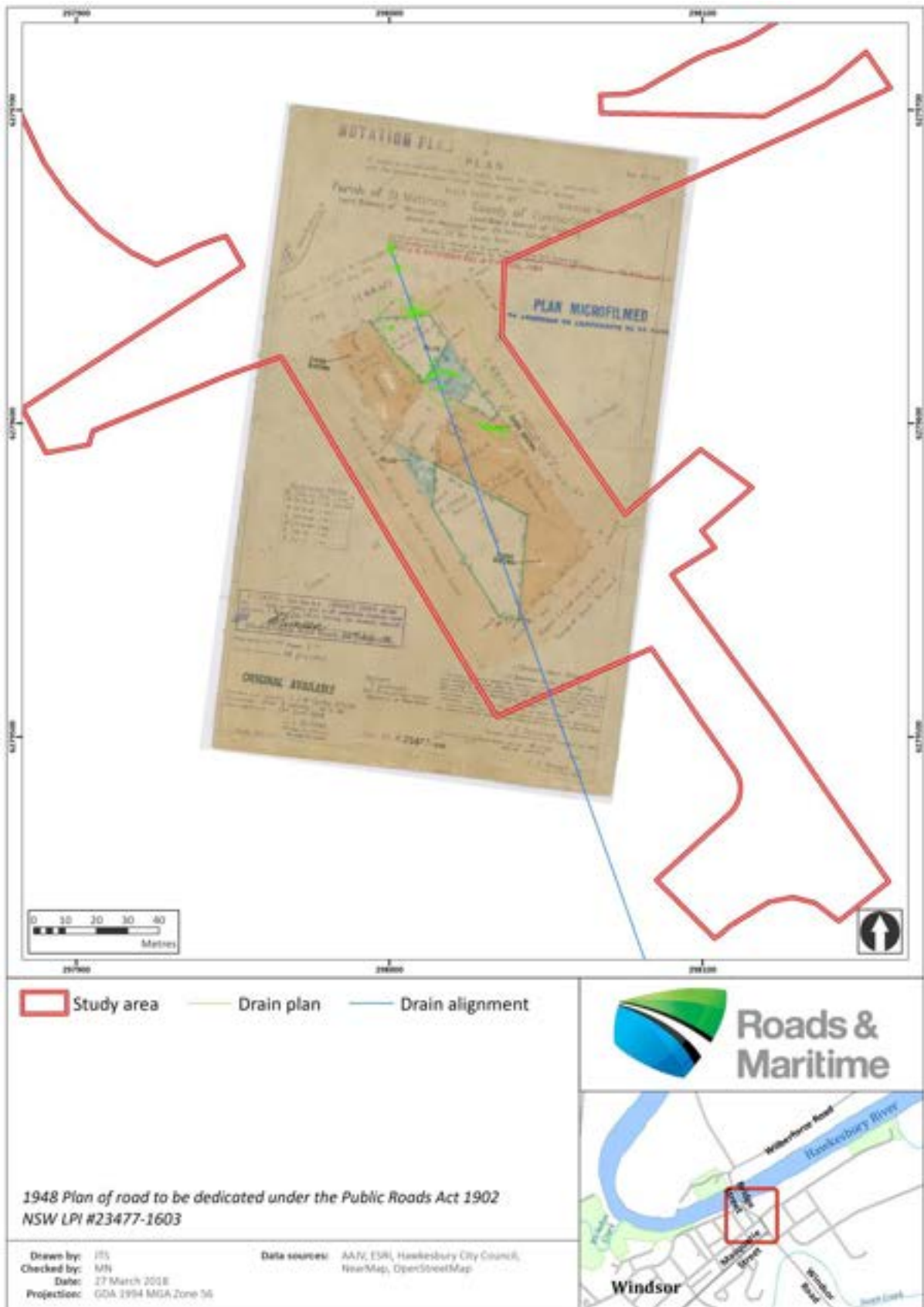


Figure 27 - Overlay on the 1948 Road Plan

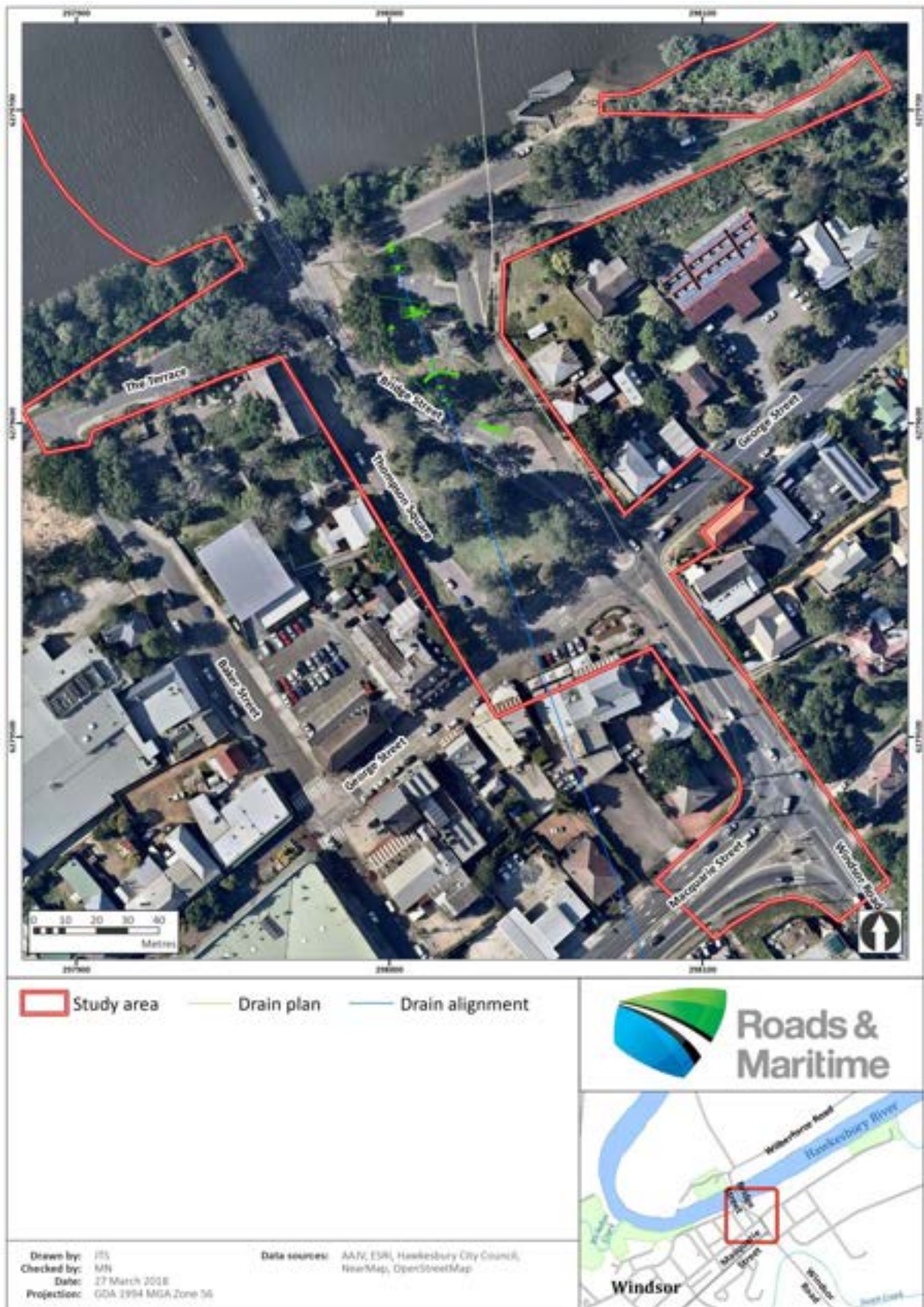


Figure 28 - Overlay on the 2016 Aerial Photo, Prior to Archaeological Testing

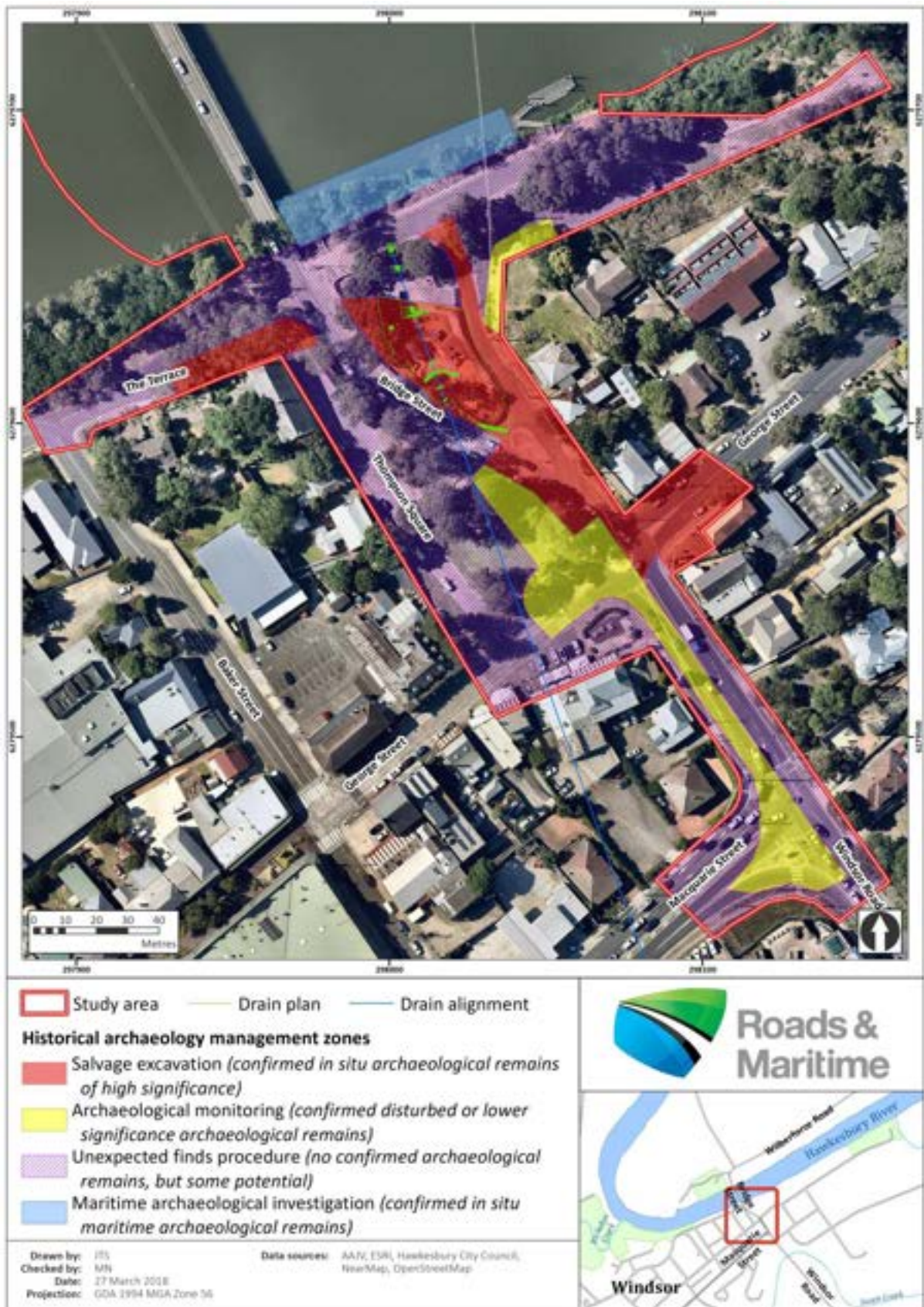


Figure 29 - Overlay on the 2018 Aerial Photo Showing Archaeological Management Zones

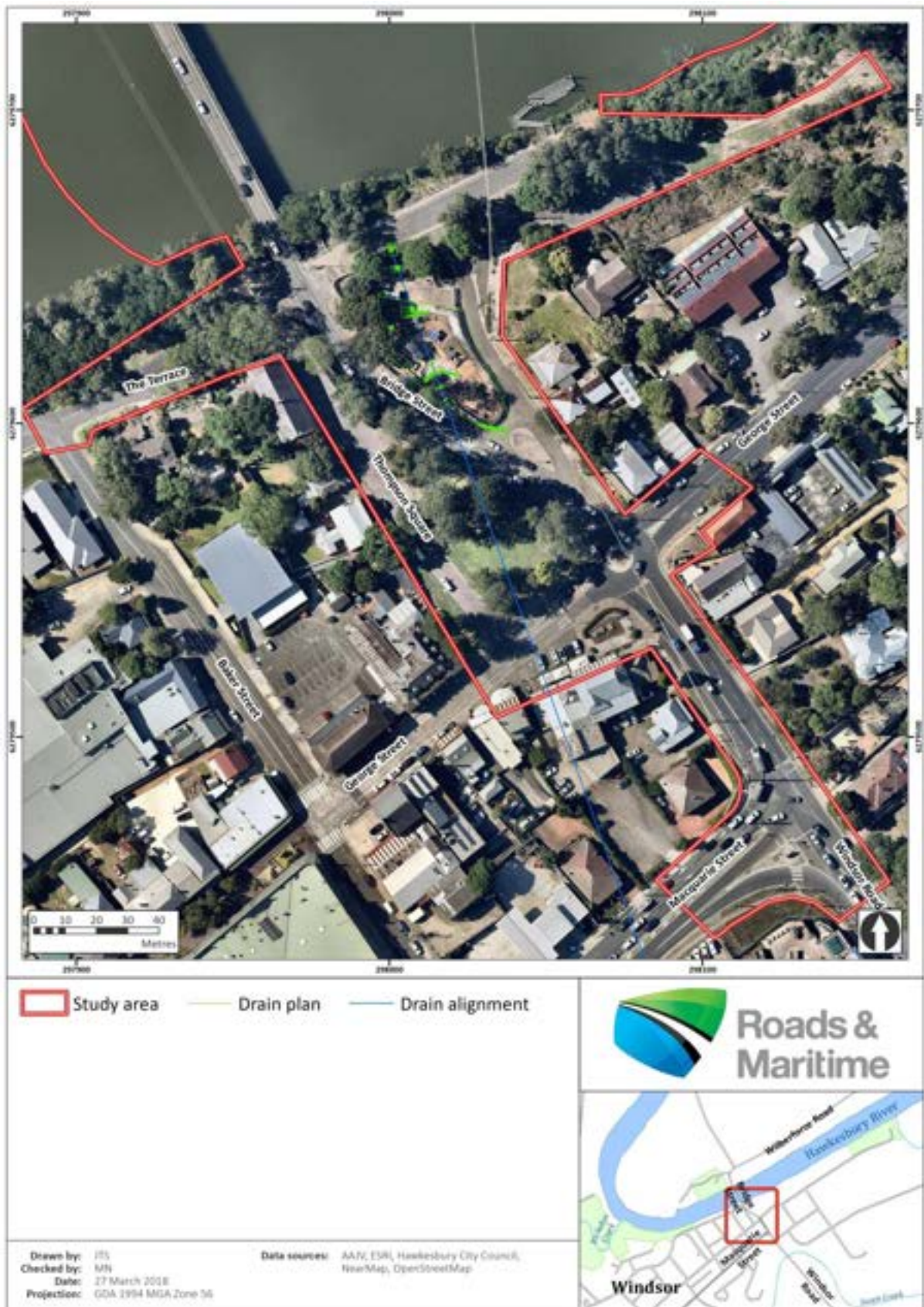


Figure 30 - Overlay on the 2018 Aerial Photo

5 MATERIALS

5.1 Brick Samples

Two bricks were sampled from those recovered from Sondage 6. Both were sandstock bricks with evident strikes and hack marks along the sides. Neither of the sample bricks had frogs, government Broad Arrows nor other identifying marks.

Brick One had dimensions at one end of L225mm x W110mm x H60mm with the other end trimmed down, post firing, to a width of only 70mm (both other dimensions remaining the same) (see Figure 43 and Figure 44). This trimming was uneven with one face trimmed from approximately half way along the brick's length while the opposite face was trimmed at a sharper angle for only a quarter of its length. There is what appears to be a remnant scribed line in one surface of the brick possibly as a guide for the trimming.

The face opposite the strike exhibits considerable "cratering" from possible expansion of water/gas vesicles in the clay during the firing. The cratering and trimming revealed some larger ironstone (5-10mm) inclusions in the clay body of the brick. Brick One had presumably been trimmed for use in the arch section of the drain with the position of the taper indicating its intended position as part of the soldier course at the crown. The trimming would have been designed to allow this brick to form the critical wedge shaped "keystone" of the arch structure. The unevenness of the trimming demonstrates knowledge of the required shape for this brick course but a lack of care in the workmanship.

Brick Two had dimensions of 225mm x 110mm x 60-62mm and was a consistent medium orange colour, with well mixed clay containing some large (1-2mm) rounded quartz sand particles and iron stone inclusions (see Figure 45 and Figure 46).

It is recorded that Phillip brought over not only 10,000 bricks, but brick moulds, suggesting that there may be some consistency in brick sizes from the establishment of the colony.¹⁹ However, there is wide variability of brick size within buildings or work of the same period and even within single brickyards. There is therefore no necessary correlation between brick dimensions and period of use. Nevertheless, the recorded dimensions of the sample bricks are similar, though not identical, to those recorded for the Macquarie period at Old Government House in Parramatta (see Table 1).

Period	Length (mm)	Width (mm)	Height (mm)
1790	235.0	114.3	69.91
Hunter's 1800	225.4	101.6	60.3
1815 Macquarie Addns	222.3	114.3	63.5
Greenway's	222.3	114.3	63.5

Table 1 - Brick Dimensions from Old Government House, Parramatta (Source: Lewis, p6.01.04)

¹⁹ See Pearson, S, Building Materials Analysis, First Government House Site, Sydney, Heritage Resource Services, 1988, p 5.

5.2 Mortar Samples

Two samples of the bonding material were obtained from separate portions of the body of the drain in Sondage 6. Sample one was removed from the arched section at the crown of the drain while sample two was obtained from the headwall of the blocked section of the drain.

The detailed close-ups of sample one are shown in Figures 47-48. Investigation of this sample revealed that it comprises a very friable dark brown mud mortar with a small fraction of lime in the form of calcined shell fragments, some up to 2mm. The detailed close up photos also revealed small charcoal inclusions and fragments of organic matter – possibly manure or sawdust. This information is entirely consistent with other early colonial mortars.

Sample two was a much harder dark yellowish concrete comprising large consistently sized sand grain aggregate and a patent cement. The evidence of the constituents of sample 2 is consistent with a late nineteenth or early twentieth century date.

5.3 Vitreous Ceramic Pipe

At the base of the headwall of the drain a vitreous ceramic pipe (VCP) has been inserted to allow continued flow of waste/storm water past the headwall. This glazed pipe is a buff colour and has an external diameter of 270mm (with the collar 330mm). This form of pipe is of a late nineteenth or early twentieth century date.

5.4 Discussion

The sandstock bricks and the mud mortar are consistent with an early nineteenth century period of construction (1815). The absence of broad-arrows on the bricks is not inconsistent with them being supplied by a Govt. brickyard. The design of the drain, noted above indicates that the drain's failure is attributable largely to its original design. Brick drains constructed in the period immediately following the construction of the Thompson Square drain reverted to the barrel drain configuration that became a standard throughout the 1820s and 1830s. It was not until the 1850s that oviform drains of a scale similar to the Thompson Square drain were employed in NSW for civic projects. This includes the system of five main drains/sewers in Sydney constructed in the early 1850s. In this respect the Thompson Square drain was almost 40 years ahead of its time in terms of intent. The execution of a drain on this scale required materials, skills and an understanding of drain geometry that were unavailable in the Colony in 1814.



Figure 31 - Vertical view of exposed crown of brick drain with remnant lime rendering in Sondage 3. (Source: AAJV 2018)



Figure 32 - Feeder brick box drain for the main drain alignment. (Source AAJV 2018).



Figure 33 - Feeder brick box drain for main drain alignment. (Source AAJV 2018)



Figure 34 - Feeder line (foreground) crossing main drain showing slumping of the box drain above the shoulders of the main drain (Source: AAJV 2018)



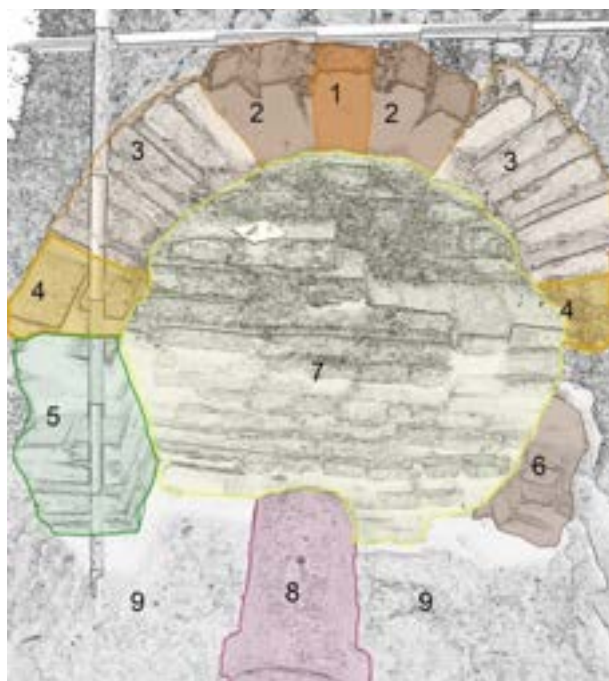
Figure 35 - Brick shaft for the main drain alignment (Source RMS 2018)



Figure 36 - Vertical view of the blocked drain in Sondage 6. South is to top of image. Note the 'slumping' of the bricks at the crown of the drain indicating the collapse which blocked the drain and required physical intervention. (Source: AAJV 2018)



Figure 37 - View of brick drain in Sondage 6 with later (19th/20th century) headwall and vitrified ceramic pipe inserted at base. (Source: AAJV 2018)



- 1 Soldier sandstock brick at crown - collapsing
- 2 Collapsing sandstock arch headers
- 3 Sandstock header courses for arch (6 courses)
- 4 Sandstock stretcher courses for arch springing (3 courses)
- 5 Vertical walls English bond (6 courses visible)
- 6 Collapsing wall stretcher bond
- 7 Later (19th c) drain headwall with re-used sandstocks and yellow patent sandy concrete
- 8 Vitrified ceramic pipe 270mm diameter
- 9 Basal Clay

Figure 38 - Diagram of interpreted elements of drain exposure. (Source: AAJV 2018)

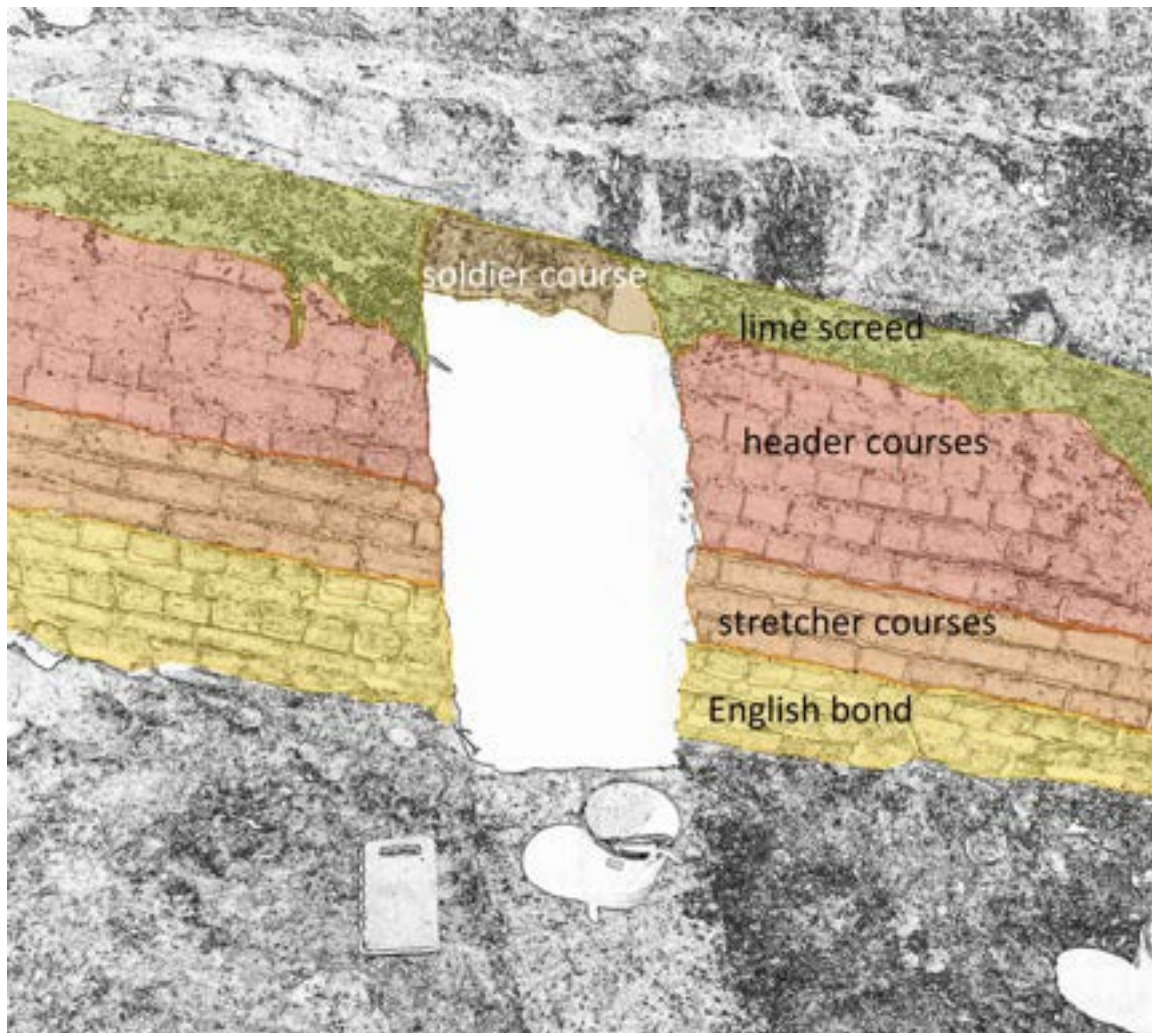


Figure 39 - Diagram showing interpretation of exposed external surface of the drain



Figure 40 - Exposed section with cut for drain indicated. (Source: AAJV 2018)

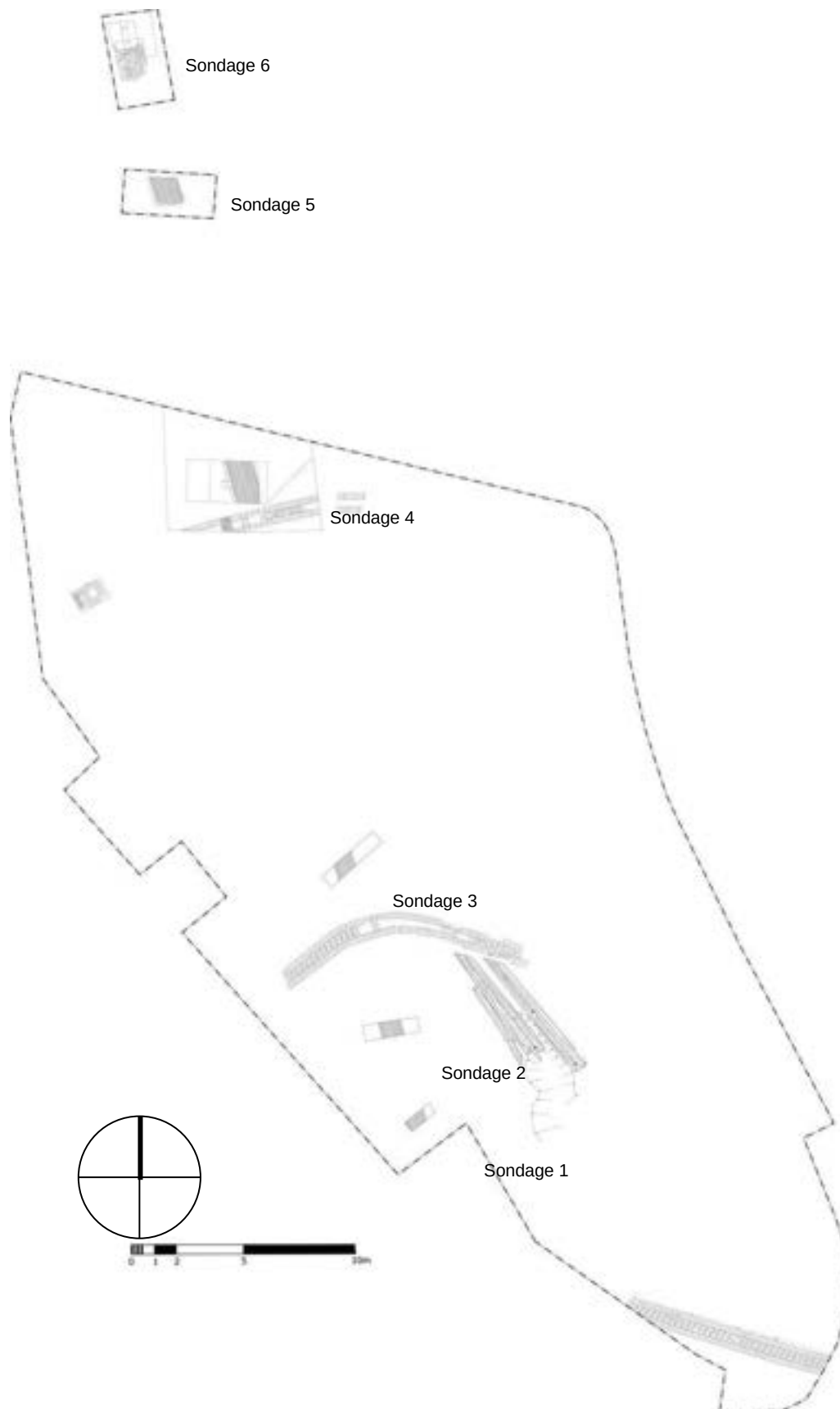


Figure 41 - Plan of the exposures of the drain in Thompson Square. (Source: AAJV 2018)

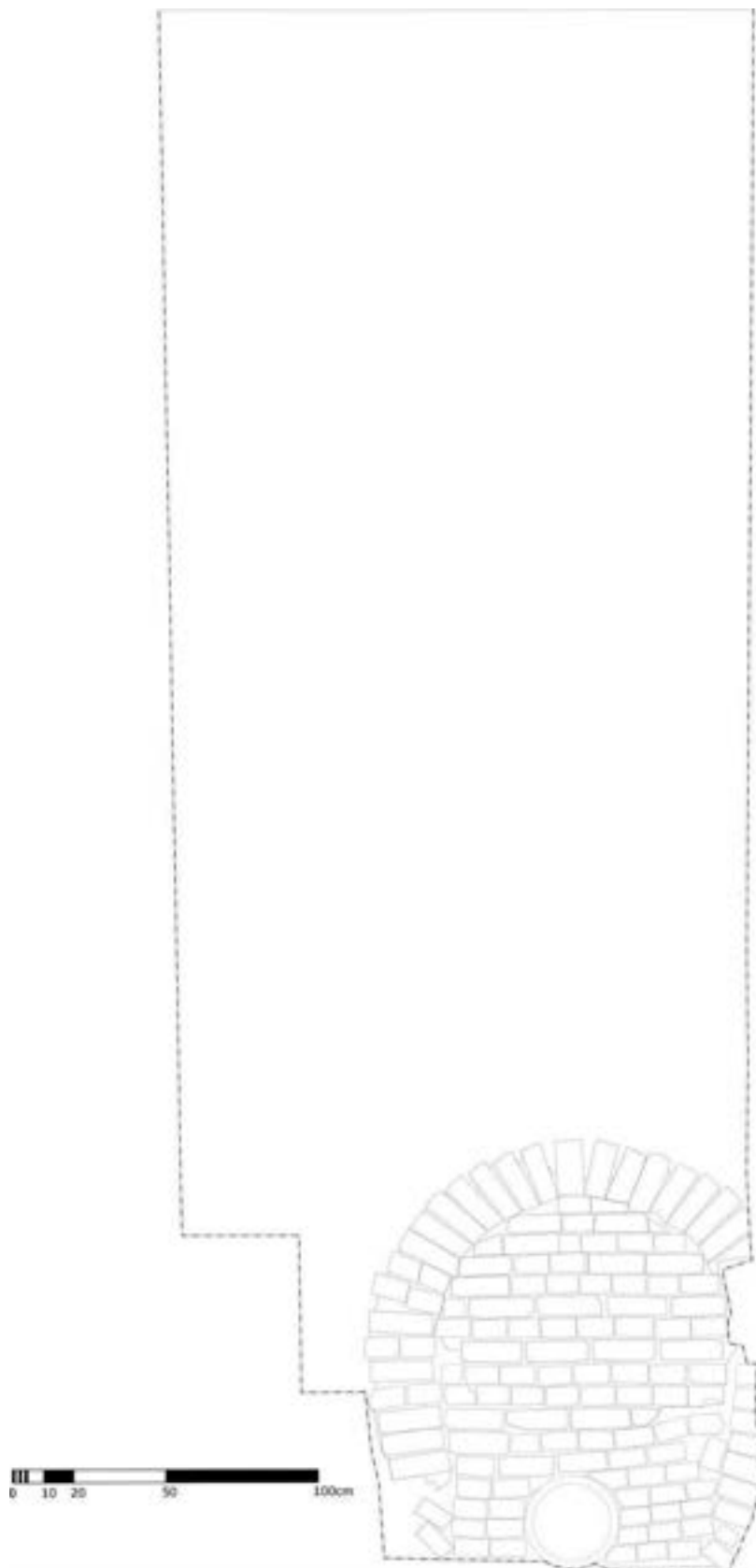


Figure 42 - Elevation of the drain headwall in sondage 6 – looking south. (Source: AAJV 2018)



Figure 43 - Bed of sandstock Brick 1 from drain arch with cratered surface, probably from the expansion of water vapour during firing. Note the possible scribe line (indicated). (Source: AAJV 2018)



Figure 44 - Bed of sandstock Brick 1 from drain arch showing strike side. Note the uneven trimming of the brick with each point on the side indicated. (Source: AAJV 2018)



Figure 45 - Strike of sandstock Brick 2. (Source: AAJV 2018)



Figure 46 - Bed of sandstock Brick 2. (Source: AAJV, 2018)



Figure 47 - Detail of Sample 1 mud mortar showing inclusion of calcined shell and larger calcined shell fragment. (Source: AAJV 2018)



Figure 48 - Detail of Sample 1 mud mortar showing small charcoal fragments (red) and organic matter -sawdust/chaff (blue) inclusions. (Source: AAJV 2018)



Figure 49 - Sample 2 of Patent cement. C.f with mortar. Note the larger consistent sand grain size (Source: AAJV 2018)



Figure 50 - A section of one of the box culverts with evidence of former timber coverings. (AAJV March 2018)

6 OPTIONS FOR THE BARREL DRAIN

This section reviews the options for conserving the barrel drain in light of the existing approved bridge design, as well as an alternate design.

Approved Bridge Footing Design

The existing bridge design includes the construction of a new concrete abutment structure along the eastern side of the project area.

A comparison of the approved design with the alignment of the brick barrel drain indicates that the existing design would require the removal of most, if not all, of the brickwork, as the footing alignment for the approved abutment design is essentially directly aligned with the barrel drain (by coincidence).

Construction of this design would require the excavation of a row of bored concrete piles, with a concrete capping beam on top. This design would require either the removal of the barrel drain prior to the piling work, or piling through the existing barrel drain.

In the first circumstance, the archaeological excavation of virtually the entire length of the barrel drain would be required to allow it to be recorded through measured drawing and photography prior to construction. There would be opportunity to recover some or all of the brickwork, though for reasons of practicality it is likely only a small “slice” of the drain could be retained and removed intact. The remaining brickwork could be salvaged and stored for some future use and interpretation, however the fragile nature of the bricks, related to their initial low firing temperature, means that certainly some of the bricks would be damaged during disassembly and transport, and any retained bricks would not be suitable for use other than in a controlled museum environment. The bricks could not, for example, be used as brick paving, as they would quickly degrade.

If the drain were not fully excavated and removed prior to piling, careful placement of the piles may result in some small sections of the drain remaining undisturbed and in situ, but in general the drain would be cut multiple times by the piling process, which would cause a range of damage to the structure which could not be easily controlled or rectified. The surface brick box culverts would also be damaged during this process, and likely destroyed unless salvaged, due to the nature of the construction processes.

The complete excavation of the drain would create a range of conservation and storage issues and, it should be noted, would require a secure, climate-controlled facility to house the material in the longer term. It would also allow only for ex situ conservation outcomes.

Proposed Amended Bridge Footing Design

Following the discovery of the barrel drain, RMS instructed the bridge designers, Jacobs, to investigate alternate footing designs for the southern bridge abutment, which would allow for the retention of as much of the barrel drain as possible.

Several iterations of a new footing option were explored, and materials conservation advice was sought from specialist conservators International Conservation Services. The core concept for the new footing design was to place a row of bored concrete piers on either side of the barrel drain, with the concrete capping beam spanning the distance between the piers, thus providing an abutment footing platform which bridged over the barrel drain and would conceal the drain but conserve it in situ, and largely intact. This proposal would still require sections of the surface box culverts to be removed.

Under this proposal, the piers will be located a minimum of 1500mm off each side of the barrel drain. Where the proposed capping beam is less than 500mm, the void above the drain will be filled with a

piece of custom formed Styrofoam, which will bridge the drain and serve as sacrificial formwork for the concrete of the capping beam while it is being poured. In other areas where the distance between the top of the drain and the formwork is greater than 500mm, the space will be backfilled with clean fill. Approximately 10m of the southern end of the barrel drain will also remain under the open space within the reconnected sections of Thompson Square, following the completion of the bridge construction.

This option will retain the vast majority of the drainage system intact, however it will be enclosed beneath the new bridge abutment. The engineering requirements and site geometry do not leave scope for sections of the drain to be left exposed, which would have a range of conservation and management issues in any event.

This proposal will require the majority of the surface brick box culverts to be removed, where the line of piling intersects with the surface drains or the drains are affected by utilities. Due to the shallow nature of the surface drains, they are also at a risk of construction damage. The box drains have been thoroughly recorded through measured drawing and photography during the archaeological investigations, and an option should be considered to disassemble and carefully salvage a section of culvert for potential interpretation. Other intact bricks from the culverts within the zone of construction impact will also be salvaged for interpretive use.

Recommendation

On the basis that the proposed alternate bridge abutment footing design is feasible from an engineering perspective, and will allow for the greater retention of historic fabric in situ, it is recommended that the alternate abutment footing design be adopted. The detailed impacts of that design are discussed below.

7 REVIEW OF IMPACTS OF PROPOSED REVISED ABUTMENT DESIGN

The revised abutment footing design consists of a series of bored piers placed approximately 1500mm either side of the barrel drain, which are then capped with a poured concrete capping beam. The piers are proposed to be poured to minimise vibration. As the areas for the piers have already been archaeologically investigated they do not require archaeological monitoring.

Where more than 500mm of space exists between the top of the barrel drain and the underside of the proposed capping beam, the barrel drain will be separated from the capping beam in the following manner:

Where the top of the drain remains unexcavated – by the remaining excising soil

Where the top of the drain has been exposed – by covering with a layer of geotextile and clean sand fill

Where 500mm or less space remains between the underside of the proposed capping beam and the top of the barrel drain, custom cut Styrofoam packers will be placed atop the drain, separated by a layer of geotextile.

These various covering materials will separate the wet concrete from the historic material and the soil, clean sand or Styrofoam packers will spread the load of the wet concrete above the drain, to manage any compression issues.

Once the capping beam has been poured and cured, the drain will be fully enclosed and protected beneath the new structure. The new abutment can be constructed above the capping beam with no further impact upon the historic drain.

It is anticipated that all of the existing barrel drain fabric will be able to be retained, however the surface box culverts will be cut by the new abutment footings, and it may be necessary to lower the height of the sumps by several courses in order to accommodate the new capping beam. These areas will be recorded prior to removal, and intact bricks will be removed and retained for interpretation.

See Appendix C for a full set of plans.

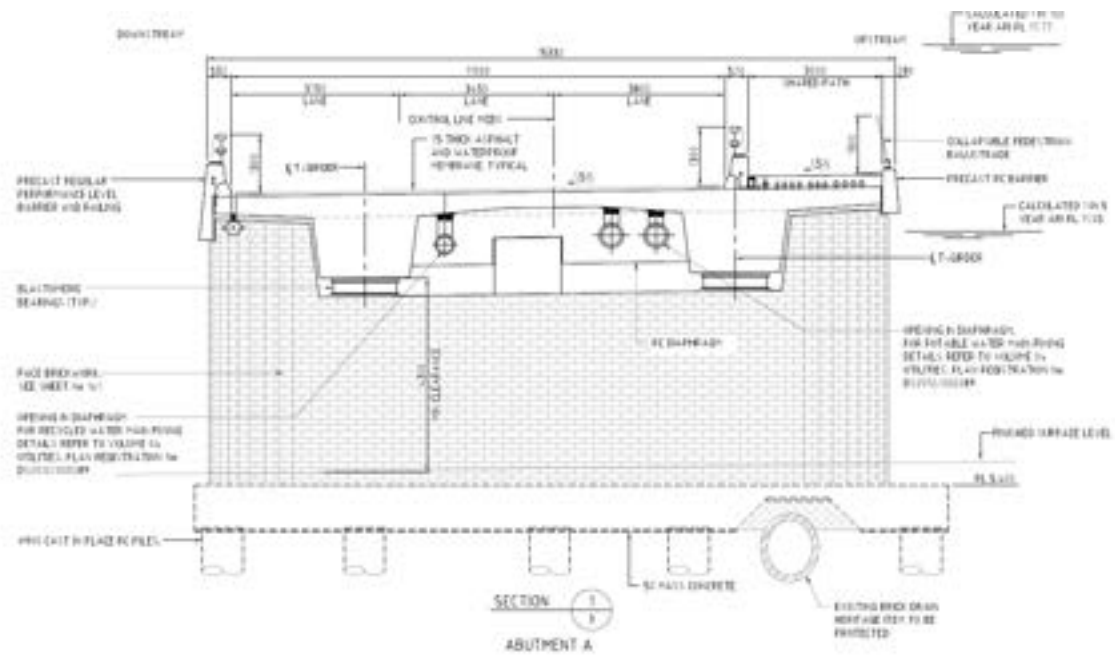


Figure 51 - Typical cross section of abutment and drain (Jacobs)

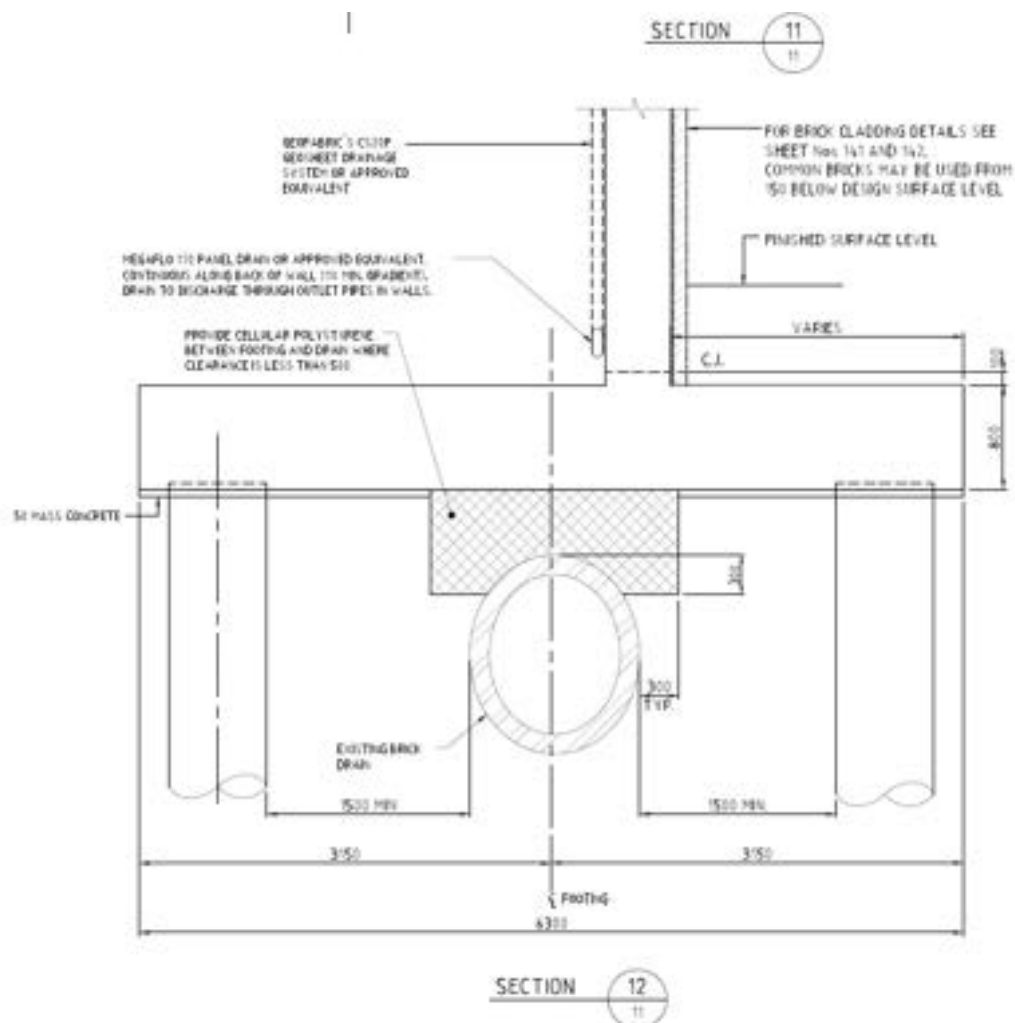


Figure 52 - Detailed cross section (Jacobs)

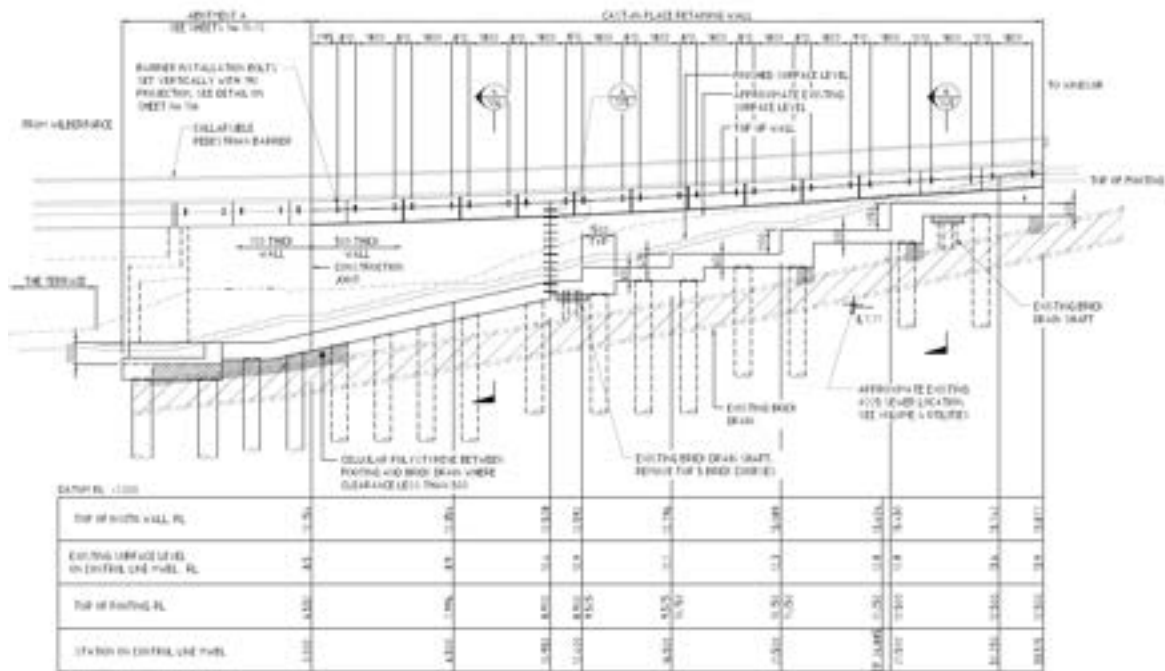


Figure 53 - elevation showing drain and new abutment. The hatched areas are where the foam packers will be placed. In other areas, the existing soil will be left in situ. (Jacobs)

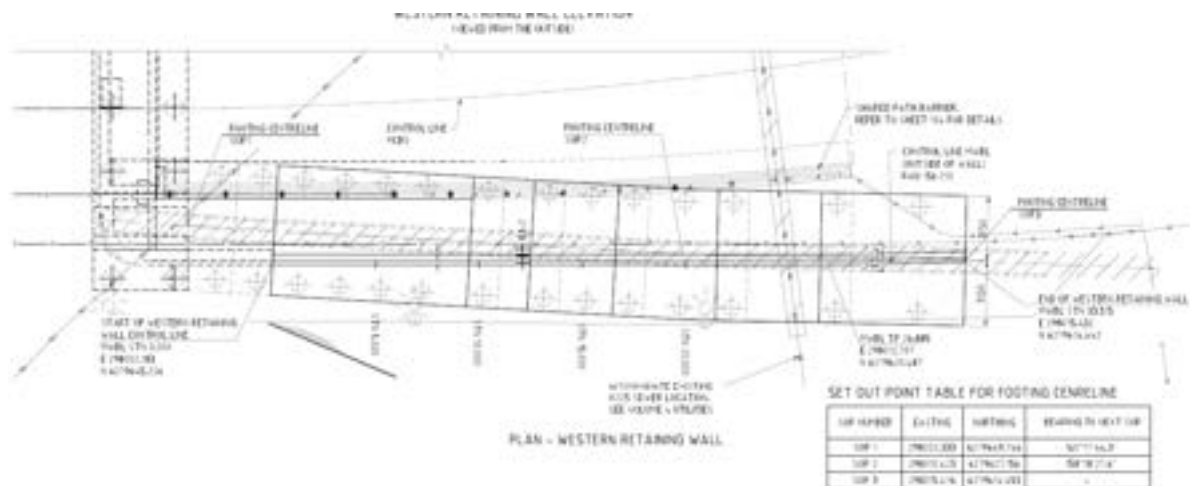


Figure 54 - Plan showing relationship of the piers to the drain (Jacobs)

8 DISCUSSION OF OPTIONS AND ALTERNATIVES

Within the scope of the approved bridge replacement project, there are essentially only two alternatives – the “do nothing” option, which involves implementing the approved bridge design, and the alternate abutment footing design, which will enclose the drain within the new footing design.

Option 1 – Record and Remove

If the “do nothing” option is selected, the drain will be largely destroyed by the approved bridge abutment design. Small sections of the drain may survive the piercing and construction of the capping beam, but this is not guaranteed, and the remains would be fragmented and inaccessible.

Under this option, a greater level of archaeological salvage should be undertaken, including complete excavation of the drain, drawing in plan and section, exposure of the full depth of the drain to allow recording in elevation and in cross-section, and archaeological monitoring during demolition. It may also be prudent to retain a larger quantity of bricks for future use and interpretation, and consideration should also be given to removing an intact cross-section of the drain for potential display off site.

This option would have a substantial heritage impact on the drain structure and would leave little intact and in situ remains following the completion of the bridge abutment works.

Option 2 – Proposed Concrete Footing Enclosure

Option 2 involves implementing the proposed revised bridge abutment footing design. This involves placing a series of bored concrete piers approximately 1500mm off either side of the drain, which will then support a concrete capping beam, which will in turn serve as the new foundation for the bridge abutment. This will transfer the load of the abutment around the barrel drain, allowing it to be retained largely in situ, although it will be inaccessible.

This option will have a minimal direct impact on the barrel drain, as a separation layer of either geofabric and Styrofoam or geofabric and clean sand fill will be placed between the surface of the brick drain and the underside of the capping beam.

The vibration impacts associated with the boring of the pier holes have been reviewed and acceptable limits have been determined by an engineer, which will not affect the drain (see Appendix).

The compression impacts of the wet concrete during the concrete pour have also been evaluated by an engineer and the compression from the wet concrete will be less than the compression which had previously existed during the period the drain was buried under 2+ metres of soil.

The materials conservation issues have also been reviewed by a conservator and their advice has been incorporated into the revised design.

The design of Option 2 will allow the existing portion of the barrel drain within the project area to be retained in its current form. Much of the drain will be able to remain unexcavated and thus protected within the existing ground conditions. The surface culverts will be partially demolished by the line of the new pier construction however this impact is similar to the impact of Option 1 and is unavoidable given the site constraints. All elements to be removed will be recorded, and it is proposed to carefully salvage a section of a box culvert by a conservator for future reconstruction and interpretation, while intact bricks will be salvaged for interpretation.

Conclusion

Neither option allows for original drain fabric to remain exposed in situ. Given the fragility of the remains and their location within a public park, keeping a section of the drain exposed for interpretation is a poor conservation option.

Even with Option 2, the finished ground levels are such that it is not possible to place a “viewing window” into a chamber containing a section of the drain. This may also create engineering issues requiring additional structural works which have not been investigated. Again any such viewing chamber would have a number of difficult conservation issues.

Off-site interpretation, or representative interpretation within Thompson Square are the better options to maximise the conservation of the historic fabric.

On the basis of the above analysis, Option 2 will allow for a greater retention of historic fabric in situ and thus is the preferred option.

9 DISCUSSION OF INTERPRETATION OPTIONS

Interpretation of this structure, as with any type of site, should aim to explain the significant aspects of the site to an audience that may not necessarily be familiar with the site's broader historical context or the engineering details of this type of structure. This is often most successfully undertaken where the object survives in situ within the broader context of its surroundings. Drains and sewers, however, were designed to be buried with the enclosing earth and fill being essential in maintaining the structural integrity of the drain. This is particularly the case with the Thompson Square drain in which construction was achieved using friable, under-fired brick and a bonding medium composed of earth and vegetable matter with very little lime.

Exposure of any section of the drain in situ is likely to result in accelerated deterioration and is not recommended.

It should also be remembered that the drain itself tells only a very limited part of the story of early 19th century Windsor, and the story of its construction, use and ultimate replacement needs to be worked into an overall understanding of the development of Windsor over time.

It is recommended that a section of box culvert is carefully recorded by the archaeologists and removed by conservators for conservation and secure storage prior to future reinstatement in an indoor context (e.g. Windsor Museum or a Council-nominated location). The Windsor Museum option may not be viable since there are in situ drains on display and any additional drain-related material may be a source of confusion.

Intact bricks and artefacts associated with the drain should also be retained for future interpretation works, although again this is likely to be off site interpretation due to the fragility of the items.

Detailed proposals for interpreting the drain, and the story of its construction and role within the early town of Windsor should be integrated into the final Interpretation Plan for the project area.

10 CONSULTATION

For the purposes of developing the approach to managing the barrel drain, the following entities were consulted with and/or notified about the potential in situ retention of the drain:

- Office of Environment and Heritage – via letter and in discussion with RMS between January and April 2018
- Department of Planning and Environment – via letter and in Project Control Group Meetings between January and April 2018
- Windsor Community – via a RMS Community Update flyer in March 2018
- Hawkesbury City Council – via a RMS Community Update flyer in March 2018
- Hawkesbury City Council Heritage Committee - via a site visit in February 2018
- Windsor Bridge Parliamentary Committee of Enquiry- via a site visit in March 2018
- A meeting between OEH, DPE and RMS was held in April 2018. The issues discussed included the approach to redesign, adequacy of technical advice from the material conservator, vibration specialist and structural engineer. The concerns raised by OEH have been addressed in this report
- In addition, specialist advice was sought from:
 - International Conservation Services – in relation to materials conservation issues
 - Jacobs – in relation to engineering design, vibration and compression issues
- The specialist advice from International Conservation Services and Jacobs is contained within the Appendices to this report.

11 CONCLUSIONS

The brick drain at Thompson Square is an early example of a major program of civic works undertaken in New South Wales. This was an ambitious project that sought to provide Windsor with wharfage facilities as well as improving access from George Street to the Hawkesbury River. The brick drain was to operate as a sewer and stormwater line that may have served existing buildings along the eastern side of the square, and future buildings on the western side. The drain is however not shown on any known plan or map of the area and this is at this stage conjectural. Future archaeological work along the periphery of the area investigated to date may clarify this.

Like many of Macquarie's public works responsibility for the work was vested in private contractors who were given access to Government assets. In the case of the Thompson Square drain the contractors were local men – John Howe and James Magrath. Howe, a free settler, succeeded [Andrew Thompson](#) as the licensed auctioneer at Windsor by his successful management of the sales of Thompson's property, which earned the favour of Governor [Lachlan Macquarie](#), Thompson's chief beneficiary. Howe would later rise to the position of Chief Constable and Coroner. James Magrath was a former convict who arrived from Ireland in 1802 and following release commenced farming in the Hawkesbury district. He would accumulate significant land-holdings in the district. In 1813, prior to the Thompson Square works Howe and Magrath had been contracted to complete and repair the road from Sydney to Windsor and to build a toll-bridge over South Creek at Windsor.

The drain built through Thompson Square was of a significant scale in both length and carrying capacity matched only by the drain constructed in Parramatta in 1814-1815 by Rowland Hassall. The ambitious nature of the project exceeded the capabilities of its builders and the quality of materials used in its construction. The design appears to have been based on the Lady Macquarie's Road culvert in the Royal Botanic Gardens, Sydney. The use of wood, rather than stone or brick, for covering the box culverts feeding into the barrel drain appears to have been an expedient which may have been related to cost, or a retrofit over a culvert which was originally left open. The use of mud mortar rather than lime may have been a product of price cutting or the unavailability of good quality lime.

The drain is a rare example of sewer/drainage works forming part of an early nineteenth century integrated civic construction program in New South Wales. The scale and form have not yet been recorded elsewhere, possibly indicating that smaller-scale brick barrel drains could be constructed more efficiently and at less cost to provide adequate servicing for settlements that still had small populations. Drains and sewers of the scale of the Thompson Square drain do not generally reappear as standard forms until the 1850s in Sydney by which time a large, concentrated population required sanitary services to improve living conditions and to curb disease. By the 1850s the geometry of drain construction was better understood and in most instances the design flaws that characterise the Thompson Square drain were avoided.

The drain has strong associations with Governor Lachlan Macquarie and his ambitions to transform the Colony through major public works that recognised the development of regional settlements as centres of population for both bond and free inhabitants. Although the intent may have been noble, the execution was less so. The drain also has direct associations with two notable Windsor inhabitants John Howe and James Magrath, both of whom played significant roles in the development of the Hawkesbury district.

The question of what was being drained and sewered remains unanswered. This may only become apparent once all of the available field data has been collated and analysed. Similarly, the extent of the main drain remains unclear. The head has not been located but it can be assumed that is located

north of George Street while the condition of the outlet cannot be examined due to the gabion wall that now forms the river foreshore.

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13 APPENDICES

13.1 Appendix A - Howe and Magrath Contract (ML MSS 106 Item 37)

This Article of Agreement made and Concluded on the Eighth day of
 August in the year of our Lord one thousand eight hundred and fourteen
 Between John Howe of Windsor Dealer and James Magrath of the same place
 Lathman of the one part and Henry Wentworth and Simon Lord Solicitors
 Commissioners of Woods for and on the part of Government of the other part
 Whereas the said John Howe and James Magrath have delivered in
 duplicate to His Excellency the Governor for filling up and levelling a
 certain piece of ground called Thompson's Square at the Bathurst and
 Erection a bridge at the Bathurst on the Terms and
 Conditions and for the Considerations herein after mentioned. And
 Whereas the said Terms and Conditions especially are that a bridge
 shall be erected at Windsor for joining the Front of Thompson's Square
 in filling up the ditch and reducing it to a gradual slope from the
 front of Bridge on which the Magrath's Stone stands to the top of the
 Hill and also the laying of one or two sewers the whole to be
 completed in manner following
 The Front of the Square to be piled with round Piles from 16 to 18
 inches thick to be from three to four feet apart in the Year to be
 three feet above the Water mark of Spring Tides but in a Line with
 the well Cap and secured by Land Ties to extend from side line
 to side line of the Square to be planked on the Inside of the Piles and
 then filled up to the top
 The bridge to commence from the upper side line of the Square to
 extend eighteen feet from the above Row of Piles which will be in
 deep water the bridge to be in Length to be planked on the Inside
 and filled up until it should be thought best to plank the top
 and in that case the same is to be planked and that filled up the
 whole to be capped and well secured by Land Ties as also to the Row
 of Piles on the front of the Square
 To sink and erect one sewer in the middle of the Square with Channels
 leading thence or to sink and erect two sewers one on each side
 of the Square as laid down in the Plan in the possession of His
 Excellency Governor Macgregor and as His Excellency may please to direct

J. H. & J. M.

The said John Howe and James Magrath hereby Covenant,
promise, bargain, undertake and Contract to and with the said
Davy Wentworth and Simon Lord Highways as Comptrolers or
officers on the part of Government that the work and Labor is
and about the said premises shall be done executed and performed
in a good substantial and workmanlike manner and shall be
commenced upon as soon after this Agreement is signed as
possible and shall be completed and finished within twelve calendar
months from the day of the date hereof without any Delay or Loss
of time and from time to time and at all times shall be
subject to the Direction of His Excellency the Governor or any,
from His Excellency may please to appoint by Warrant and
Subject the same in the Course of it. In Consideration
of which the said Davy Wentworth and Simon Lord as Comptrolers
as officers for and on Account of Government do hereby promise,
engage and undertake to lend and pay unto them the said
John Howe and James Magrath the sum of Three Hundred and
fifty pounds Sterling and Three Hundred and fifty Gallons of
Irish Rum or other Spirits of the best kind usually Imported
such sum of Money and Portion of Spirits to be paid and tendered as
follows in four equal portions that is to say one fourth part
to be paid and tendered at the Commencement of the Work, and
two other fourth parts during the progress thereof and the
fourth or last remaining proportion to be paid and tendered when
the whole of the said Work is finished and perfected in
pursuance of the Terms of this Contract and Covenant thereof.
And it is further understood and Agreed that they the said
John Howe and James Magrath shall be allowed the Use of the
Bullocks Team Carriage &c. &c. that are now allowed to be
for the Turnpike Road for the term of six months from the date
hereof and moreover that they shall be permitted to make from

One

State and delivered
in presence of

To: Anne
 Mary
 Robert Jones
 J. P. Jones

Stellenwert
A. B. C.

24/10/2000

James, no. 21

L. Magnus

13.2 Appendix B – Transcript of Howe and Magrath Contract

New South Wales

This article of agreement made and concluded on the eighth day of August in the year of Our Lord One Thousand Eight Hundred and fourteen between John Howe of Windsor – Dealer and James Magrath of the same place Labourer of the one part and D’Arcy Wentworth and Simeon Lord Esquires Commissioners of Roads for and on the part of Government of the other part Whereas the said John Howe and James Magrath have delivered in Proposals to His Excellency the Governor for filling up and levelling a certain Portion of Ground called “Thompson’s Square” at the Hawkesbury and Erecting a Wharfe at the Hawkesbury at Windsor on the Terms and Conditions and for the Considerations herein after mentioned and whereas the said Terms and Conditions expressly are that a Wharfe shall be erected at Windsor for piling the front of Thompson’s Square for filling up the same and reducing it to a gradual slope from the Rise or Ridge on which His Majesty’s Store stands to the top of the Piles and also the laying of one or two sewers the whole to be completed in Manner following

The Front of the Square to be piled with sound Piles from 16 to 18 inches thick to be from three to four feet in the clear to be three feet above the water mark of Spring Tides (X) in a Line with it, well capped and secured by Land Ties to extend from Side Line to Side Line of the Square to be planked on the Inside of the Piles and then filled up to the top.

The Wharfe to commence from the Upper Side Line of the Square to Extend Eighteen feet from the above Row of Piles which will be in deep Water to Extend fifty feet in Length to be planked on the Inside and filled up unless it should be thought bad to plank the top and in that Case the same is to be planked and not filled up, the whole to be Capped and well secured by Land Ties as also to the Row of Piles in the front of the Square.

To Sink and Erect one Sewer in the Middle of the Square with Channels leading thereto or to Sink and Erect two Sewers one on each side of the Square as laid down in the Plan in the possession of His Excellency Governor Macquarie and as His Excellency may pleas to direct and

the said John Howe and James Magrath hereby Consent and promise warrant undertake and Contract to and with the said D’Arcy Wentworth and Simeon Lord Esquires as Commissioners as aforesaid on the part of Government that the Work and Labor in and about the said premises shall be done executed and performed in a good substantial and workmanlike manner and shall be Commenced upon as soon after this agreement is perfected as possible and shall be Completed and finished within twelve Calendar months from the day of the date hereof without any Delay or Loss of time from time to time and at all times shall be subject to Inspection of His Excellency the Governor or any person His Excellency may please to appoint to (X) and Inspect the same in the Course of its Progress In Consideration of which the said D’Arcy Wentworth and Simeon Lord as Commissioners as aforesaid for and on account of Government Do hereby promise engage and undertake to tender and pay unto to them the said John Howe and James Magrath the sum of Three Hundred and fifty Pounds Sterling and three hundred and fifty Gallons of Bengal Rum or other Spirits of the best usually Imported.

Such sum of Money and Portion of Spirits to be paid and tendered as follows in four equal proportions that is to say one fourth has to be paid and tendered at the Commencement of Work and two other fourth parts during the progress thereof and the fourth or last remaining proportion to be paid and tendered when the Whole of the said work is finished and perfected in pursuance of the tenor of this Contract and (X) thereof. And it is further understood and agreed that they the said John Howe and James Magrath shall be allowed the use of the Bullocks Timber Carriage Carts &c that are now allowed to and for the Turnpike Road for the term of six months from the date hereof and moreover that they shall be permitted to make from

one hundred and twenty to one hundred and fifty thousand of Bricks on the Brick Ground now making at Windsor for Government And the said John Howe and James Magrath hereby consent engage and agree to receive the said sum of three hundred and fifty pounds sterling and the said Portion of Spirits being Three hundred and fifty Gallons with the other Allowances herein before Mentioned from Government in full Satisfaction and discharge of the said work so engaged by them to be Completed by this Contract and that they are willing to (X) the said Money and Spirits at the (X) herein before mentioned and to do execute and perform the same work in a good efficient and workmanlike manner within the time limited in the Contract And (X) the said John Howe and James Magrath jointly and severally (X) (X), to the said Darcy Wentworth and Simeon Lord Esquire a Commissioner as aforesaid on the part of Government in the penal Sum of one hundred pounds sterling for the due performance this Contract and the several matters and things therein contained (X) to the (X) Intent and Meaning thereof to be forfeited by them and levied on their Goods and Chattells in Case Default is made of the due performance thereof In Witness whereof the said (X) (X) herein to set their hand and seals the day and year (X)

Sealed and delivered in the presence of:

D Wentworth

S Lord

H Antill

(X)

Robert Jones

(X)

John Howe

James Magrath

Approved L Macquarie

APPENDIX 6. ARTEFACT CATALOGUE

6.1 CERAMIC

The following fields were recorded during the cataloguing of ceramic artefacts. The highlighted fields are included in the catalogue below. Data from the additional fields is available in the artefact database stored within the excavation archive.

Date Excavated	Dating Notes	Thickness (mm)
Catalogue Number	Maker	Length (mm)
Context	Distributor	Width (mm)
NISP	Product Maker	Portion
MNI	Text Form	Manufacture
% Remains	Text on Item	Body Decoration
Activity	Provenance	Surface Decoration
Function	Modifications	Pattern
Subfunction	Conjoins	Decoration Colour
Artefact Class	Height (mm)	Location
Material	Bore Diameter (mm)	Glaze Type
Ware Type	Base Diameter (mm)	Photographed?
Weight (g)	Rim Diameter (mm)	Conservation Measure
Artefact TPQ	Base Length (mm)	Notes
Artefact TAQ	Base Width (mm)	

Catalogue Number	Context	NISP	MNI	%	Activity	Function	Subfunction	Material	Ware Type	Weight (g)	Artefact TPQ	Artefact TAQ	Maker	Text on Item	Provenance	Portion	Body Decoration	Surface Decoration	Pattern	Decoration Colour	Notes
WBRHS181095	1488	8	1	20	Food service	Tableware	Platter	Refined earthenware	Gilt Earthenware	296.1	1820					Rim, marly, shoulder & base		Gilt	Banded	Silver	Platter. Whiteware. Banded silver gilt, rim & marly
WBRHS181096	1488	3	0	20	Food service	Tableware	Platter	Refined earthenware	Gilt Earthenware	32.6	1820					Rim, marly & shoulder		Gilt	Banded	Silver	Platter. Whiteware. Banded silver gilt, rim & marly
WBRHS181097	1488	2	1	20	Food service	Tableware	Tureen	Refined earthenware	Gilt Earthenware	34.3	1820					Rim, body & handle		Gilt	Banded	Silver	Soup tureen, ovoid shape, handle & tag. Whiteware. Banded silver gilt, rim & body
WBRHS181155	1488	4	1	20	Food service	Tableware	Flatware	Porcelain	Chinese Blue-and-White porcelain	39.1		1850			China	Base		Underglaze hand painted	Canton, scene with bridge, temple & house	Blue	Flatware. Chinese export porcelain, Canton scene
WBRHS181156	1488	1	0	5	Food service	Tableware	Plate	Porcelain	Chinese Blue-and-White porcelain	12.4		1850			China	Base		Underglaze hand painted	Canton, scene with boat	Blue	Plate. Chinese export porcelain. Canton scene
WBRHS181157	1488	28	0	40	Food service	Tableware	Plate	Refined earthenware	Gilt Earthenware	307.9	1820					Rim & marly		Gilt	Banded	Silver	Plate. Whiteware. Banded silver gilt, rim & marly
WBRHS181158	1488	9	0	20	Food service	Tableware	Platter	Refined earthenware	Gilt Earthenware	133.5	1820					Rim, marly, shoulder & base		Gilt	Banded	Silver	Platter. Whiteware. Banded silver gilt, rim & marly
WBRHS181159	1488	36	0	50	Food service	Tableware	Platter	Refined earthenware	Gilt Earthenware	356.3	1820					Rim, marly & shoulder		Gilt	Banded	Silver	Plate. Whiteware. Banded silver gilt, rim & marly. Collected fragments of different plates
WBRHS181192	1488	5	1	30	Food service	Tableware	Plate	Refined earthenware	Gilt Earthenware	35.5	1820					Rim, marly & shoulder		Gilt	Banded	Silver	Plate. Whiteware. Banded silver gilt, rim & marly
WBRHS181201	1412	2	2	100	Household	Bottle	Blacking polish	Stoneware	Salt-glazed Stoneware	447	1805	1869	Day and Martin	Real Japan Blacking made by Day and Martin. 97 High Holborn, London	London	Whole		Glazed		Red and yellow	2x Blacking bottles. Stoneware, salt-glaze "Day and Martin Real Japan Blacking" Stonewear, Salt glaze. Paper labels present
WBRHS181206	1488	4	1	20	Food preparation	Large vessel	Bowl	Refined earthenware	Glazed Earthenware	193.9	1820					Base & foot		Glazed		Clear	Large bowl. Whiteware. Base & foot. Undecorated
WBRHS181207	1488	28	0	20	Food service	Tableware	Plate	Refined earthenware	Gilt Earthenware	136.6	1820					Rim & marly		Gilt	Banded	Silver	Plate. Whiteware. Banded silver gilt, rim & marly. Collected fragments of different plates
WBRHS181212	1488	2	0	10	Food preparation	Large vessel	Bowl	Refined earthenware	Glazed Earthenware	140.2	1820					Base & foot		Glazed		Clear	Large bowl. Whiteware. Base & foot. Undecorated
WBRHS181213	1488	2	1	50	Food service	Tableware	Egg cup	Refined earthenware	Glazed Earthenware	21.7	1760	1830				Cup & Base		Glazed		Clear	Egg cup. Creamware. Base & cup, separate fragments, no cross-mend
WBRHS181218	1488	3	1	20	Food service	Tableware	Tureen	Refined earthenware	Gilt Earthenware	198.1	1820					Base & foot		Gilt	Banded	Silver	Large soup tureen, ovoid shape, pedestal base & foot. Whiteware. Banded silver gilt, pedestal base & foot
WBRHS181219	1488	7	0	40	Food service	Tableware	Platter	Refined earthenware	Gilt Earthenware	239.6	1820					Marly & Body		Gilt	Banded	Silver	Platter. Whiteware. Marly & base. Banded silver gilt, marly
WBRHS181225	1488	1	0	5	Food service	Tableware	Bowl	Refined earthenware	Gilt Earthenware	11.5	1820					Rim		Gilt	Banded	Silver	Serving bowl (missing lid). Whiteware. Banded silver gilt, rim & marly. Cross-mend with cat#181236
WBRHS181230	1488	2	1	10	Food preparation	Large vessel	Bowl	Refined earthenware	Glazed Earthenware	71.5	1820					Rim & marly		Glazed		Clear	Large bowl. Whiteware. Rim & marly. Undecorated
WBRHS181231	1488	2	1	30	Food service	Tableware	Saucer	Refined earthenware	Gilt Earthenware	23.2	1820					Rim, marly, foot & base		Gilt	Banded	Silver	Saucer. Whiteware. Banded silver gilt, rim & marly
WBRHS181236	1488	10	1	30	Food service	Tableware	Bowl	Refined earthenware	Gilt Earthenware	255.4	1820					Rim, marly, shoulder & base		Gilt	Banded	Silver	Serving bowl (missing lid). Whiteware. Banded silver gilt, rim & marly. Cross-mend with cat#181225
WBRHS181237	1488	7	0	40	Food service	Tableware	Platter	Refined earthenware	Gilt Earthenware	444.3	1820					Rim, marly, shoulder & base		Gilt	Banded	Silver	Platter. Whiteware. Banded silver gilt, rim & marly
WBRHS181258	1488	4	0	30	Food service	Tableware	Flatware	Refined earthenware	Glazed Earthenware	60.1	1820					Base		Glazed		Clear	Flatware. Whiteware. Base. Undecorated
WBRHS181264	1488	5	1	30	Food service	Tableware	Platter	Refined earthenware	Gilt Earthenware	403.8	1820					Rim, marly, shoulder & base		Gilt	Banded	Silver	Platter. Whiteware. Banded silver gilt, rim & marly
WBRHS181268	1488	7	0	10	Food service	Tableware	Platter	Refined earthenware	Gilt Earthenware	101.3	1820					Rim & marly		Gilt	Banded	Silver	Platter. Whiteware. Banded silver gilt, rim & marly
WBRHS181282	1488	3	0	10	Food service	Tableware	Plate	Refined earthenware	Gilt Earthenware	47.2	1820					Marly, body & base		Gilt	Banded	Silver	Plate. Whiteware. Banded silver gilt, marly
WBRHS181299	1488	2	1	20	Food service	Tableware	Plate	Porcelain	Chinese Blue-and-White porcelain	29.3		1850			China	Base		Underglaze hand painted	Canton, scene with tree	Blue	Plate. Chinese export porcelain. Canton scene

WBRHS181333	1488	1	1	5	Food service	Tableware	Hollow ware	Porcelain	Chinese HP porcelain	3.7		1750			China	Body		Underglaze & Overglaze hand painted	Imari	Blue & red	Hollow ware vessel. Chinese export porcelain, Imari style (floral) < https://www.gotheborg.com/qa/exportforthewest.shtml >
WBRHS181372	1488	1	0	10	Food service	Tableware	Sugar bowl	Porcelain	Chinese Blue-and-White porcelain	7.2		1830			China	Rim & body		Underglaze hand painted	Fitzhugh pattern	Blue	Sugar bowl. Chinese export porcelain, Canton. Fitzhugh pattern
WBRHS181385	1488	1	1	5	Food service	Tableware	Teaware	Refined earthenware	TP Earthenware	6	1820					Body		Transfer-print	Banded	Brown	Teaware, Hollow ware, cup or bowl. Brown TP, banded pattern, interior & exterior
WBRHS181391	1488	1	1	5	Food service	Tableware	Bowl	Porcelain	Chinese Blue-and-White porcelain	5.3		1850			China	Body		Underglaze hand painted	Lotus, Lingzhi & Spiral	Blue	Bowl. Chinese export porcelain, Canton. Lotus, Lingzhi & Spiral pattern
WBRHS181397	1488	2	1	5	Food service	Tableware	Plate	Porcelain	Chinese Blue-and-White porcelain	41.6		1850			China	Rim, marly & shoulder		Underglaze hand painted	Well & Tree	Blue	Plate. Chinese export porcelain. Canton. Well & Tree border pattern
WBRHS181403	1488	9	1	60	Food service	Tableware	Sugar bowl	Porcelain	Chinese Blue-and-White porcelain	133.5		1830			China	Rim, body, foot & base		Underglaze hand painted	Fitzhugh pattern	Blue	Sugar bowl. Chinese export porcelain, Canton. Fitzhugh pattern
WBRHS181409	1488	8	1	40	Food service	Tableware	Bowl	Porcelain	Chinese Blue-and-White porcelain	470		1850			China	Rim, body, foot & base		Underglaze hand painted	Canton	Blue	Serving bowl (missing lid), handle tag. Chinese export porcelain, Canton scene
WBRHS181415	1488	7	1	30	Food service	Tableware	Bowl	Porcelain	Chinese Blue-and-White porcelain	44		1830			China	Rim, body, foot & base		Underglaze hand painted	Fitzhugh pattern	Blue	Bowl. Chinese export porcelain, Canton. Fitzhugh pattern. Cross-mend with cat#181580
WBRHS181422	1488	3	0	15	Food service	Tableware	Bowl	Refined earthenware	Glazed Earthenware	46.6	1820					Rim, marly & shoulder		Glazed		Clear	Bowl, serving dish, missing lid. Whiteware. Undecorated. Associated (cross-mend?) with cat#181451
WBRHS181428	U/S	1	0	100	Building	Insulator	Electric insulator	Stoneware	Salt-glazed Stoneware	291	1916					Complete		Glazed		Clear	Electric insulator. Stoneware, salt-glaze. Circular & hollow moulded shape. 2x ferrous metal wiring
WBRHS181433	1488	10	0	30	Food service	Tableware	Platter	Refined earthenware	Gilt Earthenware	199.6	1820					Marly, body & base		Gilt	Banded	Silver	Platter. Whiteware. Marly & base. Banded silver gilt, marly
WBRHS181434	1412	2	1	30	Food storage	Jar	Large storage jar	Refined earthenware	Glazed Earthenware	135.1	1780	1830				Base & body		Glazed		Clear	Large food storage jar. Pearlware. Clear lead glaze, interior & exterior
WBRHS181439	1488	4	0	10	Food service	Tableware	Plate	Refined earthenware	Gilt Earthenware	17.1	1820					Rim, marly & shoulder		Gilt	Banded	Silver	Plate. Whiteware. Banded silver gilt, rim & marly
WBRHS181445	1488	1	0	5	Food service	Tableware	Handle	Refined earthenware	Glazed Earthenware	3.3	1820					Handle		Glazed		Clear	Handle. Whiteware. Undecorated
WBRHS181446	1412	2	1	30	Food service	Tableware	Platter	Refined earthenware	Relief-decorated Earthenware	320	1780	1830				Rim, marly, foot & base	Moulded	Glazed	Ribbon (vine?) pattern with grapes on rim & marly	Clear	Plate. Pearlware. Relief-moulded rim & marly, ribbon (vine?) & grapes pattern. Same pattern as cat#181688
WBRHS181451	1488	1	1	25	Food service	Tableware	Bowl	Refined earthenware	Glazed Earthenware	58.3	1820					Rim, marly & shoulder		Glazed		Clear	Bowl, serving dish, missing lid. Whiteware. Undecorated. Associated (cross-mend?) with cat#181422
WBRHS181452	U/S	6	0	45	Food storage	Container	Large storage bowl	Course earthenware	Lead Glaze Ware	2518						Rim, body & lug handle		Banded	Incised fern pattern on lug handles	Brown	Large food storage bowl. Coarse earthenware. Handmade lug handles with incised fern pattern, slip banded body. Brown lead glaze, exterior only. Dry goods
WBRHS181455	U/S	1	0	2	Food service	Tableware	Teaware	Refined earthenware	Relief-decorated Earthenware	8	1780	1830				Body	Moulded	Slight vertical curves		Clear	Teaware, Hollow ware. Pearlware. Moulded exterior body.
WBRHS181456	U/S	1	0	5	Household	Bottle	Blacking polish	Stoneware	Salt-glazed Stoneware	11.6						Body		Glazed		Clear	Bottle. Stoneware, salt-glaze, exterior
WBRHS181457	U/S	1	0	10	Household	Houseware	Candlestick	Refined earthenware	Gilt Earthenware	21.4	1820					Rim & bowl		Gilt	Banded	Gold	Candlestick. Whiteware. Banded gilt on interior rim
WBRHS181458	1433	1	1	5	Food service	Tableware	Bowl	Refined earthenware	TP Flow	10.5	1835					Marly & Body		Transfer-print	Floral	Blue	Bowl. Refined white earthenware. Interior: Flow Blue TP, post 1835. Floral pattern. Exterior: Light blue glaze. Brooks 2005: 38-39
WBRHS181459	1433	1	1	5	Food service	Tableware	Teaware	Porcelain	Porcellaneous	1.9	1790					Handle		Glazed		Clear	Undiagnostic handle, teaware. Bone china. Brooks 2005: 27

WBRHS181461	U/S	1	0	20	Unknown	Indeterminate	Jug	Refined earthenware	TP Flow	9.8	1835					Body		Transfer-print	Two temples?	Blue	Jug. Tablewear or Toiletries. Refined white earthenware. Flow Blue TP, post 1835. Two temples pattern? Brooks 2005: 38-39, Crook 2019: 18
WBRHS181462	1420	1	1	5	Food service	Tableware	Saucer	Porcelain	Porcellaneous	3	1790					Base & foot		Glazed		Clear	Saucer. Bone china. Undecorated
WBRHS181463	1374	1	1	10	Food storage	Bottle	Unknown	Refined earthenware	Glazed Earthenware	23.3	1820					Body		Glazed		Clear	Bottle, body. Whiteware. Undecorated
WBRHS181464	1433	1	1	2	Food service	Tableware	Flatware	Porcelain	TP Porcellaneous	3.2	1790					Body		Transfer-print	Unidentified	Blue	Flatware. Bone china. Blue TP, interior. Brooks 2005: 27
WBRHS181465	1433	1	0	2	Food service	Indeterminate	Flatware	Refined earthenware	Glazed Earthenware	1.5	1820					Body		Glazed		Clear	Flatware, undiagnostic body sherd. Whiteware
WBRHS181467	U/S	1	0	10	Toiletries	Vessel	Jug/Chamber pot	Refined earthenware	HP Earthenware Poly	48	1780	1830				Handle		Underglaze hand painted	Floral & banded	Red	Large handle of jug or chamber pot, moulded thumb rest. Pearlware. Hand painted red.
WBRHS181468	1433	1	1	2	Food service	Tableware	Flatware	Refined earthenware	TP Flow	1.2	1835					Marly	Moulded	Transfer-print & Overglaze gilt	Paisley gilt over Flow blue marly	Blue	Flatware. Refined white earthenware. Marly: moulded bevel edge. Marly: Flow Blue TP with Overglaze gilt paisley pattern
WBRHS181469	1374	1	1	2	Food service	Tableware	Hollow ware	Refined earthenware	Relief-decorated Earthenware	0.5	1780	1830				Body	Engine turned	Glazed	Horizontal rim lines	Green	Body fragment, hollow ware. Pearlware? External engine turned small horizontal rings wih green glaze
WBRHS181470	1366	1	1	2	Food service	Tableware	Flatware	Refined earthenware	TP Earthenware	2.6	1780	1830				Shoulder		Transfer-print	Floral	Blue	Tableware, Flatware. Pearlware. Blue TP interior
WBRHS181471	1433	1	1	2	Food service	Indeterminate	Flatware	Refined earthenware	Glazed Earthenware	4.5	1820					Body		Glazed		Clear	Flatware, undiagnostic body sherd. Whiteware
WBRHS181474	1366	1	1	5	Household	Houseware	Pot	Terracotta	Terracotta	22.7						Rim		Unglazed			Unglazed terracotta red coarseware pot. Gardenware?
WBRHS181475	1508	1	1	5	Food service	Tableware	Plate	Refined earthenware	Gilt Earthenware	2.1	1820					Shoulder	Moulded	Gilt	Banded	Silver	Plate. Whiteware. Banded gilt on marly. Similar to set of gilt tableware context [1490]
WBRHS181476	U/S	1	0	5	Food service	Tableware	Flatware	Porcelain	Chinese Blue-and-White porcelain	2.2		1850			China	Body		Underglaze hand painted	Floral	Blue	Body fragment. Chinese import porcelain. Canton scene, floral rim
WBRHS181477	1433	1	1	5	Food storage	Bottle	Ginger beer	Stoneware	Salt-glazed Stoneware	15						Body		Glazed		Clear	Bottle. Stoneware, salt-glaze, exterior & interior
WBRHS181479	1508	1	1	5	Food service	Tableware	Plate	Refined earthenware	Banded	8.8	1860					Shoulder		Underglaze hand painted	Banded	Brown	Plate. Refined white earthenware. Brown banded line handpainted on shoulder. Brooks 2005: 36
WBRHS181480	U/S	5	0	40	Food storage	Bottle	Ginger beer	Stoneware	Salt-glazed Stoneware	411	1866	1919	Conlon & Co	CONLON & / BROUGHTON STREET / GLEBE	Broughton Street, Glebe, Sydney	Base, Rim & shoulder		Glazed		Clear	Ginger beer bottle. Stoneware, salt-glaze. Bottle maker: "CONLON & / BROUGHTON STREET / GLEBE" stamped on body above base, c.1866-1919 < https://www.sydneyaldermen.com.au/alderman/michael-joseph-conlon/ >
WBRHS181481	1508	3	1	10	Food service	Tableware	Plate	Refined earthenware	Gilt Earthenware	17.3	1820					Rim, marly & shoulder		Gilt	Banded	Silver	Plate. Refined white earthenware. Banded gilt on marly. Similar to set of gilt tableware context [1490]
WBRHS181482	1366	3	1	2	Unknown	Indeterminate	Hollow ware	Refined earthenware	Industrial Slip	6.9	1830					Body		Industrial slip	Mocha	Brown	Chamber pot. Yellowware. Industrial slip, mocha. Interior brown dendric pattern. Brooks 2005: 40
WBRHS181483	U/S	1	0	2	Food service	Tableware	Teaware	Porcelain	Porcelain	2	1900					Body		Overglaze decal	Polychrome floral	Brown & Green	Teaware. Porcelain. Overglaze polychrome decal, post-1900. Brooks 2005: 36-37
WBRHS181485	U/S	1	0	10	Food service	Tableware	Plate	Refined earthenware	TP Earthenware	6.6	1780	1830				Base		Transfer-print	Floral	Blue	Tableware, Plate. Pearlware. Blue TP interior
WBRHS181487	1433	3	1	5	Toiletries	Vessel	Chamber pot	Refined earthenware	TP Earthenware	5.1	1820					Body		Transfer-print	Marble-style	Blue	Chamber pot. "Marble-type" pattern. Interior & Exterior: irregular veined blue TP pattern with light blue lead glaze. Brooks 2005: 45.
WBRHS181488	U/S	1	0	5	Food service	Tableware	Hollow ware	Refined earthenware	Glazed Earthenware	8.6	1760	1830				Base & foot		Glazed		Clear	Tableware, Hollow ware (bowl?). Creamware. Base & foot. Creamware glaze.

WBRHS181496	U/S	2	0	5	Unknown	Indeterminate	Unknown	Refined earthenware	TP Earthenware	18.2	1820					Body		Transfer-print	Floral	Blue	Flatware, flower box? Rectangular serving dish? Refined white earthenware. Blue TP on exterior & interior, floral exterior pattern & unknown interior pattern. End corner of interior TP pattern?
WBRHS181502	1229	1	1	20	Food service	Tableware	Bowl	Porcelain	Chinese Blue-and-White porcelain	5.2		1850			China	Body		Underglaze hand painted	Canton, banded	Blue	Bowl. Chinese export porcelain. Canton scene, banded
WBRHS181508	U/S	1	0	20	Food service	Tableware	Tea cup	Porcelain	Porcellaneous	13.1	1790	1850				Rim, body & handle		Gilt	Interior: ribbon & dots, Exterior: banded	Red & Silver	Teacup. Bone china. Overglaze hand painted. Interior rim: red ribbon & dots. Exterior rim: silver band
WBRHS181520	U/S	1	0	10	Food service	Tableware	Flatware	Refined earthenware	Glazed Earthenware	9.3	1780	1830				Base		Glazed		Clear	Tableware, Flatware. Pearlware. Undecorated base
WBRHS181526	U/S	2	0	30	Food service	Tableware	Bowl	Refined earthenware	Glazed Earthenware	41.5	1760	1830				Base, body & foot, Rim		Glazed		Clear	2x fragments. Creamware. Bowl = Body & foot. Bowl = Rim
WBRHS181527	1374	1	1	2	Food service	Tableware	Flatware	Porcelain	Chinese Blue-and-White porcelain	1.5		1850			China	Rim		Underglaze hand painted	Canton rim	Blue	Flatware. Rim. Chinese export porcelain
WBRHS181530	U/S	1	0	10	Food service	Tableware	Bowl	Refined earthenware	Sponge Print ware	5.5	1835					Rim		Cut sponged	Geometric & Banded	Brown	Bowl. Refined white earthenware. Brown handpainted rim banded & cut sponged, post-1835 Brooks 2005: 42
WBRHS181531	1488	1	1	20	Food service	Tableware	Plate	Refined earthenware	Edgeware	25	1841	1857				Rim, marly, shoulder & base	Moulded	Underglaze hand painted	Shell-edge	Blue	Plate. Refined earthenware. Blue shell-edged, unscaloped impressed. Brooks 2005: 41
WBRHS181532	U/S	3	0	15	Food service	Tableware	Plate	Refined earthenware	Relief-decorated Earthenware	40	1820					Rim, marly, foot & base	Scalloped & moulded rim	Glazed	Leaf pattern	Clear	Plate. Whiteware. Rim relief-moulded banded & leaf pattern
WBRHS181533	1497	1	1	5	Food service	Tableware	Hollow ware	Refined earthenware	TP Earthenware	2.9	1820					Body		Transfer-print	Floral	Blue	Tableware, Hollow ware. Blue TP exterior & interior. Blue floral print.
WBRHS181537	U/S	1	0	10	Unknown	Vessel	Hollow ware	Porcelain	Porcelain Moulded	36	1790					Body & shoulder?	Moulded	Glazed	Floral?	Brown	Hollow ware vessel. Jug, figurine, or vase? Bone china, glazed interior & exterior. Large moulded body, floral pattern, exterior brown glaze.
WBRHS181538	U/S	1	0	10	Food service	Tableware	Plate	Refined earthenware	Glazed Earthenware	14	1900					Rim and marly		Overglaze decal	Polychrome floral	Pink, green & white	Saucer. Whiteware. Overglaze polychrome decal, post-1900. Brooks 2005: 36-37
WBRHS181539	1497	1	1	5	Building	Architectural	Pipe	Course earthenware	Sewerage Pipe	59.6						Rim & body		Glazed		Clear	Large sewer pipe. Coarse earthenware. Clear lead glaze, exterior & interior
WBRHS181542	U/S	1	0	5	Unknown	Bottle	Unknown	Stoneware	Salt-glazed Stoneware	3.5						Body		Glazed		Clear	Bottle. Stoneware, salt-glaze, exterior
WBRHS181543	1488	1	1	15	Household	Houseware	Figurine	Refined earthenware	HP Earthenware Poly	21.1	1780	1830				Base & body	Moulded	Overglaze hand painted and moulded	Indeterminate	Red	Figurine or Vase? Pearlware, glazed interior & exterior. Small diameter base (52mm). Moulded body, draped fabric? Overglaze handpainted red on moulded relief & single band around base
WBRHS181544	U/S	5	0	30	Toiletries	Vessel	Chamber pot	Refined earthenware	Glazed Earthenware	168	1820					Rim & body		Glazed		Clear	Chamber pot. Whiteware
WBRHS181545	U/S	1	0	10	Food service	Tableware	Bowl	Refined earthenware	TP Earthenware	35.1	1820					Base & foot		Transfer-print	Floral	Black	Large food service bowl. Whiteware. Black TP
WBRHS181547	1422	1	1	10	Food service	Tableware	Plate	Porcelain	Chinese Blue-and-White porcelain	5		1850			China	Base & foot		Underglaze hand painted	Canton	Blue	Flatware. Chinese export porcelain, Canton scene
WBRHS181549	1453	1	1	5	Food service	Indeterminate	Unknown	Refined earthenware	Unknown	2.3						Base		Glazed		Clear	Base fragment. Undecorated
WBRHS181551	U/S	1	0	20	Food service	Tableware	Teaware	Refined earthenware	Glazed Earthenware	10.7	1820					Body & handle		Underglaze hand painted	Line on handle	Brown	Teaware, body & handle. Whiteware. Brown handpainted line on handle exterior
WBRHS181553	1427	1	1	10	Food service	Tableware	Plate	Porcelain	Chinese Blue-and-White porcelain	7		1850			China	Body		Underglaze hand painted	Canton, scene with tree	Blue	Plate. Chinese export porcelain, Canton scene
WBRHS181555	1453	1	1	5	Food service	Tableware	Bowl	Porcelain	Chinese Blue-and-White porcelain	3.1		1850			China	Rim		Underglaze hand painted	Canton, scene with clouds	Blue	Bowl. Chinese export porcelain, Canton scene

WBRHS181556	U/S	1	0	20	Food service	Tableware	Tea saucer	Porcelain	Sprigged Porcellaneous	17	1820					Rim & body	Moulded	Glazed	Sprigged grapevine	Blue	Tea saucer. Sprigged bone china, Chelsea Porcelain. Light blue glazed grapevine sprig over clear lead glaze body, post-1820. Brooks 2005: 43. Associated with cat#181811
WBRHS181557	U/S	2	0	5	Food preparation	Container	Bowl	Course earthenware	Lead Glaze Ware	8						Rim		Glazed		Clear	Bowl fragment. Coarse earthenware. Rim. Clear lead glaze, exterior & interior
WBRHS181559	U/S	1	0	35	Medical	Jar	Lid	Refined earthenware	TP Earthenware	8.7	1870	1901	S Maw, Son & Thompson	... [S]ON & THOMPS[ON] / ... TO 12.	London	Lid		Transfer-print		Black	Lid, smelling salts? White earthenware. Black TP "S Maw, Son & Thompson, 7-12 Aldersgate, London" 1870-1901 (retirement of Thompson & company renamed). Medical & surgical supplier. < https://collection.sciencemuseumgroup.org.uk/people/cp46545/s-maw-son-thompson > < https://londonstreetviews.files.wordpress.com/2015/08/1869-smelling-salt-bottles.jpg >
WBRHS181561	U/S	1	0	10	Food service	Tableware	Saucer	Refined earthenware	Relief-decorated Earthenware	7	1820					Rim & marly	Scalloped & moulded rim	Overglaze hand painted	4 dots irregular pattern	Orange	Saucer. Whiteware. Scalloped & roulette moulded rim. Overglaze handpainted, 4 orange dots in irregular rim pattern
WBRHS181562	1590	2	1	10	Toiletries	Vessel	Jug/Chamber pot	Refined earthenware	TP Earthenware	36	1820					Body		Transfer-print	Floral	Black	Jug/Chamber pot. 2x conjoined body fragments. Black TP. Floral pattern
WBRHS181563	1456	1	1	20	Food storage	Jar	Large storage jar	Course earthenware	Lead Glaze Ware	165						Base & body		Glazed		Brown	Large food storage jar. Coarse earthenware. Brown lead glaze, interior only
WBRHS181566	1412	1	1	20	Food service	Tableware	Flatware	Refined earthenware	Banded	9	1820					Rim		Underglaze hand painted	Banded	Green	Flatware, plate? Whiteware. Green banded line handpainted on interior rim.
WBRHS181567	1412	1	1	20	Food service	Tableware	Teaware	Refined earthenware	Sponge Print ware	10	1820					Rim & body		Sponge painted	Sponged flowers and banded rim	Brown	Teaware, Hollow ware, cup or bowl. Exterior: brown sponge painted flowers, handpainted banded rim. Interior: brown handpainted rim
WBRHS181568	U/S	1	0	20	Food service	Tableware	Platter	Refined earthenware	Relief-decorated Earthenware	132.2	1780	1830				Rim & marly	Moulded	Glazed	Scrolls on marly	Clear	Platter. Pearlware. Relief-moulded marly, scroll pattern. Conjoin with cat#181676
WBRHS181569	U/S	1	0	20	Food service	Tableware	Bowl	Refined earthenware	Relief-decorated Earthenware	30	1780	1830				Rim & body	Moulded		Floral with leaves	Clear	Tableware, shallow bowl. Pearlware. Rim & body. Moulded exterior, floral pattern with leaves. Same pattern as cat#181763
WBRHS181570	U/S	1	0	20	Food storage	Bottle	Stout bottle	Stoneware	Industrial Slip	87	1866	1923	James Miller, Port Dundas Glasgow Pottery Co.	PO... / GLA... / POT...	Glasgow	Base & body		Industrial slip		White	Stout/Ale Bottle. Stoneware. Industrial slip, clear glaze, interior & exterior. "PO... / OLA... / POT..." stamped on body above base. Maker = James Miller, Glasgow, "Port Dundas/Glasgow/Pottery Co." Williamson 1999, Museums Victoria Collections; Brooks 2005: 28
WBRHS181572	U/S	1	0	5	Food service	Tableware	Teaware	Porcelain	Porcellaneous	3.7	1790					Handle		Glazed		Clear	Teaware handle. Bone china. Clear lead glaze
WBRHS181573	U/S	3	0	30	Food service	Tableware	Platter	Porcelain	TP Porcellaneous	407	1790					Rim, marly and body		Transfer-print	Willow	Blue	Platter. Bone china. Willow pattern, post-1790. Brooks 2005: 27

WBRHS181574	1488	35	5	30	Food service	Tableware	Teaware	Refined earthenware	TP Earthenware	242	1818	1846	Enoch Wood & Sons		Burslem, Staffordshire , England	Rim, body, foot & base		Transfer-print	Sheepshearer	Blue	5x Teaware, Hollow ware, cup or bowl. Pearlware. Blue TP. Interior base: cottage in woods. Exterior rim & body: 'Wild Rose' style border & Pattern = "Sheepshearer" or "Sheep Shearer II", Enoch Wood & Sons, Burslem, Staffordshire, 1818-1846. Transferware Collector's Club, pattern #1006. Associated (matched set?) with cat#181630.
WBRHS181575	U/S	1	0	20	Food preparation	Container	Bowl	Refined earthenware	Yellow ware	70	1830					Rim & body	Moulded	Glazed	Floral and gate pattern on body	Yellow	Utilitarian bowl. Yellow Ware. Exterior: moulded body, floral & gate pattern, yellow glaze. Interior: clear glaze. Possible cross-mend with WBRHS181592
WBRHS181578	U/S	1	0	35	Medical	Jar	Lid	Refined earthenware	TP Earthenware	12.5	1866	c. 1921	Isaac Josephson	[...]'S AUSTRALIA[N...] / FOR / SOR[ES]... ; Grey star shape behind text	Sydney	Lid		Transfer-print		Black	Lid fragment. Isaac Josephson patent 1866, Sydney. Produced & distributed by Edward Row & Company, Wholesale Pharmacists, Sydney, 1855-c.1921. <i>The Chemist and Druggist</i> March 15, 1883, p.102. Full text: JOSEPHSON'S AUSTRALIAN OINTMENT, SYDNEY, N.S.W./ FOR ALL SORES, OLD WOUNDS, BURNS, SUNBURNS, CHAFING, CHAPPED HANDS &C &c.; Grey star shape behind label text. < https://archaeologyonthefrontier.com/2017/04/11/wounds-of-all-descriptions-the-nmp-and-medical-self-treatment/ > < http://www.shfa.nsw.gov.au/sydney-About_us-Heritage_role-Heritage_and_Conservation_Register.htm&objectid=82 > Associated with cat#181738, but separate lids, MNV=1
WBRHS181579	U/S	1	0	20	Food service	Tableware	Saucer	Porcelain	Porcellaneous	14	1790					Rim, marly, foot & base		Gilt	Banded	Gold	Saucer. Bone china. Banded gilt on interior rim & marly
WBRHS181580	1488	2	0	10	Food service	Tableware	Bowl	Porcelain	Chinese Blue-and-White porcelain	2		1830			China	Rim		Underglaze hand painted	Fitzhugh pattern	Blue	Bowl. Chinese export porcelain, Canton. Fitzhugh pattern. Cross-mend with cat#181415
WBRHS181581	U/S	1	0	5	Food service	Tableware	Plate	Refined earthenware	Glazed Earthenware	9	1820					Rim		Overglaze hand painted	Possible banded gilt rim?	Silver?	Plate. Whitewear. Possible linear gilt enamel on rim (eroded)
WBRHS181584	U/S	4	0	40	Toiletries	Vessel	Chamber pot	Refined earthenware	Relief-decorated Earthenware	425.9	1890		J & G Meakin, Hanley	IRONSTONE... / Royal Arms with Lion Rampant / J. & G. MEAKIN / HANLEY/ ENGLAND	Hanley, Staffordshire , England	Rim, body & base	Moulded	Transfer-print	Maker's mark	Black	Chamber pot. Whiteware. Maker's mark on base "IRONSTONE... / Royal Arms with Lion Rampant / J. & G. MEAKIN / HANLEY/ ENGLAND", post-1890. < http://www.thepotteries.org/mark/m/meakin_jg.html >
WBRHS181585	U/S	1	0	30	Food service	Tableware	Teaware	Porcelain	Porcellaneous	6	1900					Rim & body		Overglaze decal	Unidentified	Brown	Teaware. Bone china. Overglaze polychrome decal, remnant brown, post-1900. Brooks 2005: 36-37
WBRHS181586	1427	1	1	5	Food service	Tableware	Teaware	Refined earthenware	TP Earthenware	1	1820					Body		Transfer-print	Floral and linear	Green	Tableware (Teaware?), Hollow ware. Whiteware. Green TP, exterior. Floral and linear pattern
WBRHS181590	1427	1	1	5	Food storage	Houseware	Bowl	Course earthenware	Unglazed ware	26						Rim & body		Unglazed			Unglazed bowl fragment. Coarse earthenware. Rim and body

WBRHS181591	U/S	4	0	10	Household	Houseware	Pot	Stoneware	Relief-decorated Stoneware	53						Body	Moulded	Glazed	Floral patterns with chamfered sides	Exterior: blue, green & white. Interior: brown	Household pot. Stoneware. Relief-moulded decorative exterior body, floral pattern with chamfered corners, blue, green & white lead glaze. Interior brown lead glaze. Flower pot or vase?
WBRHS181592	1412	2	1	40	Food preparation	Container	Bowl	Refined earthenware	Yellow ware	297	1830					Rim & body	Moulded	Glazed	Floral and gate pattern on body	Yellow	Utilitarian bowl. Yellow Ware. Exterior: moulded body, floral & gate pattern, yellow glaze. Interior: clear glaze. Possible cross-mend with WBRHS181575
WBRHS181595	U/S	1	0	90	Toiletries	Jar	Lid	Refined earthenware	Glazed Earthenware	33	1820					Lid		Glazed		Clear	Lid, almost complete. Whiteware. Clear lead glaze, exterior & interior. Same as cat#181626
WBRHS181596	U/S	1	0	60	Food storage	Bottle	Ginger beer	Stoneware	Salt-glazed Stoneware	411	1842	1870	Thomas Field	T. FIELD / POTTER / [S]YDNEY	George Street, Sydney	Base & body		Glazed		Clear	Ginger beer bottle. Stoneware, salt-glaze. Bottle maker: "T. FIELD / POTTER / [S]YDNEY" stamped on body above base, c.1842-1870 Jones 2009: 53 (1867) < https://collection.maas.museum/object/185307 > (1842)
WBRHS181597	U/S	1	0	10	Food service	Tableware	Plate	Refined earthenware	Relief-decorated Earthenware	5	1780	1830				Rim	Scalloped & moulded rim	Glazed	Ribbon (roulette striped vine?) pattern with flowers on rim	Clear	Plate. Pearlware. Relief-moulded rim, ribbon (roulette striped vine?) pattern with flowers on rim
WBRHS181599	1599	1	1	5	Food service	Tableware	Saucer	Refined earthenware	TP Earthenware	4.4	1780	1830				Rim & body		Transfer-print	Wild rose border	Blue	Saucer. Pearlware. Blue TP, Wild Rose border
WBRHS181600	1412	1	1	20	Food storage	Jar	Large storage jar	Refined earthenware	Glazed Earthenware	99	1780	1830				Body, base & foot		Glazed		Clear	Large food storage jar. Pearlware. Clear lead glaze, interior & exterior
WBRHS181602	1488	1	1	5	Food service	Tableware	Saucer	Refined earthenware	TP Earthenware	3	1820					Rim		Transfer-print	Rhine-style floral scroll pattern on rim	Blue	Saucer. Blue TP, Rhine-style floral scroll border. Whiteware, post-1820. Brooks 2005: 26
WBRHS181606	1412	8	2, 2, 1	50	Household & Food storage	Bottle	Ink bottle, Ginger beer & Unknown	Stoneware	Industrial slip & Salt-glazed Stoneware	385, 383, 198	1850					Base, Base & body, Finish, neck & body		Industrial slip		White & Clear	Bottles. Stoneware. Industrial slip or Salt-glazed. 2x Ink bottles (finish, neck & body), MNV=2, white industrial slip, post-1850 Brooks 2005: 28. 2x Bases, MNV=1, white industrial slip, unknown contents. 4x Bases, Ginger beer bottles (?) MNV=2, salt-glazed
WBRHS181608	U/S	1	0	20	Food service	Tableware	Hollow ware	Refined earthenware	Glazed Earthenware	22	1820					Base & foot		Glazed		Clear	Tableware, hollow ware (bowl?). Whiteware. Base & foot. Undecorated
WBRHS181612	1412	1	0	20	Food service	Tableware	Teaware	Refined earthenware	Glazed Earthenware	10	1820					Base & foot		Glazed		Clear	Teaware, Hollow ware, cup or bowl. Whiteware. Undecorated. Possibly associated with cat#181618
WBRHS181614	U/S	1	0	10	Food service	Tableware	Bowl	Refined earthenware	HP Earthenware Poly	8.8	1820					Rim & body		Underglaze hand painted	Banded rim (red), with stylized floral interior (blue & black)	Red & Blue, black	Bowl. Whiteware. Handpainted with clear lead glaze. Interior red banded rim, Interior stylised floral (?) pattern, three small blue dots over black vertical line (tree?)
WBRHS181618	1412	1	1	30	Food service	Tableware	Teaware	Refined earthenware	Glazed Earthenware	20	1820					Body, base & foot		Glazed		Clear	Teaware, Hollow ware, cup or bowl. Whiteware. Undecorated. Possibly associated with cat#181612
WBRHS181620	1412	1	1	45	Household	Pot	Flower saucer	Terracotta	Terracotta	237						Rim, body & base		Painted		Light blue	Unglazed terracotta red coarseware saucer. Faint blue remnant exterior paint. Gardenware?

WBRHS181624	1412	3	1	15	Food storage	Jar	Large storage jar	Stoneware	Salt-glazed Stoneware	441						Base & body		Glazed		Brown & Clear	Large food storage jar. Stoneware, salt-glaze. Exterior: brown 'orange peel'. Interior: clear glaze
WBRHS181626	1412	1	1	100	Toiletries	Jar	Lid	Refined earthenware	Glazed Earthenware	57	1820					Lid		Glazed		Clear	Lid, complete. Whiteware. Clear lead glaze, exterior & interior. Same as cat#181595
WBRHS181629	U/S	1	0	5	Food service	Tableware	Jug	Refined earthenware	TP Earthenware	32	1820					Handle		Transfer-print	Floral	Blue	Jug handle. Whiteware. Blue TP. Floral pattern
WBRHS181630	1488	1	1	5	Food service	Tableware	Teaware	Refined earthenware	TP Earthenware	10	1818	1846	Enoch Wood & Sons		Burslem, Staffordshire , England	Rim & body		Transfer-print	Sheepshearer	Blue	Teaware, Saucer. Pearlware. Blue TP. Interior rim & body: 'Wild Rose' style border & Pattern = "Sheepshearer" or "Sheep Shearer II", Enoch Wood & Sons, Burslem, Staffordshire, 1818-1846. Transferware Collector's Club, pattern #1006. Associated (matched set?) with cat# 181574
WBRHS181632	1412	2	1	100	Household	Bottle	Ink bottle	Stoneware	Salt-glazed Stoneware	220.3	1860	1910				Complete		Glazed		Clear	2x Ink bottles. 'Penny ink well' style. Stoneware, salt-glaze. Weights = 104.3g & 116g Collections WA: c.1860-c.1910 < https://collectionswa.net.au/items/0142e116-ea44-44cd-a01f-ebd48f6b4170 >
WBRHS181635	1412	1	1	10	Food service	Tableware	Jug	Refined earthenware	Relief-decorated Earthenware	58	1780	1830				Handle	Moulded	Glazed	Linear	Clear	Jug handle. Pearlware. Moulded, linear pattern
WBRHS181636	1412	1	1	10	Household	Bottle	Ink bottle	Stoneware	Industrial Slip	34.5	1850					Finish, neck & shoulder		Industrial slip		White	Ink bottle. Stoneware. Industrial slip, clear glaze. Finish, neck & shoulder, post-1850 Brooks 2005: 28
WBRHS181637	1488	11	1	40	Food service	Tableware	Bowl	Refined earthenware	TP Earthenware	198	1809	1838	Thomas Rathbone & Co.		Portobello, Edinburgh, Scotland	Rim, body & base		Transfer-print	Chinese Raftman & Ruins	Blue	Bowl. Pearlware. Blue TP. Pattern = "Chinese Raftman & Ruins", Thomas Rathbone & Co., Portobello Pottery, Edinburgh, Scotland, 1809-1838. Pattern distinguished by "castle gate & towers" scene on rim & base interior. GR Haggerty 2019 "Scottish East Coast Transfer Printed Wares", p.15-16. Unpublished paper for Transfer Collectors Club of America. Associated (matched set?) with cat#181665
WBRHS181641	U/S	2	0	25	Food service	Tableware	Flatware	Refined earthenware	TP Flow	44	1835		Possible Minton, Staffordshire	Base: "M" (TP) and "2" (Stamped)	England	Body, base & foot		Transfer-print	Chinoiserie, with pavillion	Black	Plate. Pearlware, pre-1830. Flow Black TP, post 1835. Chinoiseie pattern with pavilion, pre-1870. Samford 1997. Base mark "M" (TP) and "2" (impressed. Possible Minton, Stoke-on-Trent. Godden 1991
WBRHS181642	1555	1	1	10	Food storage	Jar	Large storage jar	Course earthenware	Lead Glaze Ware	61						Base & body		Red slip		Red & Clear	Large food storage jar. Coarse earthenware. Red slip exterior. Clear lead glaze, interior
WBRHS181643	U/S	1	0	20	Food service	Tableware	Tea pot	Refined earthenware	Rockingham ware	9	1850					Rim & body	Moulded		Geometric Chinoserie knot	Brown	Tea pot. Rockingham ware. Body & interior rim for lid. Moulded geometric Chinoserie knot pattern on upper body
WBRHS181647	1412	2	1	15	Toiletries	Vessel	Wash bowl/Chamber pot	Refined earthenware	TP Earthenware	65	1820					Rim & body		Transfer-print	Greek key	Purple	Washbowl or Chamber pot. Refined white earthenware. Purple TP. Greek key repeat pattern, flattened rim & interior. Possible scallop moulding on interior body?
WBRHS181648	1427	1	1	5	Food service	Tableware	Flatware	Refined earthenware	TP Earthenware	3	1780	1830				Rim		Transfer-print	Unidentified	Blue	Tableware, Flatware. Pearlware. Blue TP
WBRHS181649	U/S	1	0	10	Food service	Tableware	Teaware	Porcelain	Porcellaneous	3	1790					Handle		Glazed		Clear	Teaware handle. Bone china. Clear lead glaze

WBRHS181652	U/S	2	0	20	Food service	Tableware	Platter	Refined earthenware	Relief-decorated Earthenware	279.8	1859					Rim, marly & shoulder	Moulded	Glazed	Wheat Pattern	Clear	Platter. Refined earthenware. Wheat Pattern on rim & marly, scalloped bowl, 1859+ Sussman, L. 1985 <i>The Wheat Pattern: An Illustrated Survey</i> . Parks Canada. Associated with cat#181780
WBRHS181653	1422	1	1	5	Food storage	Jar	Large storage jar	Course earthenware	Lead Glaze Ware	5						Rim		Glazed		Clear	Large food storage jar. Coarse earthenware. Clear lead glaze, interior & exterior rim
WBRHS181654	1599	1	1	5	Food service	Tableware	Flatware	Refined earthenware	TP Earthenware	1.7	1820					Rim & body	Moulded	Transfer-print	Fibre	Blue	Tableware, Flatware. Whiteware. Dot moulded rim. Blue TP Fibre pattern. Brooks 2005: 45 & Fig 4.39
WBRHS181657	U/S	1	0	20	Household	Houseware	Figurine	Bisque earthenware	TP Earthenware	6.6	1815	1823	Bentley, Wear & Bourne (engravers)		Shelton, Staffordshire , England	Body		Overglaze transfer-print	Naval scene	Black	Commemorative jug. Bisque fired earthenware. Black TP: Naval scene, Ship with detailed rigging & sails. Designed by Bentley, Wear & Bourne, fine engravers. Vine Street, Shelton, Staffordshire, England, 1815-1823 . Known for commemorative display jugs in bisque earthenware & creamware, bulbous body shape with gold gilt banding on rim, foot & handle. Jugs display naval battle scenes associated with American/English War of 1812. < http://printedbritishpotteryandporcelain.com/what-did-they-make/pottery-item/jug-2 >
WBRHS181658	1427	1	1	15	Food service	Tableware	Tea saucer	Porcelain	Porcellaneous	3	1790					Rim		Glazed		Pink	Tea saucer. Bone china. Pink lead glaze, interior & exterior. Brooks 2005: 27
WBRHS181659	1412	1	1	10	Food service	Tableware	Tea pot	Refined earthenware	HP Earthenware Poly	10	1780	1830				Spout		Underglaze hand painted	Lines on spout	Black	Tea pot. Pearlware. Spout. Moulded ceramic strainer on interior. Black handpainted horizontal lines on spout exterior.
WBRHS181660	U/S	1	0	5	Unknown	Bottle	Unknown	Stoneware	Salt-glazed Stoneware	2.4						Body		Glazed		Clear	Bottle. Stoneware, salt-glaze, exterior & interior
WBRHS181661	1412	1	1	30	Toiletries	Container	Jar	Porcelain	Porcellaneous	12	1790					Base & body		Glazed		Clear	Jar or Pot? Toiletries. Bone china. Undecorated lead glaze
WBRHS181665	1488	14	5	30	Food service	Tableware	Teaware	Refined earthenware	TP Earthenware	73	1809	1838	Thomas Rathbone & Co.		Portobello, Edinburgh, Scotland	Rim, body & base		Transfer-print	Chinese Raftman & Ruins	Blue	5x Teaware, Hollow ware, cup or bowl. Pearlware. Blue TP. Pattern = "Chinese Raftman & Ruins", Thomas Rathbone & Co., Portobello Pottery, Edinburgh, Scotland, 1809-1838. Pattern distinguished by "castle gate & towers" scene on rim & base interior. GR Haggerty 2019 "Scottish East Coast Transfer Printed Wares", p.15-16. Unpublished paper for Transfer Collectors Club of America. Associated (matched set?) with cat#181637
WBRHS181666	1508	1	1	10	Food service	Tableware	Hollow ware	Refined earthenware	TP Earthenware	1.4	1820					Body		Transfer-print	Unidentified	Blue	Bowl. Whiteware. Blue TP
WBRHS181667	1412	1	1	30	Food service	Tableware	Teaware	Refined earthenware	Glazed Earthenware	19	1820					Body, base & foot		Glazed		Clear	Teaware, Hollow ware, cup or bowl. Whiteware. Undecorated

WBRHS181669	1412	1	1	10	Food service	Tableware	Flatware	Refined earthenware	TP Earthenware	12	1851					Body		Transfer-print	Scene with children and teacher, including framed signs '...THE WAY WE SHOULD GO' & 'BAN.../OF.../HOP ...'	Black	Flatware (Plate?). Black TP. Partial scene with children and teacher, including framed sign '...THE WAY HE SHOULD GO' & doorway labeled 'BAN.../OF.../HOP...'. Child Ware, Brooks 2005: 48-49. Transfer-print associated with Band of Hope, Nonconformist temperance movement, founded 1847 in Leeds. TP scene based on magazine illustration of children signing abstinence pledge with teacher, under signs "Band of Hope" and "Train up a child in the way he should go" (Proverbs 22:6). Magazine: Band of Hope Review & Children's Friend, Edition 1, Jan 1851, page 1. Edited by Thomas Bywater Smithies, published by Partridge & Co., London
WBRHS181670	U/S	1	0	20	Food storage	Jar	Large storage jar	Course earthenware	Lead Glaze Ware	221						Body		Glazed		Clear	Large food storage jar. Coarse earthenware. Clear lead glaze, interior & exterior
WBRHS181676	U/S	1	0	20	Food service	Tableware	Platter	Refined earthenware	Relief-decorated Earthenware	119.8	1780	1830				Rim, marly & shoulder	Moulded	Glazed	Scrolls on marly	Clear	Platter. Pearlware. Relief-moulded marly, scroll pattern. Conjoin with cat#181568
WBRHS181682	U/S	1	0	10	Food service	Tableware	Tea pot	Refined earthenware	HP Earthenware Poly	15	1780	1830				Handle		Underglaze hand painted	Line on handle	Green	Tea pot. Pearlware. Handle. Green handpainted line on handle exterior
WBRHS181688	U/S	1	0	60	Food service	Tableware	Plate	Refined earthenware	Relief-decorated Earthenware	207	1780	1830				Rim, marly, foot & base	Moulded	Glazed	Ribbon (vine?) pattern with grapes on rim & marly	Clear	Plate. Pearlware. Relief-moulded rim & marly, ribbon (vine?) & grapes pattern. Same pattern as cat#181446
WBRHS181694	1412	1	1	100	Food storage	Bottle	Stout bottle	Stoneware	Industrial Slip	703	1850					Complete		Industrial slip		White	Bottle. Stoneware. Complete. Industrial slip, clear glaze. No maker marks. Stout beer style bottle, post-1850 Brooks 2005: 28
WBRHS181700	U/S	1	0	45	Food service	Tableware	Lid	Refined earthenware	Relief-decorated Earthenware	28.7	1820					Lid rim	Moulded	Glazed	Floral	Clear	Teaware, lid. Whiteware. Oval shaped body & interior rim. Moulded exterior body, floral pattern.
WBRHS181706	U/S	1	0	40	Food service	Tableware	Saucer	Refined earthenware	Relief-decorated Earthenware	88.3	1820					Rim, body & foot	Moulded	Glazed	Floral	Clear	Saucer. Whiteware. Moulded interior body, irregular floral pattern
WBRHS181707	1412	1	1	30	Food preparation	Large vessel	Bowl	Refined earthenware	Glazed Earthenware	36	1820					Body, base & foot		Glazed		Clear	Bowl. Whiteware. Body & foot
WBRHS181713	U/S	1	0	30	Food service	Tableware	Teaware	Refined earthenware	TP Earthenware	13	1820					Rim, body & base		Transfer-print	Rim dot border, interior & exterior. Chain pattern exterior	Blue	Teaware, Hollow ware, cup or bowl. Blue TP. Possible cross-mend with WBRHS181761
WBRHS181730	1599	1	1	5	Food service	Tableware	Plate	Refined earthenware	TP Earthenware	4	1820					Body		Transfer-print	Willow	Blue	Plate. Willow pattern. Whiteware, post-1820. Brooks 2005: 26
WBRHS181736	1488	1	1	5	Food service	Tableware	Tea saucer	Refined earthenware	TP Flow	4	1835					Body		Transfer-print	Floral	Blue	Tea saucer. Refined white earthenware. Flow Blue TP, post 1835. Floral pattern towards rim

WBRHS181738	1412	1	1	30	Medical	Jar	Lid	Refined earthenware	TP Earthenware	7	1866	c. 1921	Isaac Josephson	[...] OINTME[NT]... / [...]ORES / [...]DS, BURNS / [...]S CHAFING ; Grey star shape behind text	Sydney	Lid		Transfer-print		Black	Lid fragment. Isaac Josephson patent 1866, Sydney. Produced & distributed by Edward Row & Company, Wholesale Pharmacists, Sydney, 1855-c.1921. <i>The Chemist and Druggist</i> March 15, 1883, p.102. Full text: JOSEPHSON'S AUSTRALIAN OINTMENT, SYDNEY, N.S.W./ FOR ALL SORES, OLD WOUNDS, BURNS, SUNBURNS, CHAFING, CHAPPED HANDS & C &c.; Grey star shape behind label text. < https://archaeologyonthefrontier.com/2017/04/11/wounds-of-all-descriptions-the-nmp-and-medical-self-treatment/ > < http://www.shfa.nsw.gov.au/sydney-About_us-Heritage_role-Heritage_and_Conservation_Register.htm&objectid=82 > Associated with cat#181578, but separate lids, MNV=1
WBRHS181742	1488	1	1	5	Food service	Tableware	Teaware	Refined earthenware	TP Earthenware	1	1820					Handle		Transfer-print	Unidentified	Blue	Teaware, Hollow ware, cup or bowl. Blue TP
WBRHS181743	U/S	3	0	40	Toiletries	Vessel	Chamber pot	Refined earthenware	TP Earthenware	158	1820					Base, body and handle join		Transfer-print	Marble-style	Blue	Chamber pot or Wash Basin. "Marble-type" pattern. Exterior = irregular veined blue TP pattern with light blue lead glaze. Interior = clear lead glaze. Brooks 2005: 45.
WBRHS181744	1488	1	0	2	Food service	Tableware	Flatware	Refined earthenware	TP Earthenware	1	1820					Body		Transfer-print	Unidentified	Blue	Flatware. Blue TP, Willow?
WBRHS181745	1412	1	1	40	Household	Architectural	Fitting	Refined earthenware	Relief-decorated Earthenware	44	1820					Body	Moulded	Glazed	Concentric circles of raised dots	Clear	Household ceramic. Whiteware. Moulded knob with decorative concentric relief pattern. Central square hole for spindle attachment. Door knob? Lamp stand?
WBRHS181746	1488	4	1	10	Food service	Tableware	Plate	Refined earthenware	TP Earthenware	35	1780	1830				Rim & marly		Transfer-print	Willow	Blue	Plate. Pearlware. Blue TP, Willow pattern. Brooks 2005: 44
WBRHS181749	1412	1	1	20	Food service	Tableware	Platter	Refined earthenware	TP Earthenware	68	1820	1870				Base		Transfer-print	Gothic Revival style	Purple	Platter. Whiteware. Purple TP: partial scene of gothic building, lake with forested island, boat with 2 sails. Partial maker's mark on base. Gothic Revival 1820-1870. Samford 1997: 15. Associated with cat#181775 (TP pattern: floral border & gothic plate)
WBRHS181750	1488	1	0	5	Food service	Tableware	Flatware	Refined earthenware	TP Earthenware	3	1780	1830				Base & foot		Transfer-print	Unidentified	Blue	Flatware. Pearlware. Blue TP.
WBRHS181751	1412	1	1	20	Food service	Tableware	Jug	Refined earthenware	TP Earthenware	335	1950			"Fake Mark" for E C Challinor of Fenton, Staffordshire	Fenton, Staffordshire	Base	Moulded	Glazed	Chain	Clear	Jug pedestal base. Whiteware (Ironstone). Moulded "chain" pattern on pedestal, plus rough unfinished cast mould seams on sides. Black TP (fake) mark: E & C Challinor of Fenton, Staffordshire. BUT actually a 'fake mark' found on modern production ironstone jugs, 1950s onwards. < http://www.thepotteries.org/allpotters/263.htm >
WBRHS181755	U/S	1	0	25	Food service	Tableware	Teaware	Porcelain	Porcellaneous	19	1790					Body, base & foot		Transfer-print		Blue	Teaware, Hollow ware. Bone china. Brooks 2005: 27

WBRHS181756	1488	1	0	5	Food service	Tableware	Plate	Refined earthenware	Gilt Earthenware	2	1820					Rim		Gilt	Banded	Silver	Plate. Whiteware. Banded silver gilt, rim
WBRHS181757	1412	1	1	30	Toiletries	Vessel	Chamber pot	Refined earthenware	Relief-decorated Earthenware	95	1820					Rim & body	Moulded	Glazed	Fern & flower	Clear	Chamber pot. Whiteware, post-1820. Moulded body. Fern & flower pattern. Brooks 2005: 26
WBRHS181758	1412	1	1	10	Toiletries	Vessel	Wash bowl/Chamber pot	Refined earthenware	Glazed Earthenware	38	1820					Rim		Glazed		Clear	Washbowl or Chamber pot. Whiteware, clear lead glaze
WBRHS181761	1412	3	1	20	Food service	Tableware	Teaware	Refined earthenware	TP Earthenware	20	1820					Rim and body		Transfer-print	Rim dot border, interior & exterior. Chain pattern exterior	Blue	Teaware, Hollow ware, cup or bowl. Blue TP. Possible cross-mend with WBRHS181713
WBRHS181762	1488	2	1	15	Food service	Tableware	Teaware	Porcelain	TP Porcellaneous	11	1810		Job Meigh, Hanley?		England	Rim & body		Transfer-print	Chinoiserie, Chinese Dragon?	Blue	Teaware, Hollow ware. Bone china. Blue TP interior & exterior rim. "Chinese Dragon" style pattern. Possibly Job Meigh of Hanley, Staffordshire, post-1810. Coysh 1974: 46, Figure 58
WBRHS181763	1412	1	1	20	Food service	Tableware	Platter	Refined earthenware	Relief-decorated Earthenware	68	1780	1830				Rim & marly	Moulded		Floral with leaves	Clear	Platter. Pearlware. Rim & marly. Moulded exterior, floral pattern with leaves. Same pattern as cat#181569
WBRHS181765	1422	1	1	15	Food service	Tableware	Cup	Refined earthenware	Glazed Earthenware	16	1820					Rim, body & handle		Glazed		Clear	Cup with handle. Whiteware, post-1820. Brooks 2005: 26
WBRHS181767	U/S	1	0	100	Household	Architectural	Fitting	Refined earthenware	Glazed Earthenware	14.2	1820					Complete		Glazed	Teardrop shape	Clear	Household ceramic. Whiteware. Handle or knob, teardrop shaped. Central round hole for spindle attachment
WBRHS181769	1412	1	1	40	Food service	Tableware	Saucer	Porcelain	Porcellaneous	58	1790					Rim, body & foot		Glazed		Clear	Saucer. Bone china. Clear lead glazed
WBRHS181770	1374	1	0	2	Food service	Indeterminate	Unknown	Refined earthenware	Glazed Earthenware	2.2	1760	1830				Body		Glazed		Clear	Body. Creamware. Undecorated
WBRHS181771	1427	1	0	10	Food service	Tableware	Flatware	Refined earthenware	TP Earthenware	2	1780	1830				Shoulder		Transfer-print	Unidentified	Blue	Tableware, Flatware. Pearlware. Blue TP interior.
WBRHS181773	1422	1	1	10	Food service	Tableware	Platter	Refined earthenware	TP Earthenware	5	1820					Body		Transfer-print	Willow	Blue	Platter. Willow pattern, post-1820. Brooks 2005: 26
WBRHS181774	1599	1	1	5	Food service	Tableware	Plate	Refined earthenware	Relief-decorated Earthenware	11.8	1760	1830				Rim & marly	Scalloped rim	Glazed		Clear	Plate. Pearlware. Rim & marly. Scallop moulded rim
WBRHS181775	1412	1	0	20	Food service	Tableware	Platter	Refined earthenware	TP Earthenware	65	1820	1870				Rim, marly & body		Transfer-print	Gothic Revival style	Purple	Platter. Refined white earthenware. Purple TP, floral print, interior rim & marly, exterior body. Gothic Revival 1820-1870. Samford 1997: 15. Associated with cat#181749 (TP pattern: floral border & gothic plate)
WBRHS181776	1599	1	1	5	Food service	Tableware	Teaware	Refined earthenware	TP Earthenware	2.1	1820					Body		Transfer-print	Unidentified	Blue	Teaware, cup or bowl. Whiteware. Blue TP
WBRHS181777	U/S	1	0	5	Unknown	Bottle?	Unknown	Course earthenware	Lead Glaze Ware	7						Body		Glazed		Clear	Body fragment, Bottle? Coarse earthenware. Red bodied, lead glazed interior
WBRHS181778	1412	2	0	10	Food preparation	Large vessel	Bowl	Refined earthenware	Glazed Earthenware	123	1820					Base & foot		Glazed		Clear	Large bowl. Whiteware. Base & foot. Undecorated
WBRHS181779	1412	2	1	10	Food service	Tableware	Drainer	Refined earthenware	Glazed Earthenware	16	1820					Rim & body	Drain holes	Glazed		Clear	Drainer (fish or meat). Whiteware. Small drain holes & large central hole. Brooks 2005: 49
WBRHS181780	U/S	2	0	20	Food service	Tableware	Platter	Refined earthenware	Relief-decorated Earthenware	156	1859					Rim, marly, shoulder & base	Moulded	Glazed	Wheat Pattern	Clear	Platter. Whiteware. Wheat Pattern on rim & marly, scalloped bowl, 1859+ Sussman, L. 1985 <i>The Wheat Pattern: An Illustrated Survey</i> . Parks Canada. Associated with cat#181652
WBRHS181782	U/S	5	0	50	Food service	Tableware	Cup	Refined earthenware	Relief-decorated Earthenware	129.4	1820					Rim, body, base & handle	Moulded	Glazed	Fern & flower	Clear	Cup with handle. Whiteware, post-1820. Moulded body & handle. Fern & flower pattern. Brooks 2005: 26

WBRHS181783	1508	3	1	10	Food service	Tableware	Bowl	Refined earthenware	TP Earthenware	11.9	1780	1830				Rim & body		Transfer-print	3 dots and crosses	Purple	Bowl. Pearlware. Purple TP. 3 dots & crosses pattern.
WBRHS181786	U/S	5	0	90	Food storage	Bottle	Stout bottle	Stoneware	Industrial Slip	607	1850					Base, body & neck		Industrial slip		White	Bottle. Stoneware. Industrial slip, clear glaze. Base, body & neck. No maker marks. Stout beer style bottle, post-1850 Brooks 2005: 28
WBRHS181789	1508	1	1	10	Food service	Tableware	Flatware	Refined earthenware	Edgeware	4.3	1841	1857				Rim	Moulded	Underglaze hand painted	Shell-edge	Blue	Flatware. Refined earthenware. Blue shell-edged, unscaloped impressed. Brooks 2005: 41
WBRHS181790	U/S	1	0	5	Food service	Tableware	Saucer	Refined earthenware	TP Earthenware	4	1820					Rim		Transfer-print	Asiatic Pheasant	Blue	Saucer. Blue TP, Asiatic phesant border. Whiteware, post-1820. Brooks 2005: 26
WBRHS181792	1412	1	1	15	Food storage	Tableware	Tea pot	Refined earthenware	Rockingham ware	53	1850					Rim, body & handle	Moulded	Glazed	Leaf pattern	Brown	Tea pot. Rockingham ware. Body, interior rim for lid, handle tag. Moulded leaf pattern on exterior under handle & exterior body linear pattern
WBRHS181793	1412	1	1	5	Food service	Tableware	Plate	Refined earthenware	TP Earthenware	11	1820					Rim & marly		Transfer-print	Willow	Blue	Plate. Blue TP, Willow pattern. Whiteware, post-1820. Brooks 2005: 26
WBRHS181794	U/S	1	0	10	Food service	Tableware	Flatware	Refined earthenware	TP Earthenware	8.3	1820					Rim		Transfer-print	Floral	Blue	Flatware. Blue TP on interior & exterior. Whiteware, post-1820. Brooks 2005: 26
WBRHS181795	1508	1	1	10	Food service	Tableware	Plate	Refined earthenware	TP Earthenware	5.3	1780	1830				Body		Transfer-print	Willow	Blue	Plate. Pearlware. Blue TP, Willow pattern. Brooks 2005: 44
WBRHS181796	U/S	1	0	10	Food storage	Bottle	Stout bottle	Stoneware	Industrial Slip	21.7	1850					Rim		Industrial slip		White	Bottle. Stoneware. Industrial slip & salt-glaze. Rim & Finish. Stout beer style bottle, post-1850 Brooks 2005: 28
WBRHS181798	1412	1	1	10	Food preparation	Container	Hollow ware	Refined earthenware	Yellow ware	27	1830					Rim & marly		Glazed		Yellow	Utilitarian Hollow ware (bowl?). Yellow Ware. Clear glaze, undecorated
WBRHS181799	1427	1	1	10	Toiletries	Container	Jar	Porcelain	Porcelain	6						Base & foot		Glazed		Clear	Jar? Porcelain. Undecorated lead glaze.
WBRHS181801	1411	1	1	5	Food preparation	Container	Bowl	Refined earthenware	Glazed Earthenware	19.3	1820					Rim & marly		Glazed		Clear	Bowl. Whiteware. Undecorated
WBRHS181802	1497	1	1	10	Food service	Container	Bowl	Refined earthenware	Glazed Earthenware	20.1	1820					Base & body		Glazed		Clear	Bowl. Whiteware. Undecorated
WBRHS181806	1599	1	1	10	Food preparation	Container	Bowl	Refined earthenware	Industrial Slip	4.3	1830					Rim & body		Industrial slip	Annular	Brown and blue	Bowl. Yellowware. Industrial slip, annular. Brooks 2005: 39
WBRHS181807	1497	2	1	5	Food storage	Bottle	Unknown	Stoneware	Industrial Slip	25.3	1850					Body		Industrial slip		White	Bottle. Stoneware. Industrial slip, clear glaze, interior & exterior. Post-1850 Brooks 2005: 28
WBRHS181808	U/S	1	0	20	Food service	Tableware	Bowl	Refined earthenware	TP Earthenware	38.8	1820					Rim and body		Transfer-print	Rhine	Blue	Bowl. Whiteware. Blue TP. Rhine pattern.
WBRHS181810	U/S	4	0	20	Food storage	Jar	Large storage jar	Course earthenware	Lead Glaze Ware	1441						Rim, body & base		Glazed		Brown	Large food storage jar. Coarse earthenware. Brown lead glaze, exterior only. Dry goods
WBRHS181811	1412	1	1	20	Food service	Tableware	Teaware	Porcelain	Sprigged Porcellaneous	13	1820					Rim & body	Moulded	Glazed	Sprigged grapevine	Blue	Teaware, Hollow ware, cup or bowl. Sprigged bone china, Chelsea Porcelain. Light blue glazed grapevine sprig over clear lead glaze body, post-1820. Brooks 2005: 43. Associated with cat#181556
WBRHS181813	1497	1	1	5	Household	Bottle	Ink bottle	Stoneware	Salt-glazed Stoneware	6.9						Base & body		Glazed		Clear	Small bottle. Stoneware, salt-glaze, exterior & interior. Ink style bottle.
WBRHS181923	U/S	3	0	5	Food service	Tableware	Teaware	Refined earthenware	Glazed Earthenware	5	1820					Rim & body		Glazed		Clear	Teaware, Hollow ware, cup or bowl. Whiteware. Undecorated
WBRHS181932	U/S	1	0	2	Food service	Tableware	Flatware	Refined earthenware	TP Earthenware	7.7	1780	1830				Rim		Transfer-print	Floral?	Purple	Flatware. Pearlware. Purple TP.
WBRHS181934	U/S	1	0	5	Food service	Tableware	Plate	Refined earthenware	Edgeware	1.5	1809	1831				Rim	Moulded	Underglaze hand painted	Shell-edge	Blue	Plate. Blue shell-edged, even scallop impressed straight lines. Brooks 2005: 41

WBRHS181938	U/S	1	0	5	Toiletries	Vessel	Jug/Chamber pot	Refined earthenware	TP Earthenware	5.4	1820					Handle		Transfer-print	Wild rose	Blue	Large handle of jug or chamber pot. Whiteware. Blue TP. Wild rose pattern	
WBRHS181940	U/S	1	0	100	Building	Architectural	Tile	Porcelain	Industrial Porcelain	65.1						Complete	Moulded	Glazed	Banded rim, with stylized floral interior	Brown	Architectural tile. Porcelain. Rectangular shape, chamfered corners. Decorative moulded exterior with brown lead glaze.	
WBRHS181944	1412	1	1	5	Food service	Tableware	Lid	Refined earthenware	Sponge Print ware	6	1780	1830				Lid finial	Moulded	Sponge painted	Floral	Blue	Lid finial. Pearlware. Moulded floral shape. Irregular blue sponge painted	
WBRHS181946	1433	4	1	10	Food service	Tableware	Platter	Refined earthenware	Glazed Earthenware	21.7	1820					Body		Glazed		Light blue	Platter. Whiteware. Light blue interior glaze. Brooks 2005: 45	
WBRHS181947	1607	1	1	10	Food service	Tableware	Flatware	Porcelain	Chinese Blue-and-White porcelain	20.1		1850				China	Base & foot	Underglaze hand painted	Canton, scene with temple and house	Blue	Flatware. Chinese export porcelain, Canton scene	
WBRHS181950	1412	1	1	95	Household	Toy	Figurine	Porcelain	Porcelain Moulded	10	1850	1920				Body	Moulded	Glazed	Frozen Charlotte (doll)	Clear	Frozen Charlotte (doll). Bone China. Body only, undecorated <https://en.wikipedia.org/wiki/Frozen_Charlotte_(doll)>	
WBRHS181964	U/S	1	0	10	Food service	Tableware	Flatware	Porcelain	Chinese Blue-and-White porcelain	18.6		1850				China	Base		Underglaze hand painted	Canton, scene with tree	Blue	Flatware. Chinese export porcelain, Canton scene
WBRHS181966	U/S	1	0	5	Food service	Tableware	Plate	Refined earthenware	Edgeware	5	1809	1831					Rim and marly	Moulded	Underglaze hand painted	Shell-edge	Green	Plate. Green shell-edged, even scallop impressed straight lines. Brooks 2005: 41
WBRHS181970	U/S	1	0	5	Food service	Tableware	Teaware	Refined earthenware	TP Earthenware	4	1780	1830					Lid rim		Transfer-print	Rim pattern with stylised Chinoiserie butterfly shape	Blue	Teaware. Pearlware. Hollow ware lid rim. Blue TP. Rim pattern: Chinoiserie stylised butterfly, 1816-1836. Samford 1997: 8
WBRHS181971	U/S	1	0	10	Food service	Tableware	Saucer	Porcelain	Chinese Blue-and-White porcelain	7.8		1850				China	Rim		Underglaze hand painted	Canton rim	Blue	Saucer. Chinese export porcelain, Canton scene
WBRHS181972	U/S	1	0	10	Food service	Tableware	Teaware	Refined earthenware	TP Flow	2.8	1835						Handle		Transfer-print	Unidentified	Blue	Teaware, Hollow ware. Flow blue TP, post 1835.
WBRHS181976	1488	1	1	15	Unknown	Bottle	Unknown	Stoneware	Industrial Slip	24.7	1850						Base & body		Industrial slip		Brown	Bottle. Stoneware. Industrial slip, brown, & salt-glaze
WBRHS181981	U/S	1	0	10	Food service	Tableware	Bowl	Refined earthenware	Glazed Earthenware	5.6	1820						Base & foot		Glazed		Clear	Bowl, body & foot. Whiteware. Undecorated
WBRHS181982	U/S	1	0	10	Food service	Tableware	Saucer	Porcelain	HP Porcellaneous	11.1	1790						Rim & body	Scalloped rim	Overglaze hand painted and moulded	Small polychrome handpainted flowers & banded gilt rim	Green, pink, yellow, green, blue & gold gilt	Saucer. Bone china. Scalloped rim & body. Overglaze polychrome handpainted flowers. Gold gilt banded rim
WBRHS181983	U/S	2	0	10	Food service	Tableware	Plate	Refined earthenware	TP Earthenware	22.2	1820						Rim & marly	Scalloped rim	Transfer-print	Asiatic Pheasant	Blue	Plate. Blue TP. Asiatic Pheasant pattern. Rim & marly. Whiteware, post-1820. Brooks 2005: 26
WBRHS181984	U/S	1	0	5	Food service	Tableware	Plate	Refined earthenware	Edgeware	2.5	1813	1834					Rim	Moulded	Underglaze hand painted	Shell-edge	Blue	Plate. Blue shell-edged, even scallop impressed bud. Brooks 2005: 41
WBRHS181987	U/S	1	0	5	Food service	Tableware	Bowl	Porcelain	Chinese Blue-and-White porcelain	5.6		1850				China	Body		Underglaze hand painted	Canton, scene with house	Blue	Body fragment. Chinese import porcelain. Canton scene, houseboat
WBRHS181988	U/S	1	0	10	Food service	Tableware	Saucer	Refined earthenware	TP Earthenware	2.9	1780	1830					Base & foot		Transfer-print	Floral	Brown	Saucer. Pearlware. Brown TP, floral pattern
WBRHS181993	U/S	1	0	10	Food service	Tableware	Plate	Refined earthenware	Edgeware	13	1813	1834					Rim	Moulded	Underglaze hand painted	Shell-edge	Blue	Plate. Pearlware. Blue shell-edged, even scallop impressed bud. Brooks 2005: 41
WBRHS181994	U/S	1	0	30	Food service	Tableware	Teaware	Stoneware	Industrial Slip	11.5	1850						Rim & body		Industrial slip	Marbled slipware	Polychrome brown	Teaware. Stoneware. Salt-glaze, underglaze brown industrial slip, marbled.
WBRHS182025	3000			5	Food service	Tableware	Plate	fine earthenware	whiteware	1.5							body			sponge stamped	blue	

WBRHS182026	3000			10	Food service	Tableware	Plate	fine earthenware	whiteware	18.6						body			brown transfer print	brown	
WBRHS182027	3000			5	food service	Tableware	Plate	fine earthenware	whiteware	1						body		sponge stamped/annular banded	geometric	blue	
WBRHS182028	3000			10	Household	hollow ware	Hollow ware/possible little pot	porcelain	hard paste	20						base		painted	red flowers, gilding,	red, gold, yellow, black	
WBRHS182029	3000			10	Food service	Tableware	Plate	fine earthenware	whiteware	8						body		transfer print	flowers and blossoms	brown	
WBRHS182030	3000			5	Food service	Tableware	Hollow ware	fine earthenware	whiteware	1.8						body		transfer print	flowers and leeaves	brown	
WBRHS182031	3000			5	food service	Tableware	Plate	fine earthenware	pearlware	7.8						body		transfer print	trees and clouds	brown	
WBRHS182032	3000			15	food service	Tableware	handle	fine earthenware	whiteware	11						large handle		transfer print	leaf	blue & green	
WBRHS182033	3000			10	food service	Tableware	Plate	fine earthenware	pearlware	255						body		transfer print	Asiatic pheasant pattern	Light blue	
WBRHS182034	3000			10	food service	Tableware	bowl	fine earthenware	Yellow ware	39						body	moulded	band of flowers anf ribbon	band of half chevrons below external rim	yellow	
WBRHS182035	3000			80	food service	Tableware	handle	fine earthenware	buff body earthenware	59						large handle	molded				
WBRHS182036	3000			5	food service	Tableware	Plate	fine earthenware	whiteware	6						rim		painted band	brown band below rim	brown	
WBRHS182037	3000			5	food service	Tableware	jar	stoneware	bristol glaze	18						neck				light brown	
WBRHS182038	3000			30	food service	Tableware	Teaware	fine earthenware	buff body earthenware	216						base & body				dark brown	
WBRHS182039	3000			10	food storage	storage	jar	stoneware	grey body stoneware	11						rim		glaze		dark brown	
WBRHS182040	3000			10	food service	Tableware	saucer	porcelain	hard paste	8						rim					
WBRHS182041	3000			10	food service	Tableware	saucer	porcelain	soft paste	5						rim & body		gilding		gold	
WBRHS182042	3000			10	Household	hollow ware	pot/cup?	fine earthenware	whiteware	9						base		gilding		gold	
WBRHS182043	3000			10	food service	flatware	plate/platter	fine earthenware	white	11						base				blue	
WBRHS182044	3000			5	food service	flatware	Unknown	fine earthenware	white	3						body		crazing			
WBRHS182045	3000			5	food service	hollow ware	Unknown	graniteware	white	5						body					
WBRHS182046	3000			10	food service	hollow ware	large bowl	graniteware	white	36						rim & body					
WBRHS182047	3000			5	Household	hollow ware	Unknown	graniteware	white	3						body					
WBRHS182048	3000			10	food service	hollow ware	jug	fine earthenware	buff body earthenware	31.5						body	molded			white glaze	
WBRHS182049	3000			10	food service	flatware	plate/platter	fine earthenware	white	17						rim	molded				
WBRHS182050	3000			10	food service	hollow ware	little pot?	stoneware	white salt glazed	6						base					
WBRHS182051	3000			10	food service	hollow ware	cup/bowl	graniteware	white	6						body					
WBRHS182052	3000			10	food service	flatware	plate	graniteware	white	6						rim					
WBRHS182053	3000			20	food service	hollow ware	serving platter	graniteware	white	17						rim	moulded/slight calloped edge		flower - faded	white	
WBRHS182054	3000			90	food service	hollow ware	large cup	graniteware	white	224						rim/body/base					
WBRHS182055	3000			20	food service	hollow ware	serving bowl	graniteware	white	99						rim & body					
WBRHS182056	3000			10	food service	hollow ware	vessel	graniteware	white	8						body					
WBRHS182057	3000			20	food service	flatware	platter	graniteware	white	78						body					
WBRHS182058	3000			20	food service	hollow ware	Ginger beer	stoneware	grey body stoneware	119						body/shoulder					
WBRHS182059	3000			20	food service	hollow ware	stout bottle	stoneware	bristol glaze	262						base/body					

WBRHS182060	3000			45	Household	hollow ware	ink bottle	stoneware	saltglaze	183						base/body/shoulder					
WBRHS182061	3000			35	Household	hollow ware	Blacking polish	stoneware	saltglaze	234						base/body					
WBRHS182062	3000			40	food service	hollow ware	stout bottle	stoneware	bristol glaze	349						base/body					
WBRHS182063	3000			15	Household	hollow ware	Blacking polish	stoneware	saltglaze	116						base					
WBRHS182064	3000			Unkn own	food service	flatware	saucer?	porcelain	soft paste	3						Indeterminate					

6.2 GLASS

The following fields were recorded during the cataloguing of glass artefacts. The highlighted fields are included in the catalogue below. Data from the additional fields is available in the artefact database stored within the excavation archive.

Date Excavated	Artefact TAQ	Thickness (mm)
Project	Maker	Length (mm)
Area	Distributor	Width (mm)
Catalogue Number	Product Maker	Portion
Context	Text Form	Form
NISP	Text on Item	Colour
MNI	Provenance	Manufacture
% Remains	Modifications	Decoration
Activity	Height (mm)	Body Cross Section
Function	Bore Diameter (mm)	Base Character
Subfunction	Base Diameter (mm)	Finish Character
Artefact Class	Rim Diameter (mm)	Embossed
Material	Diameter (mm)	Photographed
Weight (g)	Base Length (mm)	Conservation Measures
Artefact TPQ	Base Width (mm)	Notes

Catalogue Number	Context	NISP	MNI	%	Material	Activity	Function	Subfunction	Weight (g)	TPQ	TAQ	Maker	Product Maker	Text on Item	Provenance	Portion	Form	Colour	Manufacture	Decoration	Notes
WBRHS181110	U/S	2	1	40	Glass	Food Storage	Bottle	Cordial	377	1910				Body [...]LLONS / [LO]NDON S.E.	London	Base, body	Cylindrical	Aqua	Machine made, cup bottom mould	Painted label	Possible cordial bottle. Heavy patina. Machine-made, Two part mould with cup bottom. Base embossed with three dots in line. Painted label, body: "[...]LLONS / [LO]NDON S.E." Polychrome red, brown, black and white. Lettering and frame suggests "Art Deco" style (1920s-1930s). Labelling commonly replacing embossing after 1910 <https://sha.org/bottle/body.htm#Embossing>
WBRHS181113	U/S	1	1	100	Glass	Medicine	Bottle	Apothecary	186	1920				Base: F1100 / F55		Complete	Rectangular with flat chamfers	Amber	Machine made, post bottom mould		Complete bottle. Embossed base: "F1100 / F55" Boow 1991: 94, <https://sha.org/bottle/finishstyles2.htm#Small%20Mouth%20External%20Thread>
WBRHS181114	U/S	1	1	20	Glass	Medicine	Bottle	Unknown	46							Base, body	Ovoid	Aqua	Mould blown		Possibly medicine bottle. Too small for typical liquor/spirits flask. No cross-mend with cat#181161, therefore MNV=1
WBRHS181115	U/S	1	0	5	Glass	Food Storage	Bottle	Unknown	47	1850				Base: unidentified possible maker's mark		Base	Cylindrical	Aqua	Machine made, post bottom mould		Embossed base: unidentified maker's mark? Sullivan & Jones 1989: 45
WBRHS181119	U/S	1	1	20	Glass	Food Storage	Bottle	Gin/Bitters	54	1860	1920					Rim, neck, shoulder	Square	Olive	Two piece mould, hand tooled finish		Rim, neck, shoulder of square gin or bitters bottle. Two part mould seam along neck and shoulder, down tooled hand finish. Jones & Sullivan 1989 <https://sha.org/bottle/liquor.htm#Tail%20Square%20Short-necked%20spirits%20bottles>
WBRHS181120	U/S	1	1	30	Glass	Food Storage	Bottle	Milk	56	1940	1960					Rim, neck	Cylindrical	Colourless	Machine made, two piece mould		Two piece mould, machine made rim & neck. Milk bottle has small triangular grips moulded into finish to seal foil cap. Boow 1991: 71, Fig 68
WBRHS181121	U/S	1	1	40	Glass	Food Storage	Bottle	Sauces/Condiments	50	1850	1930					Rim, neck	Cylindrical	Aqua	Two piece mould, hand tooled finish		Possibly two-part flared rim for cork seal?
WBRHS181122	U/S	1	1	100	Glass	Food Storage	Bottle Stopper	Sauces/Condiments	72	1850	1950					Top, shank	Tapered	Aqua	Machine made		Club sauce style bottle stopper. Sullivan & Jones 1989: 152, <https://sha.org/bottle/finishstyles3.htm#Club%20Sauce> , <https://sha.org/bottle/closures.htm#Glass%20%20Cork%20closure>
WBRHS181123	U/S	6	1	20	Glass	Food Storage	Bottle	Wine/Champagne	193	1820	1920					Base, rim	Cylindrical	Olive	Three piece mould		Possible champagne bottle. Push-up base with large mamelon
WBRHS181124	U/S	2	1	30	Glass	Food Storage	Bottle	Wine/Champagne	211	1870	1920					Base, rim	Cylindrical	Olive	Turn moulded		Possible champagne bottle. Push-up base with large mamelon. Boow 1991: 51 <https://sha.org/bottle/wine.htm#Champagne%20Bottles>
WBRHS181126	1412	1	1	10	Glass	Medicine	Bottle	Apothecary	40	1870	1900			Embossed sides: NI... / S... and ...NS / 3 vertical waves / ...T. Embossed base: 2 within circle indent.		Base	Panelled	Aqua	Machine made, cup bottom mould		Medicine bottle. Heavy patina. Two part mould with cup base. Rectangular with chamfers. Embossed sides: "NI... / S..." and "...NS / 3 vertical waves / ...T". Embossed base: "2" within circle indent. <https://sha.org/bottle/medicinal.htm#Rectangular%20Druggists>
WBRHS181127	1412	1	1	10	Glass	Medicine	Bottle	Apothecary	12							Neck, shoulder	Unknown	Light Blue	Two piece mould		Two piece mould, neck and shoulder only. Possible medicinal panelled bottle.
WBRHS181128	1412	1	1	20	Glass	Food Storage	Bottle	Soda/Mineral water	101	1834	1870					Base	Torpedo	Aqua	Machine made, two piece mould		Torpedo bottle base. No embossing. Heavy patina. Boow 1991: 116 <https://sha.org/bottle/soda.htm#Round%20Bottom/Torpedo%20Styles>
WBRHS181129	U/S	2	1	30	Glass	Tableware	Glass	Tumbler	95	1870						Base	Cylindrical	Colourless	Press moulded		Press moulded, colourless tapered tumbler. Jones & Sullivan 1989: 35. Two fragmenet cross-fit, therefore MNI=1

WBRHS181130	U/S	1	1	100	Glass	Medicine	Bottle	Apothecary	104	1884	1927		A.J. White	Body: A.J.WHITE / LONDON	London or Sydney	Complete	Panelled	Aqua	Machine made		Complete bottle. Body, side panels: "A. J. WHITE" "LONDON" Contained Mother Seigel's Syrup (dyspepsia remedy). Established in New York 1867. New Headquarters 1884 A.J. White Ltd, Farringdom Road, London. Production branch in Sydney 1880. Sold 1927. Boow 1991: 201; Corley 1987: 119-120 < https://thebhc.org/sites/default/files/beh/BEHprint/v016/p0111-p0132.pdf >
WBRHS181131	U/S	1	1	30	Glass	Food Storage	Bottle	Gin/Bitters	73	1860	1920					Rim, neck, shoulder	Square	Amber	Indeterminate		Rim, neck, shoulder of square gin or bitters bottle. Two part mould seam along neck and shoulder, down tooled hand finish. Jones & Sullivan 1989 < https://sha.org/bottle/liquor.htm#Tail%20Square%20Short-necked%20spirits%20bottles >
WBRHS181132	U/S	3	3	30	Glass	Food Storage	Bottle	Wine/Champagne/Beer	365	1820	1870					Base	Cylindrical	Olive	Mould blown		3x bases: 1x indeterminate push-up (possible Wine/Champagne); 1x possible metal tipped wooden push-up, 1x Ricketts-type 'knocker-up' base, no embossing. Boow 1991: 46, 116. Therefore MNI=3
WBRHS181133	1412	1	0	20	Glass	Food Storage	Bottle	Wine/Champagne	82	1870	1920					Rim, neck	Cylindrical	Olive	Turn moulded		Champagne bottle finish, hand tooled finish
WBRHS181134	U/S	1	1	5	Glass	Medicine	Bottle	Unknown	18							Base, body	Ovoid	Light Blue	Mould blown		Possibly medicine bottle. Too small for typical liquor/spirits flask
WBRHS181135	U/S	1	1	20	Glass	Food Storage	Bottle	Soda/Mineral water	86	1830	1900			Body: [SYD]NEY... [TRADE]MARK	Sydney	Base, body	Ovoid	Light Blue	Mould blown		Embossed Body: "[SYD]NEY... [TRADE]MARK" Boow 1991: 55 < https://sha.org/bottle/soda.htm#Round%20Bottom/Torpedo%20Styles >
WBRHS181136	U/S	1	1	5	Glass	Food Storage	Bottle		67							Base	Cylindrical	Aqua	Machine made, cup bottom mould		
WBRHS181141	U/S	1	1	100	Glass	Food Storage	Bottle	Beer	137	1920				Body: NOT TO BE REFILLED -B1 / RECYCLABLE GLASS 5 Base: 5		Complete	Cylindrical	Amber	Machine made, cup bottom mould		Complete bottle. Body: "RECYCLABLE GLASS 5" "NOT TO BE REFILLED -B1", Symbol: Broken triangle (Maker's Mark). Base "5" surrounded by stippling. Base perimeter stippling in small crescents. < https://sha.org/bottle/bases.htm#Stippling >
WBRHS181142	U/S	1	1	20	Glass	Food Storage	Bottle	Gin/Bitters	119	1860	1920					Base, body	Square with flat chamfers	Olive	Machine made, cup bottom mould		Base of square gin or bitters bottle, chamfered corners. Cup bottom mould. Jones & Sullivan 1989 < https://sha.org/bottle/liquor.htm#Tail%20Square%20Short-necked%20spirits%20bottles >
WBRHS181143	U/S	3	1	20	Glass	Food Storage	Bottle	Wine/Champagne	169	1870	1920					Base	Cylindrical	Olive	Turn moulded		Heavy patina. Possible champagne bottle. Push-up base with large mamelon. Boow 1991: 51 < https://sha.org/bottle/wine.htm#Champagne%20Bottles >
WBRHS181144	U/S	1	1	100	Glass	Medicine	Jar	Apothecary	68	1930	1970		Vicks	Base: VAPO RUB		Complete	Cylindrical	Colourless	Machine made, two piece mould		Complete bottle. Embossed Base: "Vapo Rub". Contents: Vicks VapoRub ointment
WBRHS181145	1599	1	1	10	Glass	Food Storage	Bottle	Gin/Bitters	66	1860	1920					Base	Square with flat chamfers	Olive	Two piece mould		Base of square gin or bitters bottle, chamfered corners. Two part mould seam across base. Jones & Sullivan 1989 < https://sha.org/bottle/liquor.htm#Tail%20Square%20Short-necked%20spirits%20bottles >
WBRHS181146	U/S	1	1	5	Glass	Medicine	Bottle	Unknown	33							Base	Ovoid	Aqua	Mould blown		Possibly medicine bottle. Too small for typical liquor/spirits flask

WBRHS181147	1383	1	1	100	Glass	Medicine	Bottle	Apothecary	267	1865		Molineaux, Webb & Co.		Base: RD, Class III, 15 Oct 1865, Manufacturer Parcel 4	Manchester	Complete	Triangular with flat chamfers	Aqua	Press moulded	Diamond Reg on base, embossed	Manufacturer: Molineaux, Webb & Co. Glassworks, Manchester, UK. Design patent registered 15 Oct 1865. Press moulded: 2-part mould, post bottom base, hand finished neck and tooled patent medicine rim. Boow 1991: 184. < http://www.great-glass.co.uk/glass%20notes/lozenge2.htm >
WBRHS181148	1433	9	1	40	Glass	Food Storage	Bottle	Wine/Beer	243	1820	1870					Body	Cylindrical	Olive			Undiagnostic body shards
WBRHS181149	U/S	2	1	60	Glass	Food Storage	Bottle	Sauces/Condiments	190	1930	1960	Australian Glass Manufacturers (AGM)	Pick-Me-Up Co. Ltd.	Body: PICK-ME-UP / REG TRADE MARK) Base: AGM symbol T 436	Sydney	Base, body	Tapered	Colourless	Machine made, post bottom mould		Embossed body: "PICK-ME-UP / REG TRADE MARK)" Base: "AGM symbol T 436"
WBRHS181150	U/S	1	1	10	Glass	Food Storage	Bottle	Oil/Vinegar	69	1890	1950					Base	Tapered	Aqua	Machine made, cup bottom mould		Base fragment of decorative salad oil/vinegar bottle. Parramatta example dated Parramatta example dated post-1935 < https://heritagecentre.cityofparramatta.nsw.gov.au/objects/41819/decorative-green-glass-vinegar-or-salad-oil-bottle-with-applied-colour-lithograph-label >
WBRHS181151	U/S	1	1	20	Glass	Food Storage	Bottle	Cordial	173	1942	1942	Australian Glass Manufacturers (AGM)		Body: THE [...] COMPANY PTY. LTD. Base: AGM symbol S 981/ 8 / 1942		Base	Cylindrical	Aqua	Machine made, cup bottom mould		Embossed body: "THE [...] COMPANY PTY LTD" Base: "AGM symbol S 981/ 8 / 1942"
WBRHS181152	U/S	1	1	20	Glass	Food Storage	Bottle	Cordial	183	1930	1970	Australian Glass Manufacturers (AGM)	Noon's Cordials Windsor	Body: IS T[HE]... / M NOON W[IN]... Base: AGM symbol S 66	Windsor NSW	Base, body	Cylindrical	Aqua	Machine made, two piece mould with bottom plate		Embossed body: "IS T[HE]... / M NOON W[IN]..." Base: "AGM symbol S 66". Dated by AGM logo, Boow 1991: 176. Local business, provenance determined by similar example. < https://www.hawkesbury.org/name/noons-cordials-windsor.html >
WBRHS181153	U/S	1	1	5	Glass	Food Storage	Bottle	Gin/Bitters	28	1860	1920					Base	Square	Olive	Two piece mould		Undiagnostic body sherd < https://sha.org/bottle/liquor.htm#Tail%20Square%20Short-necked%20spirits%20bottles >
WBRHS181154	1411	1	0	Unknown	Glass	Building	Window Glass	Window Glass	4	1890						Pane	Panelled	Colourless	Press moulded	Stippled	Boow 1991: 111
WBRHS181160	U/S	1	1	20	Glass	Food Storage	Bottle	Sauces/Condiments	41	1850	1920					Rim, neck, shoulder	Panelled	Green	Two piece mould		Sauce or Pickle square bottle. Two part mould with hand tooled patent finish. Boow 1991: 116
WBRHS181161	U/S	1	1	30	Glass	Medicine	Bottle	Unknown	78							Base, body	Ovoid	Aqua	Mould blown		Possibly medicine bottle. Too small for typical liquor/spirits flask. No cross-mend with cat#181114, therefore MNV=1
WBRHS181162	U/S	2	1	30	Glass	Food Storage	Bottle	Oil/Vinegar	156	1825	1899		George Whybrow	Stopper: GEORGE WHYBROW	London	Rim, neck, stopper	Cylindrical	Aqua	Mould blown	Ribbed pattern along neck	1x condiment bottle rim and neck, hand tooled stopper type finish, ribbed pattern on moulded neck (Jones & Sullivan 1989: 89; Vader & Murray 1978: 74). 1x club sauce type stopper, embossed "GEORGE WHYBROW" (diameter & length recorded). Condiment manufacturer, Whitehall London 1825-1899 (Harris 2010: 8). Heavy patina. < https://sha.org/bottle/food.htm#Club%20sauce >
WBRHS181163	U/S	2	1	20	Glass	Food Storage	Bottle	Oil/Vinegar	89	1825	1899		George Whybrow	Stopper: GEORGE WHYBROW	London	Rim, neck, stopper	Cylindrical	Aqua	Mould blown		1x condiment bottle rim and neck, hand tooled finish. 1x club sauce type stopper, embossed "GEORGE WHYBROW" (diameter & length recorded). Condiment manufacturer, Whitehall London 1825-1899 (Harris 2010: 8). Heavy patina. < https://sha.org/bottle/food.htm#Club%20sauce >
WBRHS181164	U/S	3	1	15	Glass	Medicine	Bottle	Apothecary	42	1920						Rim, neck, shoulder	Panelled	Aqua	Machine made		Machine-made external thread = post-1920 < https://sha.org/bottle/closures.htm#External%20Threaded%20screw%20cap >

WBRHS181165	1411	2	1		Glass	Food Storage	Bottle	Wine/Champagne	128	1870	1920					Body	Cylindrical	Olive	Turn moulded		Champagne bottle. Push-up base. Possible turn mould body. Boow 1991: 51
WBRHS181166	U/S	1	1	5	Glass	Food Storage	Bottle	Beer	55	1920				Base: S 513		Base, body	Cylindrical	Amber	Machine made, cup bottom mould		Embossed base: "S 513"
WBRHS181167	1412	1	1	20	Glass	Food Storage	Bottle	Sauces/Condiments	82	1850	1900			Base: Star pattern / P		Base	Cylindrical	Aqua	Machine made, post bottom mould	Ribbed pattern along body	Embossed base: "Star pattern" in centre, "P". Two part mould. Rib pattern moulded on body. <https://sha.org/bottle/food.htm#Ribbed%20sauce>
WBRHS181168	U/S	1	1	20	Glass	Food Storage	Bottle	Wine/Beer	290	1820	1870					Base, body	Cylindrical	Olive	Mould blown		Metal tipped wooden push-up. Boow 1991: 32
WBRHS181170	U/S	2	0	Unknown	Glass	Building	Window Glass	Window Glass	11	1890						Pane	Panelled	Colourless	Press moulded	Stippled	Boow 1991: 111
WBRHS181173	1412	3	3	30	Glass	Food Storage	Bottle	Soda/Mineral water	270	1875	1896		Hume & Pegrum	3x Body: (1) [...]RAL WATERS / [...]NEY / HP logo / [...]GRUM (2) [...]DNEY (3) [...]NER / [...]E & PEGRUM	Sydney	Base, body	Torpedo	Aqua	Machine made, two piece mould		3x torpedo bottle bases. Embossed (various): Hume & Pegrum, Mineral Waters, Sydney. No cross mends, therefore MNI=3. <https://collection.maas.museum/object/246099> Jones 2009: 388-399 <i>Thirsty Work</i> . NSW, Australia.
WBRHS181174	1412	1	1	100	Glass	Food Storage	Bottle	Liquor	529	1860	1890					Complete	Cylindrical	Olive	Mouth blown		Complete bottle. Mouth-blown, grooved ring finish hand tooled. Bottom plate with slight push-up and central dot. Irregular shaped shoulders and body. Heavy patina. Closure copper wire attached. <https://sha.org/bottle/finishstyles2.htm#Grooved%20Ring>
WBRHS181179	1412	1	1	50	Glass	Food Storage	Bottle	Soda/Mineral water	183	1890	1920					Base, body	Egg-shaped	Aqua	Machine made, two piece mould, post bottom mould		Hamilton-type, Modified (flat bottom) "Tenpin" egg-shaped semi-round bottom Soda/Mineral water bottle. Tapered to a narrow flat base (standing upright). Two piece mould, post bottom with slight push-up and central dot. Vader & Murray 1978: 25, <https://sha.org/bottle/soda.htm#Round%20Bottom/Torpedo%20Styles>
WBRHS181180	U/S	1	1	100	Glass	Food Storage	Bottle	Unknown	431	1949				Base: A23, 1949		Complete	Cylindrical	Aqua	Machine made, two piece mould		Complete bottle. Embossed base "A23" and "1949". Boow 1991: 92-95
WBRHS181181	U/S	1	0	Unknown	Glass	Building	Window Glass	Window Glass	1		1870					Pane	Flat	Colourless	Crown		Boow 1991: 111
WBRHS181185	1412	1	1	50	Glass	Food Storage	Bottle	Soda/Mineral water	234	1870	1920					Rim, neck	Cylindrical	Aqua	Turn moulded, hand tooled finish		Long neck, turn moulded bottle. Hand tooled blob finish. Boow 1991: 51 <https://sha.org/bottle/soda.htm#Blob%20Soda/Mineral%20Water%20Style>
WBRHS181186	1412	1	1	100	Glass	Food Storage	Bottle	Soda/Mineral water	350	1874	1883		Summons & Co.	Body: SUMMONS & CO / REGISTERED/ TRADE/ Kangaroo logo / MARK / SYDNEY.	Sydney	Complete	Egg-shaped	Cobalt blue	Machine made, two piece mould, hand finishing tool, cup bottom mould		Complete bottle. Cobalt Soda/Mineral water bottle. Embossed Body: "SUMMONS & CO / REGISTERED/ TRADE/ Kangaroo logo / MARK / SYDNEY." Usual type. Modified
WBRHS181187	U/S	1	0	Unknown	Glass	Building	Window Glass	Window Glass	1		1870					Pane	Flat	Colourless	Crown		Boow 1991: 111
WBRHS181191	1412	1	1	30	Glass	Food Storage	Bottle	Liquor	45	1860	1890					Rim, neck	Cylindrical	Aqua	Mouth blown		Grooved ring finish, likely mouth-blown <https://sha.org/bottle/finishstyles2.htm#Grooved%20Ring>
WBRHS181197	1412	1	1	20	Glass	Food Storage	Bottle	Wine/Champagne	46		1850					Rim, neck	Cylindrical	Aqua	Hand blown		Finish consists of crude irregularly shaped applied string rim around sheared/cracked-off bore. Hand blown bottle. <https://sha.org/bottle/finishes.htm#Laid-on%20ring>
WBRHS181198	U/S	1	1	100	Glass	Food Storage	Bottle	Beer	135	1970		Glass Containers Ltd.	Carlton & United Breweries	Body: CUB logo / RECYCLABLE GLASS NOT TO BE REFILLED/ F / Broken triangle logo (maker's mark). Base: 38 (surrounded by raised dot circle pattern)	Penrith, NSW	Complete	Cylindrical	Amber	Machine made		Complete bottle. Embossed body "CUB" (Carlton & United Breweries), "RECYCLABLE GLASS NOT TO BE REFILLED", Symbol: Broken triangle (Maker's Mark). Embossed base "38" surrounded by stippling. Base: baffle plate, perimeter stippling in small crescents. <https://sha.org/bottle/bases.htm#Stippling>

WBRHS181200	U/S	1	0	Unknown	Glass	Building	Window Glass	Window Glass	4		1870					Pane	Flat	Aqua	Crown		Boow 1991: 111
WBRHS181203	1412	1	1	10	Glass	Food Storage	Bottle	Unknown	47					Base: 664/ [...] LDN		Base	Cylindrical	Aqua	Machine made, cup bottom mould		Machine made, cup mould bottom. Base: "664" "[...]LDN"
WBRHS181204	1412	1	1	100	Glass	Food Storage	Bottle Stopper	Sauces/Condiments	13	1840	1930		Lea & Perrins	Top: LEA & PERRINS	Worcester, UK	Top, shank	Tapered	Aqua	Machine made		Club sauce style bottle stopper. Embossed top: "Lea & Perrins". Sullivan & Jones 1989: 152, <https://asha.org.au/news/lea-and-perrins-glass-bottle-stopper/> <https://sha.org/bottle/finishstyles3.htm#Club%20Sauce> <https://sha.org/bottle/closures.htm#Glass%20&%20Cork%20closure>
WBRHS181205	1412	1	1	40	Glass	Medicine	Bottle	Apothecary	57	1850	1920					Base, body	Cylindrical	Cobalt blue	Mould blown		Cobalt blue small bottle base, possibly patent medicine. Mould-blown with base plate. Jones & Sullivan 1989: 45
WBRHS181208	U/S	1	1	80	Glass	Food Storage	Bottle	Wine/Beer	718	1821	1920					Base, body, shoulder, neck	Cylindrical	Olive	Three piece mould		Base: Ricketts-type 'knocker-up' base, no embossing. Boow 1991: 46, 116. Heavy patina decay, mould seams faintly present
WBRHS181209	1412	1	0	30	Glass	Food Storage	Bottle	Unknown	247					Body: [...]HIE / [...]T Base: M 5		Base	Cylindrical	Aqua	Machine made, post bottom mould		Embossed body: " [...]HIE / [...]T" Embossed base: "M 5" Possibly associated with cat#181408. Therefore MNI=0
WBRHS181210	1412	1	1	20	Glass	Medicine	Glass	Apothecary	20		1920					Base	Tapered	Colourless	Two part manufacture, drawn stem	Horizontal graduated incisions	Two part manufactured "drawn stem" graduated glass measure stemware. Regular horizontal incision lines along body of stemware bowl. Conical bowl deeply tapered into short drawn stem. Free blown and polished base. Likely measuring glass for liquid medicines.
WBRHS181211	1412	1	1	5	Glass	Unknown	Bottle	Unknown	23	1850	1920					Base	Cylindrical	Cobalt blue			Cobalt blue mold blown bottle. Post bottom base fragment. Possible patent medicine, castor oil, or poison
WBRHS181214	U/S	1	1	100	Glass	Household	Bottle	Toiletries	159	1840	1870		Alexander C. Barry	Body: BARRY'S / TRICOPHEROUS FOR THE SKIN AND HAIR / NEW YORK / DIRECTIONS IN THE PAMPHLET Base: 7	New York	Base, body, shoulder, neck, rim	Rectangular with flat chamfers	Aqua	Machine made, two piece mould, post bottom mould		Complete bottle. Embossed body: "BARRY'S" "TRICOPHEROUS FOR THE SKIN AND HAIR" "NEW YORK" "DIRECTIONS IN THE PAMPHLET" Base: "7". Popular alcohol-based hair oil. <https://americanhistory.si.edu/collections/search/object/nmah_1449584>, <https://emuseum.nyhistory.org/objects/45178/medicine-bottle.jsessionid=1C74FD55B1D36F23529DF031ACF10CA2>
WBRHS181215	1412	1	1	30	Glass	Food Storage	Bottle	Liquor	93	1870	1920				France	Rim, neck	Cylindrical	Amber	Three piece mould		Benedictine bottle. French liqueur. Rim: two part grooved finish with V-tooled string rim. Long straight neck. <https://sha.org/bottle/miscellaneous.htm#European>
WBRHS181216	1412	1	1	40	Glass	Tableware	Container	Vase	164	1870						Base	Tapered	Colourless	Press moulded	Triangular ribbed exterior body	Press moulded, colourless glass "bud" style tapered vase. Body: decorative triangular ribbed exterior, 12mm thick. Base: ground resting point with high concave interior, 25mm thick. Boow 1991: 88; Jones & Sullivan 1989: 34.
WBRHS181217	1412	1	1	90	Glass	Medicine	Bottle	Apothecary	23		1920					Base, body, shoulder, neck, rim	Octagonal	Cobalt blue	Mould blown		Cobalt blue mold blown octagonal phial (medicine bottle)
WBRHS181220	U/S	2	1	10	Glass	Food Storage	Bottle	Wine/Beer	147	1820	1870					Base	Cylindrical	Olive	Mould blown		Possible metal tipped wooden push-up. Boow 1991: 32
WBRHS181221	1412	1	1	10	Glass	Food Storage	Bottle	Wine/Beer	106	1821	1920					Base	Cylindrical	Olive	Machine made, Ricketts type bottom		Base: Ricketts-type 'knocker-up' base, no embossing. Base: raised moulded central dot. Boow 1991: 46, 116.
WBRHS181222	1412	1	1	5	Glass	Food Storage	Bottle	Cordial	44	1850				Base: 375 / illegible		Base	Cylindrical	Aqua	Machine made, post bottom mould		Embossed base: "375" and illegible mark
WBRHS181223	1412	1	0	Unknown	Glass	Building	Window Glass	Window Glass	3	1890						Pane	Panelled	Colourless	Press moulded	Stippled	Boow 1991: 111

WBRHS181224	1412	1	0	5	Glass	Food Storage	Bottle	Cordial	67	1850				Base: B		Base	Cylindrical	Green	Machine made, post bottom mould		Embossed base: "B" Possibly associated with cat#181450, therefore MNI=0. No cross-mend with cat#181297. Jones & Sullivan 1989: 45
WBRHS181226	U/S	1	1	10	Glass	Food Storage	Bottle	Soda/Mineral water	21	1895						Rim	Cylindrical	Aqua	Machine made, two piece mould		Boow 1991: 117 Boow 1991: 117
WBRHS181227	1412	2	1	50	Glass	Food Storage	Bottle	Oil/Vinegar	163	1868	1907		Champion & Co.		London	Rim, neck, body	Tapered	Aqua	Machine made, two piece mould	Neck rings, rib fluted neck and body	Ringed neck, vertically ribbed/fluted sauce bottle. Hand tooled stopper finish, upper body only. Shape = "Champion's Vinegar" c.1868-1907. James Bigwood & James EC Bigwood (son) owners Champion & Co. 1868-1907. Large exporters to Australia/NZ from 1870s < http://letslookagain.com/2015/07/champion-co-vinegar-brewers/ > Example from Parramatta dated c.1890: < https://heritagecentre.cityofparramatta.nsw.gov.au/objects/41814/champion-vinegar-green-glass-vinegar-bottle > Associated with cat#181430 & cat#181243. MNI=1
WBRHS181228	1412	1	1	15	Glass	Food Storage	Bottle	Beer	43	1920						Rim	Cylindrical	Amber	Machine made, two piece mould		Boow 1991: 69
WBRHS181229	1412	1	1	80	Glass	Medicine	Bottle	Pill bottle	12	1861	1920		Lanman & Kemp, Wholesale Druggists	Body: BRIS[TOLS PILLS] / VEGETALES / PILDO[RAS DE BRISTOL]	New York	Rim, neck, body	Panelled	Aqua	Machine made, two piece mould		Fike 1987:201 < https://findingaids.hagley.org/repositories/3/resources/1016 >
WBRHS181232	U/S	1	1	100	Glass	Food Storage	Bottle	Cordal	389	1941		Coca Cola	Coca Cola	Body: COCA COLA / TRADE MARK REGISTERED / MIN CONTENTS 6-FL OZS / TRADE MARK REGISTERED / BOTTLE REGD TRADE MARK Base: SYDNEY / AUST.	Sydney	Complete	Cylindrical	Colourless	Machine made, cup bottom mould		Complete bottle. Dated based on distinctive logo shape (1941-pres). First CocaCola factory opened in Sydney 1938. Body: "COCA COLA / TRADE MARK REGISTERED / MIN CONTENTS 6-FL OZS" "COCA COLA / TRADE MARK REGISTERED / BOTTLE REGD TRADE MARK" Base: "SYDNEY / AUST."
WBRHS181233	1412	3	0	30	Glass	Food Storage	Bottle	Wine/Champagne	288	1870	1920					Rim, neck, shoulder	Cylindrical	Olive	Turn moulded		Champagne bottles: 3x rim & necks (1 with attached closure copper wire).
WBRHS181234	1412	3	1	25	Glass	Food Storage	Bottle	Wine/Champagne	335	1870	1920					Base, body, neck, rim	Cylindrical	Olive	Turn moulded		Champagne bottle, partially cross-fit base in 2 fragment, plus separate finish and neck. Push-up base with large mamelon, hand tooled finish with sloped top. Boow 1991: 51 < https://sha.org/bottle/wine.htm#Champagne%20Bottles >
WBRHS181235	1412	1	1	30	Glass	Medicine	Bottle	Apothecary	15	1860	1915	Unknown		Base: triangle symbol		Base, body	Panelled	Colourless	Mould blown		Panelled bottle, small. Medicine bottle, pills or tincture. No pontil scar. < https://sha.org/bottle/examples.htm#Example_3 >
WBRHS181238	1412	1	1	100	Glass	Food Storage	Bottle	Sauces/Condiments	310	1840	1930		Lea & Perrins	Body: LEA & PERRINS (vertical body) Shoulder: WORCHESTERSHIRE SAUCE	Worcester, UK	Complete	Cylindrical	Aqua	Machine made, two piece mould, hand finishing tool		Complete bottle. Body: "LEA & PERRINS (vertical body)" Shoulder: "WORCHESTERSHIRE SAUCE" Two part mould, post bottom base with slight push-up and central dot. Club sauce finish, hand tooled. < https://sha.org/bottle/finishstyles3.htm#Club%20Sauce >
WBRHS181239	1412	5	0	40	Glass	Food Storage	Bottle	Gin/Bitters	310	1855			Udolpho Wolfe	Body: AROMATIC SCHNAPPS / [UDOLPHO] WOLFE	Schiedam, Netherlands	Base, body	Square	Olive	Machine made, cup bottom mould		Schnapps bottle. Embossed body: "AROMATIC SCHNAPPS / [UDOLPHO] WOLFE" Two part mould, cup base with iron pontil. Manufacture type dated 1855-1865 < https://sha.org/bottle/liquor.htm#Case%20Gin%20bottles >
WBRHS181240	U/S	1	0	Unknown	Glass	Building	Window Glass	Window Glass	2		1870					Pane	Flat	Colourless	Crown		Boow 1991: 111

WBRHS181243	1412	2	0	50	Glass	Food Storage	Bottle	Oil/Vinegar & Soda/Mineral water	218, 47	1868	1907		Champion & Co.		London	Base, body, neck, rim	Hexagonal	Aqua	Machine made, two piece mould. Two part mould, hand tooled finish		1x Oil/vinegar body & base, possibly "Champion's Vinegar" bottle. Two part mould, cup-bottom base. Boow 1991: 19, 44 < https://sha.org/bottle/food.htm#Sauces%20&%20Condiments > 1x Soda/mineral bottle rim & neck, hand tooled applied blob finish. Two different bottles under one cat#181243. MNI=0 because Oil/vinegar base associated with cat#181227 & cat#181430. Blob finish associated with Soda/Mineral water bottle bases
WBRHS181244	1412	1	1	10	Glass	Food Storage	Bottle	Wine/Champagne	61	1870	1920					Base	Cylindrical	Olive	Turn moulded		Champagne bottle. Push-up base (large mamelon only). Boow 1991: 51 < https://sha.org/bottle/wine.htm#Champagne%20Bottles >
WBRHS181245	1412	1	1	5	Glass	Medicine	Bottle	Apothecary	16	1850	1920			Body: ...CLOS...		Body	Panelled	Aqua	Mould blown		Possible medicinal bottle, pill or tincture. Embossed body: "...CLOS..." Square or rectangular panel bottle with chamfered corners. Only partial body present, no mould seams. < https://sha.org/bottle/medicinal.htm#Rectangular%20Druggists >
WBRHS181246	1412	1	0	Unknown	Glass	Building	Window Glass	Window Glass	70		1870					Pane	Flat	Colourless	Crown		Boow 1991: 111
WBRHS181249	U/S	5	1	40	Glass	Food Storage	Glass	Liquor	137	1870						Base	Tapered	Colourless	Press moulded	Impressed vertical line indents and vertical lines of circles	Press moulded. Decorative apéritifs/liquor bottle. Tapered plunger onto thick flat smooth base, no seams, 15mm thick. Decorative series of smooth edged vertical impressed lines and circles along body. Colourless glass. Boow 1991: 84-88. Jones & Sullivan 1989: 34-35.
WBRHS181250	1412	2	1	10	Glass	Food Storage	Bottle	Wine/Champagne/Beer	137	1820	1870					Base	Cylindrical	Olive	Mould blown		1x Beer/Wine push-up base with metal cap wooden core, MNI=1. 1x Wine/Champagne push-up, associated with wine bases, MNI=0. Boow 1991: 31. Two different bottles under one cat#181250
WBRHS181251	1412	2	2	40	Glass	Food Storage	Bottle	Soda/Mineral water	454	1890	1920					Base	Egg-shaped	Olive	Machine made, post bottom mould		2x Hamilton-type, Modified (flat bottom) "Tenpin" egg-shaped semi-round bottom Soda/Mineral water bottles. Tapered to a narrow flat base (standing upright). Two piece mould, post bottom with slight push-up and central dot. Vader & Murray 1978: 25, < https://sha.org/bottle/soda.htm#Round%20Bottom/Torpedo%20Styles > Two different Soda/Mineral water bottles under one cat#181251, therefore MNI=2.
WBRHS181252	1412	1	1	20	Glass	Tableware	Glass	Stemware	34	1780	1860					Base, stem	Cylindrical	Colourless	Mould blown		Late 18th through Mid 19th century. Polished pontil present on base. Jones & Smith 1985: 47
WBRHS181255	U/S	1	1	5	Glass	Food Storage	Bottle	Oil/Vinegar	42	1930		Australian Glass Manufacturers (AGM)		Base: AGM symbol / L / IS 731 / 10		Base	Octagonal	Colourless	Machine made, two piece mould with bottom plate		Machine made, plate bottom. Base: "AGM symbol" "L" "IS 731" "10"
WBRHS181256	1412	1	1	10	Glass	Food Storage	Bottle	Wine/Beer	115		1870					Base	Cylindrical	Olive	Mould blown		Sand pontil push-up with quatrefoil. Interior base: domed bulge distortion from metal rod. Boow 1991: 28, Figure 24
WBRHS181257	1412	1	0	5	Glass	Food Storage	Bottle	Wine/Champagne	37	1870	1920					Base	Cylindrical	Olive	Turn moulded		Champagne bottle. Push-up base (large mamelon only). MNI=0. Boow 1991: 51 < https://sha.org/bottle/wine.htm#Champagne%20Bottles >
WBRHS181261	U/S	1	0	10	Glass	Food Storage	Bottle	Unknown	65	1910				Base: A		Base	Cylindrical	Colourless	Machine made, cup bottom mould		Machine made, cup bottom, embossed "A" < https://sha.org/bottle/colors.htm#Colourless >
WBRHS181263	1412	1	1	30	Glass	Food Storage	Bottle	Wine/Beer	199	1850				Base: L / B		Base	Cylindrical	Olive	Machine made, post bottom mould		Embossed base: "L / B" and central dot. Boow 1991: 46, 116

WBRHS181267	U/S	1	1	20	Glass	Medicine	Bottle	Apothecary	8		1920					Rim, neck, shoulder	Square	Colourless	Machine made, two piece mould, applied finish		Possible medicinal bottle, pill or tincture. Two part mould with applied flanged lip. Boow 1991: 41-42, 117; Jones & Sullivan 1989: 91.
WBRHS181269	1412	1	1	15	Glass	Food Storage	Bottle	Wine/Beer	219		1870					Base	Cylindrical	Olive	Mould blown		Sand pontil push-up. Interior base: small circular depression from manufacture rod. Boow 1991: 28, 114, Figure 22
WBRHS181270	1366	1	1	5	Glass	Food Storage	Bottle	Wine/Beer	10	1820	1870					Body	Cylindrical	Olive	Indeterminate		Undiagnostic body shard
WBRHS181273	U/S	7	3	15	Glass	Household	Bottle	Toiletries	84	1910						Base	Tapered	Colourless	Machine made		Possible toiletries or personal hygiene containers. 3x flat small diameter bases with outward tapered thin body. Colourless glass <https://sha.org/bottle/colors.htm#Colourless>
WBRHS181276	1412	2	1	15	Glass	Food Storage	Bottle	Wine/Champagne	177	1870	1920					Base	Cylindrical	Olive	Turn moulded		Champagne bottle. Heavy patina. Push-up base. Possible turn mould body. Boow 1991: 51
WBRHS181277	U/S	1	0	20	Glass	Food Storage	Bottle	Wine/Champagne	246	1870	1920					Base	Cylindrical	Olive	Turn moulded		Champagne bottle. Push-up base with large mamelon. Boow 1991: 51 <https://sha.org/bottle/wine.htm#Champagne%20Bottles>
WBRHS181278	U/S	1	1	100	Glass	Food Storage	Bottle	Beer	660	1950	1950	Australian Glass Manufacturers (AGM)		Body: THIS BOTTLE IS / THE PROPERTY OF / THE N.S.W. BOTTLE COMPANY PTY. LTD. Base: AGM symbol 1950 IS 89 12	Sydney	Complete	Cylindrical	Amber	Machine made, two piece mould with bottom plate		Complete bottle. Body: "THIS BOTTLE IS / THE PROPERTY OF" "THE N.S.W. BOTTLE COMPANY PTY. LTD." Base: "AGM symbol 1950 IS 89 12"
WBRHS181279	1412	1	0	30	Glass	Food Storage	Bottle	Gin/Bitters	135	1860						Base	Square	Olive	Dip mold	Star pattern within moulded base	Case gin bottle base. Australian bulk importation of Dutch gin linked to end of Napoleonic wars (c.1810) Boow 1991: 39. Moulded star pattern on base. Embossed base (vs. pontil base) dip mould bottles are unusual and later in manufacture (1860s-1870s) <https://sha.org/bottle/liquor.htm#Case%20Gin%20bottles>
WBRHS181280	U/S	1	1	10	Glass	Food Storage	Bottle	Gin/Bitters	35	1860	1920					Rim	Square	Olive	Two piece mould, hand tooled finish		Rim and neck of square gin or bitters bottle. Down tooled hand finish. Jones & Sullivan 1989 <https://sha.org/bottle/liquor.htm#Tail%20Square%20Short-necked%20spirits%20bottles>
WBRHS181283	1412	1	1	100	Glass	Food Storage	Bottle	Soda/Mineral water	508	1875	1906		Newling & Walker	Body: NEWLING & WALKER / PARRAMATTA / TRADEMARK / N & W	Parramatta	Complete	Torpedo	Aqua	Machine made, two piece mould, hand finishing tool		Complete torpedo bottle. Embossed body: "NEWLING & WALKER / PARRAMATTA / TRADEMARK / N & W" Hand tooled applied blob finish, two part mould. E.Jeanne Harris 2019 "Glass Report, 3PS 153 Macquarie Street, Parramatta, NSW" for Casey & Lowe Pty. Ltd., Jones 2009: 558-567 <i>Thirsty Work</i> .
WBRHS181284	U/S	1	0	10	Glass	Food Storage	Bottle	Sauces/Condiments	29	1870	1920					Rim	Cylindrical	Aqua	Turn moulded		Finish and neck, seam-free, stopper finish, turn moulded. Boow 1991: 51
WBRHS181285	1412	4	1	30	Glass	Food Storage	Bottle	Wine/Champagne/Beer	80, 92	1870	1920					Base, neck, rim	Cylindrical	Olive	Turn moulded, hand tooled finish		1x Champagne bottle. Push-up base with large mamelon. MNI=1. Boow 1991: 51 <https://sha.org/bottle/wine.htm#Champagne%20Bottles>. 1x Beer bottle. Hand tooled packer rim finish and neck, associated with olive glass bottle bases, MNI=0. Two different bottles under one cat#181285
WBRHS181286	U/S	1	0	20	Glass	Food Storage	Bottle	Wine/Beer	203	1821	1920					Base	Cylindrical	Olive	Machine made, Ricketts type bottom		Base: Ricketts-type 'knocker-up' base, no embossing. Heavy patina decay. Boow 1991: 46, 116.
WBRHS181289	1412	1	1	95	Glass	Food Storage	Bottle	Sauces/Condiments	150	1870	1920			Base: B8		Base, body, shoulder, neck, rim	Square with flat chamfers	Aqua	Machine made, two piece mould, hand finishing tool, post bottom mould		Square bottle with chamfers. Embossed base: "B8". Two part mould. Post bottom mould. Wide mouth, hand tooled patent finish. Boow 1991: 116

WBRHS181290	U/S	1	1	100	Glass	Food Storage	Bottle	Cordial	419	1930	1970	Australian Glass Manufacturers (AGM)	Noon's Cordials Windsor	Body: NOON'S CORDIALS / WINDSOR (circle). Body (above base): THIS BOTTLE / IS THE PROPERTY OF / M. NOON WINDSOR. Base: AGM symbol IS 1663 / 1	Windsor NSW	Complete	Cylindrical	Colourless	Machine made, two piece mould with bottom plate		Complete bottle. Embossed Body: "NOON'S CORDIALS WINDSOR" "THIS BOTTLE IS THE PROPERTY OF M. NOON WINDSOR" Base: "AGM symbol, IS 1663 / 1" Dated by AGM logo, Boow 1991: 176. Local business. < https://www.hawkesbury.org/name/noons-cordials-windsor.html >
WBRHS181291	1412	1	1	30	Glass	Food Storage	Bottle	Malt Extract	54	1850	1920			Seal: [T]HE" "[M]AL[T] EXTRACT / ... LIMITED		Rim, neck, shoulder	Round	Olive	Two piece mould, hand tooled finish		Wide mouth, two part mould, hand tooled finish. Heavy patina. Lead Seal: "[T]HE" "[M]AL[T] EXTRACT" "LIMITED". Cap seal over cork (present).
WBRHS181292	U/S	1	0	5	Glass	Food Storage	Bottle	Wine/Champagne	26	1870	1920					Base	Cylindrical	Olive	Turn moulded		Champagne bottle. Push-up base (large mamelon only). Boow 1991: 51 < https://sha.org/bottle/wine.htm#Champagne%20Bottles >
WBRHS181294	U/S	1	1	20	Glass	Food Storage	Bottle	Liquor	75	1870						Base	Decagon	Colourless	Press moulded		Press moulded. Decorative apéritifs/liquor bottle. Smooth concave circular indented base, 18mm thick. Decagon (10-side) body shape. Colourless glass. Boow 1991: 84-88. Jones & Sullivan 1989: 34-35.
WBRHS181296	U/S	1	1	40	Glass	Medicine	Bottle	Apothecary	13		1920					Base, body	Octagonal	Cobalt blue	Mould blown		Cobalt blue mold blown octagonal phial (medicine bottle)
WBRHS181297	1412	1	1	10	Glass	Food Storage	Bottle	Cordial	87	1850				Base: LL / B / SS		Base	Cylindrical	Green	Machine made, post bottom mould		Embossed base: "LL / B / SS" Double letters possibly due to second post bottom imprint during manufacture. No cross-mend with either cat#181224 or cat#181450, therefore MNI=1. Jones and Sullivan 1989: 45
WBRHS181298	1446	1	1	10	Glass	Food Storage	Bottle	Cordial	13	1900				Shoulder: ...REFRIG. / ...[L]TD.		Body	Cylindrical	Colourless	Machine made		Embossed body: "REFRIG." and ...[L]TD.
WBRHS181300	1412	2	1	30	Glass	Food Storage	Bottle	Wine/Champagne	351	1870	1920					Base	Cylindrical	Olive	Turn moulded		Champagne bottle. Push-up base. Boow 1991: 51 < https://sha.org/bottle/wine.htm#Champagne%20Bottles >
WBRHS181301	U/S	1	1	100	Glass	Food Storage	Bottle	Wine/Champagne	609		1840					Complete	Cylindrical	Olive	Hand blown		Champagne bottle, partially cross-fit in 4 fragments. Two part mould blown, hand tooled finish with sloped top. Push-up base with large mamelon. Dated pre-1840s Boow 1991: 113.
WBRHS181302	1419	1	1	20	Glass	Food Storage	Bottle	Wine/Beer	67	1820	1870					Rim	Cylindrical	Olive	Hand tooled finish		Wine/Beer finish. Down tooled string rim. Boow 1991: 117
WBRHS181303	1412	1	1	10	Glass	Food Storage	Bottle	Wine/Beer	96	1820	1870					Base	Cylindrical	Olive	Mould blown		Wooden cone push-up. Boow 1991: 32
WBRHS181304	U/S	1	1	5	Glass	Food Storage	Bottle	Wine/Beer	24							Body	Cylindrical	Olive	Mould blown		Undiagnostic body shard
WBRHS181306	1412	1	1	30	Glass	Food Storage	Jar	Pickle/Preserves	61	1820	1920					Rim, shoulder	Cylindrical	Aqua	Two piece mould, hand tooled finish		Food storage jar, wide mouth. Likely preserves or condiments. Hand-tooled finish with flat top and patent finish < https://sha.org/bottle/finishstyles.htm#Patent%20or%20Flat >
WBRHS181307	1412	1	1	100	Glass	Food Storage	Bottle	Oil/Vinegar	229	1850	1900					Complete	Cylindrical	Aqua	Machine made, two piece mould, applied finish, post bottom mould base	Vertical ribbed and dashed pattern on moulded body.	Complete bottle, decorative salad oil/vinegar. Vertical ribbed and dashed pattern on moulded body. Un-moulded flat oval on body for placement of paper label (48mm x 30mm). Hand tooled applied stopper type finish, with down-tooled taper. (Jones & Sullivan 1989: 89; Vader & Murray 1978: 74). < https://sha.org/bottle/food.htm#Ribbed%20sauce > < https://sha.org/bottle/glassmaking.htm#Applied%20finishes >
WBRHS181308	U/S	1	1	30	Glass	Food Storage	Bottle	Wine/Beer	331	1820	1870					Base	Cylindrical	Olive	Mould blown		Metal tipped wooden push-up. Boow 1991: 32

WBRHS181309	1412	1	0	5	Glass	Unknown	Bottle	Unknown	19	1850	1920					Rim	Cylindrical	Green	Hand tooled finish		Common mid-19th/early 20th century finish. Possibly associated with green glass bottle bases, therefore MNI=0 <https://sha.org/bottle/finishstyles.htm#English%20Ring>
WBRHS181310	U/S	2	1	50	Glass	Food Storage	Bottle	Castor oil	121	1860	1915		Hora & Co	... [CASTOR] OIL... [HOR]A & CO. [LOND]ON	London	Base, body	Tapered	Cobalt blue	Machine made, two piece mould with bottom plate		Boow 1991: 53, <https://heritagecentre.cityofparramatta.nsw.gov.au/objects/41833/hora-cobalt-cobalt-blue-castor-oil-bottle>
WBRHS181311	1497	1	1	5	Glass	Food Storage	Bottle	Wine/Beer	24	1820	1870					Body	Cylindrical	Olive	Indeterminate		Undiagnostic body shards
WBRHS181312	U/S	1	1	100	Glass	Medicine	Dropper	Apothecary	2	1930						Complete	Cylindrical	Colourless	Mould blown		Medicine dropper. Possibly associated with cat#181346 (packed together)
WBRHS181313	1508	1	1	2	Glass	Food Storage	Bottle	Unknown	2							Body	Unknown	Aqua	Mould blown		Rib pattern moulded on shoulder(?)
WBRHS181314	1433	10	1	30	Glass	Food Storage	Bottle	Beer	196	1968				1968		Base, body	Cylindrical	Amber	Machine made		Embossed date 1968 on body at base
WBRHS181315	U/S	4	1	50	Glass	Food Storage	Bottle	Wine/Champagne	373	1870	1920					Base, body, shoulder, neck, rim	Cylindrical	Olive	Two piece mould, hand tooled finish		Champagne bottle, partially cross-fit in 4 fragments. Two part mould blown, hand tooled finish with sloped top. Push-up base with large mamelon. <https://sha.org/bottle/wine.htm#Champagne%20Bottles>
WBRHS181316	U/S	3	2	40	Glass	Food Storage	Bottle	Beer	148	1930		Australian Glass Manufacturers (AGM)		Body: [...] WINES PTY LTD Base: AGM symbol IS 1737D 15		Base, shoulder, neck, rim	Cylindrical	Amber	Machine made, cup bottom mould	Embossed, stippled on base	Body: "[...]WINES PTY. LTD." Base: "AGM symbol, IS 1737D 15". Jones & Sullivan 1989: 45. 1x rim, neck & shoulder. Possible 2x separate bases. Therefore MNI = 2
WBRHS181317	1427	1	1	2	Glass	Medicine	Bottle	Apothecary	1	1850	1920			Body: C (?) on panel		Body	Panelled	Colourless	Machine made		Embossed with possible letter "C" (?)
WBRHS181318	1427	2	0	Unknown	Glass	Building	Window Glass	Window Glass	18	1890						Pane	Panelled	Colourless	Press moulded	Stippled	Boow 1991: 111
WBRHS181319	1412	1	1	100	Glass	Food Storage	Bottle	Soda/Mineral water	343	1834	1870					Complete	Torpedo	Aqua	Machine made, two piece mould, hand finishing tool		Complete torpedo bottle. No embossing. Hand tooled applied blob finish, two part mould with possible manufacture marks from hinge mould. Boow 1991: 116 <https://sha.org/bottle/soda.htm#Round%20Bottom/Torpedo%20Styles>
WBRHS181320	U/S	1	1	100	Glass	Food Storage	Bottle	Wine/Champagne	588		1840					Complete	Cylindrical	Olive	Hand blown		Complete bottle. Heavy patina. Champagne bottle. Closure copper wire attached. Asymmetrical body with no seam marks. Push-up base with large mamelon. Hand tooled champagne finish with sloped top. Dated pre-1840s Boow 1991: 113.
WBRHS181321	U/S	1	1	100	Glass	Food Storage	Bottle	Beer	626	1959	1959	Australian Glass Manufacturers (AGM)		Body: THIS BOTTLE IS / THE PROPERTY OF / THE NSW BOTTLE COMPANY PTY. LTD. Base: AGM symbol / 1959 / IS 89 / 833		Complete	Cylindrical	Amber	Machine made, two piece mould with bottom plate	Embossed	Complete bottle. Body: "THIS BOTTLE IS" "THE PROPERTY OF" "THE NSW BOTTLE COMPANY PTY. LTD." Base: "AGM symbol, 1959, IS 89, 833"
WBRHS181322	U/S	1	1	100	Glass	Food Storage	Bottle	Cordial	670	1920	1964		Wilce's Cordial and Soft Drink Manufacturers	Body: WILCE'S. Body (above base): THIS BOTTLE IS THE PROPERTY OF WILCE'S SYDNEY	Sydney	Complete	Cylindrical	Colourless	Machine made, two piece mould with bottom plate		Complete bottle. Embossed body: "WILCE'S" "THIS BOTTLE IS THE PROPERTY OF WILCE'S SYDNEY". Wilce's Cordial and Soft Drink Manufacturers, Newtown, Sydney. Jones 2009: 978-988 <i>Thirsty Work</i> . Identical manufactured bottle & Noon's contents = cat#181410
WBRHS181323	U/S	1	1	30	Glass	Food Storage	Bottle	Wine/Beer	206	1870	1920					Base, body	Cylindrical	Olive	Machine made		Push-up base. Boow 1991: 51
WBRHS181324	U/S	1	1	30	Glass	Food Storage	Bottle	Wine/Beer	211	1890	1896	South Australian Glass Bottle Factory Ltd.		Base: O[o]	Adelaide	Base, body	Cylindrical	Olive	Machine made, post bottom mould		Base: Post bottom with slight push-up and central dot. South Australian Glass Bottle Factory Ltd, Adelaide, South Australia, 1875-96. Base: maker's mark "Oo" dates c.1890-96. Boow 1991: 181

WBRHS181325	U/S	10	7	Unknown	Glass	Food Storage	Bottle	Wine/Champagne	942	1870	1920					Base, body, shoulder, neck, rim	Cylindrical	Olive	Turn moulded		Champagne bottles: NISP=10. Total 7 rim & necks (1 cross-mend. 3 with attached closure copper wire), 2x bases. Therefore MNI=7. Finishes: champagne, sloped top. Bases: push-up with large mamelon. Heavy patina. Boow 1991: 51 < https://sha.org/bottle/wine.htm#Champagne%20Bottles >
WBRHS181326	U/S	1	1	20	Glass	Food Storage	Bottle	Wine/Beer	94	1820	1870					Base	Cylindrical	Olive	Mould blown		Possible metal tipped wooden push-up
WBRHS181327	U/S	1	1	10	Glass	Food Storage	Bottle	Sauces/Condiments	24	1850	1920					Rim	Cylindrical	Aqua	Machine made, two piece mould, hand finishing tool		Club sauce style, hand tooled finish. Possible "Lea & Perrins" < https://sha.org/bottle/finishstyles3.htm#Club%20Sauce >, < https://sha.org/bottle/closures.htm#Glass%20Cork%20Closure >
WBRHS181328	U/S	1	0	10	Glass	Food Storage	Bottle	Soda/Mineral water	25	1840	1940					Rim	Unknown	Light Blue	Hand tooled finish		Blob finish only present. Boow 1991: 65, Fig 61
WBRHS181329	U/S	1	1	40	Glass	Medicine	Bottle	Apothecary	103	1840	1920			Base: K / 3035		Base, body	Rectangular with flat chamfers	Aqua	Machine made, post bottom mould		Embossed base "K / 3035" Jones & Sullivan 1989: 45, < https://sha.org/bottle/medicinal.htm#Rectangular%20Druggists >
WBRHS181330	U/S	1	1	30	Glass	Food Storage	Bottle	Liquor	87	1860	1890					Rim, neck	Cylindrical	Olive	Mouth blown		Grooved ring finish, likely mouth-blown. Heavy patina. < https://sha.org/bottle/finishstyles2.htm#Grooved%20Ring >
WBRHS181331	U/S	1	1	40	Glass	Food Storage	Bottle	Wine/Beer	282	1821	1920					Base, body	Cylindrical	Olive	Machine made, Ricketts type bottom		Base: Ricketts-type 'knocker-up' base, no embossing. Boow 1991: 46, 116
WBRHS181332	U/S	1	1	5	Glass	Food Storage	Jar	Pickle/Preserves	81	1885	1930					Rim	Cylindrical	Aqua	Hand tooled finish		Fruit jar. Hand-tooled cap seat finish with flat top and down tooled side. < https://sha.org/bottle/closures.htm#Ecomony%20Fruit%20Jar%20Closure >
WBRHS181334	1411	2	1	5	Glass	Food Storage	Bottle	Oil/Vinegar	23					Decorative: Oval surrounded by linear pattern		Body	Cylindrical	Colourless	Machine made	Oval surrounded by linear pattern	Embossed body with oval surrounded by linear pattern
WBRHS181341	U/S	1	1	5	Glass	Food Storage	Bottle	Soda/Mineral water	18	1834	1870					Body	Egg-shaped	Aqua	Mould blown		Undiagnostic body shard. Possible body fragment of egg/torpedo shaped bottle. Boow 1991: 116 < https://sha.org/bottle/soda.htm#Round%20Bottom/Torpedo%20Styles >
WBRHS181342	1422	1	1	5	Glass	Food Storage	Bottle	Oil/Vinegar	9							Base	Unknown	Aqua	Mould blown	Round ribbed body	Mould blown. Round ribbed body. Possible oil/vinegar bottle
WBRHS181343	U/S	1	0	5	Glass	Food Storage	Bottle	Unknown	3							Body	Unknown	Olive	Indeterminate		Undiagnostic body sherd
WBRHS181344	1592	1	0	Unknown	Glass	Building	Window Glass	Window Glass	10	1890						Pane	Panelled	Colourless	Press moulded	Stippled	Boow 1991: 111
WBRHS181345	1592	1	0	Unknown	Glass	Building	Window Glass	Window Glass	7	1890						Pane	Panelled	Colourless	Press moulded	Stippled, square dentate	Boow 1991: 111
WBRHS181346	U/S	1	1	100	Glass	Medicine	Bottle	Apothecary	34	1935		Australian Glass Manufacturers (AGM)		Base: AGM S 915		Complete	Cylindrical	Colourless	Machine made, two piece mould		Complete medicine bottle. Base: "AGM symbol S 195". Possibly associated with cat#181312 (packed together).
WBRHS181347	1229	1	1	5	Glass	Food Storage	Bottle	Wine/Champagne	3							Body	Cylindrical	Olive	Indeterminate		Undiagnostic body shard
WBRHS181350	1427	1	1	5	Glass	Food Storage	Bottle	Beer	6	1960						Body	Cylindrical	Amber	Machine made	Stippled	Stippling embossed on shoulder
WBRHS181351	U/S	3	0	10	Glass	Food Storage	Bottle	Wine/Beer	41							Body	Cylindrical	Olive	Indeterminate		Undiagnostic body shard. Possibly associated with olive glass bottle cat#181370, therefore MNV=0
WBRHS181352	U/S	1	1	2	Glass	Food Storage	Bottle	Gin/Bitters	2	1860	1920					Body	Square	Olive	Machine made, two piece mould		Undiagnostic body shard, possibly Gin/Bitters. < https://sha.org/bottle/liquor.htm#Tall%20Square%20Short-necked%20spirits%20bottles >
WBRHS181353	U/S	1	1	70	Glass	Tableware	Glass	Stemware	12							Stem, knob	Unknown	Colourless	Mould blown		Jones & Sullivan 1985: 47
WBRHS181354	U/S	1	1	1	Glass	Unknown	Bottle	Unknown	1							Body	Unknown	Cobalt blue	Indeterminate		Undiagnostic body shard. Possible cobalt body fragment of poison or medicine bottle

WBRHS181356	U/S	1	1	5	Glass	Medicine	Bottle	Unknown	40					Body: C G		Body	Ovoid	Aqua	Machine made		Possibly medicine bottle. Too small for typical liquor/spirits flask.
WBRHS181357	1488	11	8	30	Glass	Tableware	Glass	Stemware	537	1780	1860					Base, stem, knob, cup	Bucket	Colourless	Mould blown		Late 18th through Mid 19th century. Pontils present on all bases. 5x bucket bowls. 2x annular knob. 3x ball knob. Dimensions roughly matched across assemblage. Jones & Smith 1985: 47
WBRHS181358	U/S	3	1	5	Glass	Food Storage	Bottle	Beer	23					Body: S[...]ED		Body	Cylindrical	Amber	Indeterminate	Embossed	Undiagnostic body shard. Possible amber beer bottle
WBRHS181359	U/S	2	1	5	Glass	Food Storage	Bottle	Wine/Beer	34							Body	Cylindrical	Olive	Indeterminate		Undiagnostic body shards
WBRHS181360	U/S	3	0	Unknow n	Glass	Building	Window Glass	Window Glass	2	1890						Pane	Panelled	Colourless	Press moulded	Stippled	Boow 1991: 111
WBRHS181363	1590	2	1	30	Glass	Food Storage	Bottle	Wine/Beer	249	1820	1870					Base, body	Cylindrical	Olive	Mould blown		Metal tipped wooden push-up. Boow 1991: 32
WBRHS181364	U/S	1	1	100	Glass	Food Storage	Bottle	Beer	325	1923	1930	Australian Glass Manufacturers (AGM)	Tooth & Co. Ltd.	Body: TOOTH & CO LTD. / TRADEMARK / INVICTA / KENT BREWERY/ SYDNEY (all encircling horse rampant symbol). THIS BOTTLE ALWAYS REMAINS THE PROPERTY OF TOOTH & CO. LTD. Base: AGM letters S 723	Sydney	Complete	Cylindrical	Green	Machine made, two piece mould with bottom plate	Embossed	Complete bottle. Body: "TOOTH & CO LTD. / TRADEMARK / INVICTA / KENT BREWERY/ SYDNEY (all encircling horse rampant symbol)" "THIS BOTTLE ALWAYS REMAINS THE PROPERTY OF TOOTH & CO. LTD." Base: "AGM (in letters) S 723" Boow 1991: 176 -- the AGM trademark in letters dates 1923-1930. Brewery located on Broadway Street, Sydney 1835-1985. One of Australia's oldest breweries.
WBRHS181365	1374	3	1	10	Glass	Food Storage	Bottle	Wine/Champagne/Beer	33							Body	Cylindrical	Olive	Indeterminate		Olive glass bottle, undiagnostic body shards
WBRHS181366	U/S	4	1	5	Glass	Food Storage	Bottle	Wine/Beer	75	1820	1870					Base	Cylindrical	Olive	Mould blown		Possible metal tipped wooden push-up. Boow 1991: 32
WBRHS181369	1590	1	1	10	Glass	Food Storage	Glass	Unknown	65	1900						Base	Cylindrical	Colourless	Mould blown		Mould blown, bottom plate
WBRHS181370	U/S	3	1	10	Glass	Food Storage	Bottle	Wine/Beer	27	1820	1870					Rim, neck, body	Cylindrical	Olive	Mould blown		Possibly associated with Olive glass body fragments cat#181351, therefore MNV=1
WBRHS181371	U/S	1	1	2	Glass	Unknown	Indeterminate	Unknown	1							Body	Cylindrical	Aqua	Indeterminate		Undiagnostic body shard
WBRHS181375	1488	6	6	30	Glass	Tableware	Glass	Tumbler	909	1810	1860					Base, body	Cylindrical	Colourless	Mould blown		Early-Mid 19th century. 4x pontils present. 2x polish finished bases. Dimensions roughly matched across assemblage. Jones & Smith 1985: 35
WBRHS181376	U/S	1	1	30	Glass	Unknown	Bottle Stopper	Unknown	2	1930						Shank	Tapered	Colourless	Press moulded	Grinding	Tapered glass stopper, grounded shank only. Small size suggests medical or personal use (perfume?)
WBRHS181377	U/S	2	0	2	Glass	Unknown	Indeterminate	Unknown	2							Body	Unknown	Colourless	Indeterminate		Undiagnostic body sherd
WBRHS181381	1427	1	1	2	Glass	Food Storage	Bottle	Soda/Mineral water	5	1895						Rim	Cylindrical	Colourless	Machine made, two piece mould		Boow 1991: 117
WBRHS181382	U/S	1	1	5	Glass	Food Storage	Bottle	Beer	33					Body: SY[...] / [T]HIS BOTTLE / PROPER[...]	Sydney	Body	Cylindrical	Amber	Machine made		Possibly Tooth & Co. Ltd., Kent Brewery, Sydney
WBRHS181384	1412	1	1	50	Glass	Unknown	Bottle	Unknown	128	1840				Base: K		Base, body	Cylindrical	Aqua	Machine made, two piece mould, post bottom mould		Embossed base: "K" Unknown contents could include toiletries, fragrances, or liquid sauces. Heavy patina. Jones and Sullivan 1989: 45
WBRHS181387	U/S	1	1	100	Glass	Food Storage	Bottle	Ginger Beer	418	1939		Australian Glass Manufacturers (AGM)	Noon's Cordials Windsor	Body: NOONS CORDIALS WINDSOR/ GINGER BEER (circle). Body (above base): THIS BOTTLE / IS THE PROPERTY OF / NOONS CORDIALS PTY. LTD. WINDSOR. Base: AGM IS 1379	Windsor NSW	Complete	Cylindrical	Amber	Machine made, two piece mould with bottom plate		Complete bottle. Embossed Body: "NOONS CORDIALS WINDSOR" encircling "GINGER BEER". Base: "AGM symbol, IS 1379" Dated by newspaper article: < https://trove.nla.gov.au/newspaper/article/85810420 >
WBRHS181390	1412	1	1	20	Glass	Food Storage	Bottle	Cordial	16	1840	1920			Base: 1995		Base	Cylindrical	Aqua	Machine made, Ricketts type bottom	Embossed	Embossed base: "1995" Ricketts-type 'knocker-up' base. Boow 1991: 44-46. Note: heavy glass body (with bubbles) and manufacture type suggest pre-1920 manufacture

WBRHS181392	1590	1	1	100	Glass	Food Storage	Jar	Stopper	81	1820	1920					Complete	Circular	Aqua	Mould blown		Complete jar stopper. Interior base diameter 40mm, External top diameter 60mm. Mould-blown with interior pontil scar. Circular body, top circular depression, tapered sides, and tapered base. Jones & Sullivan 1989: 153
WBRHS181393	U/S	1	1	5	Glass	Food Storage	Bottle	Wine/Beer	34	1821	1920					Base	Cylindrical	Olive	Machine made, Ricketts type bottom		Base: Ricketts-type 'knocker-up' base, no embossing. Boow 1991: 46, 116
WBRHS181396	1412	1	1	20	Glass	Household	Bottle	Blacking polish	42	1875	1895		Frank Miller & Sons	Body: [FRANK] / [MILLER]S / [CROW]N / Crown symbol / [DRE]SSING / NEW YORK / USA	New York	Base, body	Square with flat chamfers	Aqua	Machine made, cup bottom mould		Blacking bottle, two part mould, square with chamfers. Embossed body: [FRANK] / [MILLER]S / [CROW]N / Crown symbol / [DRE]SSING / NEW YORK / USA <https://glassbottlemarks.com/frank-millers-crown-dressing-new-york-usa/>
WBRHS181398	U/S	1	0	20	Glass	Food Storage	Bottle	Gin/Bitters	111	1860	1920			Body: [...]ER		Base, body	Square with flat chamfers	Olive	Machine made, cup bottom mould		Base of square gin or bitters bottle, chamfered corners, cup bottom. Embossed body: "[...]ER" Jones & Sullivan 1989 <https://sha.org/bottle/liquor.htm#Tail%20Square%20Short-necked%20snirts%20bottles>
WBRHS181399	U/S	2	2	20	Glass	Food Storage	Bottle	Beer	131	1945	1945	Australian Glass Manufacturers (AGM)		Base: AGM symbol / 1945 / IS 97		Base	Cylindrical	Amber	Machine made, two piece mould with bottom plate		2x bases, amber (beer) bottles. 1x embossed base: "AGM symbol / 1945 / IS 97" No cross-mend between bases, and different circumference. Therefore MNI=2
WBRHS181402	1412	1	1	30	Glass	Medicine	Bottle	Apothecary	409	1900		Davey & Moore Ltd.		D & M	England	Base, body	Cylindrical	Aqua	Machine made, post bottom mould		Large diameter aqua bottle base. Two part mould, post bottom base. Embossed base: "D & M". Davey & Moore Ltd., Brimsdown, Middlesex England. Produced laboratory, pharmaceutical, and medical glasswares. Trade name = Davisil. Maker's mark dated c.1900 onwards. Boow 1991: 177 <http://www.glassmaking-in-london.co.uk/late-glasshouses>
WBRHS181404	1412	7	1	25	Glass	Food Storage	Bottle	Sauces/Condiments	128	1870	1920					Base, body	Square with flat chamfers	Aqua	Machine made, post bottom mould		Square with chamfers. Two part mould, post bottom mould. Boow 1991: 116
WBRHS181405	U/S	1	1	100	Glass	Medicine	Bottle	Apothecary	141	1860			John Pottie	Body: J. POTTIE	Sydney	Complete	Ovoid	Aqua	Two piece mould, hand tooled finish		Complete bottle, heavy patina, cork fragment remains inside. Embossed body: "J. Pottie" surrounded by decorative ribbon. Veterinary product made by John Pottie, established Sydney 1860. Fisher & Stanton 2001. Fisher, J. and J. Stanton 2001 Entrepreneurial Success through Marketing in Ninteenth Century Australia: The Case of John Pottie & Sons. <i>Journal of Research in Marketing and Entrepreneurship</i> 3(1): 39-50.
WBRHS181408	1412	4	4	50	Glass	Food Storage	Bottle	Unknown	140, 56, 86,62		1920			Body of Soda/mineral bottle: ...KE[R]... / JOHN / MAKE[R]		Base, body, shoulder, neck, rim	Square with flat chamfers, Round neck, Egg-shaped	Aqua	Machine made, cup bottom mould; Two piece mould, hand tooled finish; Two piece mould		2x Medicine bottles, square with chamfers. 1x clear glass bottle, hand tooled stopper finish and neck, Boow 1991: 70. 1x clear glass egg-shaped soda/mineral bottle, body + base fragment. Heavy patina. Four different bottles under one cat#181408. Therefore MNI=4
WBRHS181410	1412	1	1	100	Glass	Food Storage	Bottle	Cordial	674	1913			Noon's Cordials Windsor	Body: NOONS CORDIALS / WINDSOR (circle). Body (above base): THIS BOTTLE / IS THE PROPERTY OF / M. NOON WINDSOR	Windsor NSW	Complete	Cylindrical	Colourless	Machine made, two piece mould with bottom plate		Complete bottle. Embossed body: "NOON'S CORDIALS WINDSOR" "THIS BOTTLE IS THE PROPERTY OF M. NOON WINDSOR" Boow 1991: 93. Dated from local business history <https://www.hawkesbury.org/name/noons-cordials-windsor.html>. Identical manufactured bottle & Wilce's contents = cat#181322

WBRHS181411	U/S	1	1	15	Glass	Medicine	Bottle	Apothecary	11	1850	1920					Base, body	Square with flat chamfers	Light Blue	Mould blown		Possible medicinal bottle, pill or tincture. Only partial base present, no mould seams.
WBRHS181414	1412	1	1	30	Glass	Food Storage	Bottle	Wine/Beer	207		1870					Base	Cylindrical	Olive	Mould blown		Sand pontil push-up with quatrefoil. Interior base: domed bulge distortion from metal rod. Boow 1991: 28, Figure 24
WBRHS181416	U/S	2	1	15	Glass	Food Storage	Bottle	Champagne	331							Base	Cylindrical	Olive	Mould blown		Jones & Sullivan 1989: 87
WBRHS181419	1412	1	1	100	Glass	Household	Bottle	Blacking polish	141	1852	1920		Hauthaways	Body: HAUTHAWAYS / PEERLESS GLOSS Base: 2	Boston	Base, body, shoulder, neck, rim	Square with flat chamfers	Aqua	Machine made, cup bottom mould		Complete bottle. Boston, USA. Embossed body: "HAUTHAWAYS" "PEERLESS GLOSS" Base: "2" Shoe polish. < https://victoriancollections.net.au/items/5c3d58b921ea67027483971b >
WBRHS181420	1412	2	1	30	Glass	Food Storage	Bottle	Sauces/Condiments	78	1840	1930					Base, body, rim	Cylindrical	Aqua	Machine made, two piece mould, hand finishing tool		Club sauce style, hand tooled finish. Two part mould, bottom plate base. Possible "Lea & Perrins" < https://sha.org/bottle/finishstyles3.htm#Club%20Sauce >, < https://sha.org/bottle/closures.htm#Glass%20%20Cork%20closure >
WBRHS181421	1412	1	1	20	Glass	Food Storage	Bottle	Wine/Beer	153	1821	1920					Base, body	Cylindrical	Olive	Machine made, Ricketts type bottom		Base: Ricketts-type 'knocker-up' base, no embossing. Boow 1991: 46, 116
WBRHS181424	1412	1	1	10	Glass	Food Storage	Bottle	Soda/Mineral water	50	1875	1896		Hume & Pegrum	Body: HUME & PEGRU[M]	Sydney	Body	Egg-shaped	Aqua	Machine made, two piece mould		Egg-shaped, round bottle body fragment. Hume & Pegrum, Mineral Waters, Sydney. No cross-mend, therefore MNI=1. Jones 2009: 388-399 <i>Thirsty Work</i> . NSW, Australia.
WBRHS181425	1412	1	1	15	Glass	Food Storage	Bottle	Wine/Beer	204	1820	1870					Base	Cylindrical	Olive	Mould blown		Metal tipped wooden push-up. Boow 1991: 32. Possible cross-mend with cat#181427, therefore MNI=1
WBRHS181426	1412	3	1	15	Glass	Food Storage	Bottle	Wine/Champagne	146	1870	1920					Base	Cylindrical	Olive	Turn moulded		Champagne bottle. Push-up base (large mamelon only). Boow 1991: 51 < https://sha.org/bottle/wine.htm#Champagne%20Bottles >
WBRHS181427	1412	1	0	10	Glass	Food Storage	Bottle	Wine/Beer	77	1820	1870					Base	Cylindrical	Olive	Mould blown		Metal tipped wooden push-up. Boow 1991: 32. Possible cross-mend with cat#181425, therefore MNI=0
WBRHS181430	1412	1	0	10	Glass	Food Storage	Bottle	Oil/Vinegar	23	1868	1907		Champion & Co.		London	Neck, shoulder	Tapered	Aqua	Machine made, two piece mould	Neck rings, rib fluted neck and body	Ringed neck, vertically ribbed/fluted sauce bottle. Hand tooled stopper finish, upper body only. Shape = "Champion's Vinegar" c.1868-1907. James Bigwood & James EC Bigwood (son) owners Champion & Co. 1868-1907. Large exporters to Australia/NZ from 1870s < http://letslookagain.com/2015/07/champion-co-vinegar-brewers/ > Example from Parramatta dated c.1890: < https://heritagecentre.cityofparramatta.nsw.gov.au/objects/41814/champions-vinegar-green-glass-vinegar-bottle > MNI=0 associated with cat#181243 & cat#181227
WBRHS181431	1412	2	2	30	Glass	Medicine	Bottle	Apothecary	65	1860	1890			Base: 3		Base, body	Square with flat chamfers	Aqua	Machine made, cup bottom mould		2x bases. Medicine bottles, square with chamfers. "French square" style. 1x embossed base: "3". < https://sha.org/bottle/medicinal.htm#Square%20druggists >
WBRHS181432	1412	1	1	20	Glass	Medicine	Bottle	Castor oil	10	1850	1920					Rim, neck	Cylindrical	Cobalt blue	Two piece mould, hand tooled finish		Cobalt blue rim & neck, castor oil bottle. Possibly associated with cat#181449 (base fragment), therefore MNI=1 < https://collections.museumsvictoria.com.au/items/1611886 > , < https://sha.org/bottle/Typing/household/castoroil.png >

WBRHS181436	1412	1	0	5	Glass	Food Storage	Bottle	Soda/Mineral water	12	1875	1896		Hume & Pegrum	Body: HP logo	Sydney	Body	Egg-shaped	Aqua	Machine made, two piece mould		Round bottle body fragment, possibly egg-shaped. Hume & Pegrum, Mineral Waters, Sydney. Body fragment only, therefore MNI=0. Jones 2009: 388-399 <i>Thirsty Work</i> . NSW, Australia.
WBRHS181437	1412	2	1	80	Glass	Medicine	Bottle	Apothecary	311	1840	1920					Base, body, shoulder, neck, rim	Rectangular with flat chamfers	Aqua	Two piece mould, hand tooled finish		Applied packer rim finish. Two part mould with post bottom. Heavy patina. <https://sha.org/bottle/finishstyles.htm#English%20Ring> <https://sha.org/bottle/medicinal.htm#Rectangular%20Druggists>
WBRHS181438	1412	1	1	30	Glass	Food Storage	Bottle	Liquor	79	1860	1890					Rim, neck	Cylindrical	Olive	Mouth blown		Grooved ring finish, likely mouth-blown. Closure copper wire attached. <https://sha.org/bottle/finishstyles2.htm#Grooved%20Ring>
WBRHS181442	1412	1	0	5	Glass	Food Storage	Jar	Pickle/Preserves	7							Rim, neck	Cylindrical	Aqua	Two piece mould, hand tooled finish		Wide mouth food jar, hand tooled stopper finish. Associated with cat#181448. Therefore MNI=0
WBRHS181443	1412	1	1	30	Glass	Food Storage	Jar	Pickle/Preserves	70	1840	1920					Rim, neck, shoulder	Cylindrical	Aqua	Mouth blown		Wide mouth food jar, hand tooled stopper finish. Short neck, thin round body. Boow 1991: 19, Figure 18d <https://sha.org/bottle/finishes.htm#Molded%20&%20Tooled%20finish>
WBRHS181444	1412	3	3	15	Glass	Food Storage	Bottle	Gin/Bitters	124	1860	1920					Rim	Square	Olive	Two piece mould, hand tooled finish		3x Rim and neck of square gin or bitters bottle. Down tooled hand finish. Jones & Sullivan 1989 <https://sha.org/bottle/liquor.htm#Tail%20Square%20Short-necked%20spirits%20bottles>. Associated with cat#181279 & cat#181239. MNI=3
WBRHS181448	1412	3	1	20	Glass	Food Storage	Jar	Pickle/Preserves	22							Rim, neck	Cylindrical	Aqua	Hand tooled finish		Wide mouth food jar, hand tooled stopper finish. Associated with cat#181442. Therefore MNI=1
WBRHS181449	1412	2	0	10	Glass	Medicine	Bottle	Castor oil	17	1850	1920					Base	Cylindrical	Cobalt blue	Machine made, cup bottom mould		Cobalt blue base, Castor oil bottle. Possibly associated with cat#181432 (rim/neck fragment), therefore MNI=0. Jones & Sullivan 1989: 45 <https://sha.org/bottle/Typing/household/castoroil.jpg>
WBRHS181450	1412	3	1	20	Glass	Food Storage	Bottle	Cordial	162	1850				Base: L. / ... S. / ... 9		Base	Cylindrical	Green	Machine made, post bottom mould		Embossed base: "L. / ... S. / ... 9" Possibly associated with cat#181224, therefore MNI=1. Jones & Sullivan 1989: 45
WBRHS181454	1412	3	0	20	Glass	Food Storage	Bottle	Sauces/Condiments	26							Neck, shoulder	Cylindrical	Aqua	Two piece mould, hand tooled finish		Possible club sauce bottle. Associated with cat#181204. Therefore MNI=0
WBRHS181655	U/S	1	1	Unknown	Glass	Household	Lamp	Hand Lamp	18	1850	1930					Base	Circular	Opaque white	Press moulded		Undecorated opaque white 'milk' glass base small fragment of kerosene hand lamp. Cuffley 1973: 60-65. Cuffley, P. 1973 <i>A Complete Catalogue and History of Oil and Kerosene Lamps in Australia</i> . Yarra Glen, Vic: Pioneer Design Studio Pty. Ltd.
WBRHS181995	3000		1		Glass	Building	Window Glass		117							indeterminate	flat	colourless	Indeterminate		
WBRHS181996	3000		1		Glass	Building	3.5ml broad window glass		7.5							indeterminate	flat				
WBRHS181997	3000		1		Glass	furnishing	5.5 plate glass	mirror	404							indeterminate	flat				
WBRHS181998	3000		1	90%	Glass	Food Storage	bottle	wine/beer	387							body & shoulder	cylindrical	dark olive green	3 part shoulder hinge mold with a dip mold body		
WBRHS181999	3000		1	15%	Glass	Food Storage	bottle	wine/beer	223							base	cylindrical	dark olive green	dip mold/abrupt heel/conical push up		

WBRHS182000	3000		1	15%	Glass	Food Storage	bottle	wine/beer	326							base & body	cylindrical	dark olive green	dip mold/abrupt heel/conical push up		
WBRHS182001	3000		1	15%	Glass	Food Storage	bottle	wine/beer	201							base	cylindrical	dark olive green	dip mold/abrupt heel/conical push up		
WBRHS182002	3000		1	10%	Glass	Food Storage	bottle	wine/beer	94.5							base	cylindrical	dark olive green	dip mold/abrupt heel/conical push up		
WBRHS182003	3000		1	10%	Glass	Food Storage	bottle	wine/beer	125							base	cylindrical	dark olive green	dip mold/abrupt heel/conical push up/sand pontilled		
WBRHS182004	3000		1	10%	Glass	Food Storage	bottle	wine/beer	84							base	cylindrical	dark olive green	dip mold/abrupt heel/conical push up/sand pontilled		
WBRHS182005	3000		1	10%	Glass	Food Storage	bottle	indeterminate	2.7							body	cylindrical	light green	2 piece with post bottom mold	chevron lines running up the side	
WBRHS182006	3000		1	25%	Glass	Food Storage	bottle	oil/vinegar	121					C on base		base & body	cylindrical	light green	Indeterminate		
WBRHS182007	3000		1	30%	Glass	Food Storage	bottle	oil/vinegar	121					A on base		base & body	cylindrical	light green	2 piece with post bottom mold		
WBRHS182008	3000		1	10%	Glass	Food Storage	bottle	alcohol	92.6							body	cylindrical	green	Indeterminate		
WBRHS182009	3000		1	40%	Glass	Food Storage	bottle	alcohol	177							body	cylindrical	light green	dip mold		
WBRHS182010	3000		1	5%	Glass	Food Storage	bottle	alcohol	57							body	Cylindrical	light green	Indeterminate		
WBRHS182011	3000		1	10%	Glass	Food Storage	bottle	alcohol	131					M		base	oval	light green	poss post bottom		
WBRHS182012	3000		1	20%	Glass	Food Storage	bottle	vinegar	309					ON'S/GAR		base	polygon	light green	poss post bottom		
WBRHS182013	3000		1	90%	Glass	Food Storage	bottle	soft drink	344					72...P3//2...GM logo		bade/body/neck	Cylindrical	Georgia green	machine made	panels above and below a flat band in the middle section	
WBRHS182014	3000		1	100%	Glass	Food Storage	bottle	soft drink	208					NOT TO BE REFILLED		complete	Cylindrical	amber	machine made		
WBRHS182015	3000		1	100%	Glass	medicine	bottle	Medicine	43					POWELL//BLACKFRIARS/R OAD		complete	Cylindrical	colourless	post bottom mold with flattened lip		
WBRHS182016	3000		1	5%	Glass	indeterminate	bottle		4							body		light /patination			
WBRHS182017	3000		1	5%	Glass	indeterminate	bottle		3.5							body		light /patination			
WBRHS182018	3000		1	5%	Glass	indeterminate	bottle		9.5							body		light green			
WBRHS182019	3000		1	10%	Glass	indeterminate	bottle		11.5							base		colourless - yellow under UV light			
WBRHS182020	3000		1	10%	Glass	indeterminate	bottle		24.5							neck		light olive green			
WBRHS182021	3000		1	10%	Glass	indeterminate	indeterminate		19							base		colourless - yellow under UV light			
WBRHS182022	3000		1	5%	Glass	indeterminate	indeterminate		3.5							body		purple			
WBRHS182023	3000		1	20%	Glass	indeterminate	indeterminate		37							body		colourless			
WBRHS182024	3000		1	10%	Glass	indeterminate	indeterminate		3.5							body		colourless			
WBRHS182065	3000		1	5%	Glass	Food Storage	saucer?		5							body		white			

6.3 CLAY PIPES

The following fields were recorded during the cataloguing of clay pipes. The highlighted fields are included in the catalogue below. Data from the additional fields is available in the artefact database stored within the excavation archive.

Date Excavated	Weight (g)	Pipe Portion
Project	Artefact TPQ	Bowl Shape
Area	Artefact TAQ	Spur?
Catalogue Number	Dating Notes	Glaze?
Context	Dating Notes2	Usewear
NISP	Maker	Bowl Decoration Pattern
MNI	Distributor	Stem Decoration Pattern
% Remains	Text on Item	Decoration Location
Activity	Provenance	Photographed?
Function	Height (mm)	Conservation Measure
Subfunction	Rim Diameter (mm)	Notes
Artefact Class	Thickness (mm)	
Material	Length (mm)	

[illegible]

6.4 METAL FASTENERS AND PINS

The following fields were recorded during the cataloguing of metal fasteners and pins. The highlighted fields are included in the catalogue below. Data from the additional fields is available in the artefact database stored within the excavation archive.

Date Excavated	Function	Width (mm)
Catalogue Number	Subfunction	Head Type
Area	Type	Taper
Context	Weight (g)	Shank Cross Section
NISP	Dating Notes	End Type
MNI	References	Fibre Orientation
% Remains	Notes	Fastener Manufacture
Artefact Class	Diameter (mm)	Photographed?
Material	Thickness midshank (mm)	Conservation Measure
Activity	Length (mm)	

Catalogue Number	Context	MNI	NISP	%	Material	Activity	Function	Subfunction	Type	Weight	Diameter (mm)	Thickness (midshank)	Length (mm)	Width (mm)	Head Type	Taper	Shank Cross Section	End Type	Fastener Manufacture
WBRHS181099	1488	1	1	100	Steel	Architectural/Structural	Fastening	Nut	Flange Nut	43	27	4	12	36					Machine-made
WBRHS181107	1427	1	1	100	Iron	Architectural/Structural	Fastening	Nail	Common Nail	3		5	33	5	Brad	Four-sided	Square	Pointed	Cut
WBRHS181112	U/S	4	4	100	Iron	Architectural/Structural	Fastening	Nail	Common Nail	30		4; 6; 5; 7	43; 45; 52; 80	6; 7; 6; 8	Rose	Two-sided; Two-sided; Two-sided; Four-sided	Rectangular; Rectangular; Rectangular; Square	Chisel	Hand-wrought
WBRHS181139	1422	2	3	100; Indeterminate	Iron	Architectural/Structural	Fastening	Nail	Common Nail	5		7; 7	40; 53	6; 10	Rose?	Four-sided; Two-sided	Rectangle	Pointed?	Hand-wrought
WBRHS181172	1412	1	1	100	Iron	Architectural/Structural	Fastening	Nail	Common Nail	5		5	80	5	Rose	Four-sided	Square	Pointed	Hand-wrought
WBRHS181176	U/S	2	2	100; Indeterminate	Iron	Architectural/Structural	Fastening	Nail	Common Nail	6		4; 4	30; 38	7; 5	Rose?	Two-sided	Rectangle	Chisel	Hand-wrought
WBRHS181182	1459	3	6	100	Iron	Architectural/Structural	Fastening	Nail	Common Nail	17		5; 5; 5	47; 63; 75	7; 6; 6	Rose	Four-sided; Four-sided; Four-sided	Square	Chisel	Hand-wrought
WBRHS181188	1406	1	1	100	Steel	Architectural/Structural	Fastening	Nail	Common Nail	7	5	5	62		Round	NA	Round	Pointed	Machine-made
WBRHS181190	1412	2	2	100	Iron	Architectural/Structural	Fastening	Nail	Common Nail	6	4; 4	4; 4	55; 60		Rose?	NA	Round	Chisel	Hand-wrought
WBRHS181198	U/S	1	1	Indeterminate	Iron	Architectural/Structural	Fastening	Nail	Common Nail	5		7	29	6	Rose?	Indeterminate	Square	Indeterminate	Hand-wrought
WBRHS181241	U/S	1	1	100	Iron	Architectural/Structural	Fastening	Washer	Indeterminate	393		8	95	95					Indeterminate?
WBRHS181247	U/S	2	2	100	Iron	Architectural/Structural	Fastening	Nail	Common Nail	56		8; 8	90; 105		Rose	Four-sided	Square	Chisel	Hand-wrought
WBRHS181248	1412	1	1	100	Steel	Architectural/Structural	Fastening	Nail	Common Nail	7	4	4	62		Flat, Round	NA	Round	Pointed	Drawn wire
WBRHS181253	U/S	3	3	100	Iron	Architectural/Structural	Fastening	Nail	Common Nail	16		5; 6; 10	33; 34; 40		Flat	NA	Square	Indeterminate	Indeterminate?
WBRHS181254	1412	1	1	100	Iron	Architectural/Structural	Fastening	Screw	Common Screw	15	6	6	47		Round	NA	Round		Machine-made
WBRHS181272	U/S	1	2	100	Iron	Architectural/Structural	Fastening	Nail	Common Nail	9		8	67	7	Rose	Four-sided	Square	Chisel	Hand-wrought
WBRHS181274	1488	1	1	100	Steel	Architectural/Structural	Fastening	Screw	Common Screw	3	4	4	34		Slot	NA	Round	Pointed	Machine-made
WBRHS181339	U/S	4	4	100	Iron	Architectural/Structural	Fastening	Nail	Common Nail	29	5; 6; 6; 6	5; 6; 6; 6	40; 42; 62; 82		Rose	NA	Round	Pointed	Drawn wire
WBRHS181386	1427	2	2	90; 100	Iron	Architectural/Structural	Fastening	Nail	Common Nail	8	7; 8	7; 8	>36; 40		Rose	Indeterminate; Two-sided	Indeterminate; Rectangular	Indeterminate; Chisel	Hand-wrought

WBRHS181388	1427	1	1	100	Iron	Architectural/Structural	Fastening	Nail	Lath Nail	9	5	5	60		Flat, Round	NA	Round	Pointed	Drawn wire
WBRHS181400	U/S	1	1	100	Iron	Architectural/Structural	Fastening	Nail	Lath Nail	7	5	5	60		Flat, Round	NA	Round	Pointed	Drawn wire
WBRHS181401	1453	2	2	100; 100	Iron	Architectural/Structural	Fastening	Nail	Common Nail	11		4; 8	35; 45	5-7; 6-8	Die	Two-sided	Rectangular	Chisel	Hand-wrought
WBRHS181406	U/S	3	3	100; 100; 100	Iron	Architectural/Structural	Fastening	Nail	Common Nail	19	5; 5; 7	5; 5; 7	45; 58; 75		Rose	NA	Round	Pointed	Drawn wire
WBRHS181407	U/S	1	1	90?	Steel	Architectural/Structural	Fastening	Nail	Common Nail	24	5	5	180		Round	NA	Round	Pointed	Machine-made
WBRHS181418	1488	1	1	100	Iron	Architectural/Structural	Fastening	Nail	Clasp Nail	17		6	70	6	Clasp	NA	Rectangular	Blunt	Machine Cut
WBRHS181447	1412	2	2	100	Iron	Architectural/Structural	Fastening	Nail	Common Nail	20		5; 6	65; 66	6; 7	Rose	Two-sided	Rectangular	Chisel	Hand-wrought
WBRHS181453	1412	1	1	100	Iron	Architectural/Structural	Fastening	Nail	Common Nail	10		5	50	4	Rose	NA	Round	Indeterminate	Cut
WBRHS181651	1411	2	2	100	Iron	Architectural/Structural	Fastening	Nail	Common Nail	15		5; 6	50; 61	7; 7	Rose	NA	Square; Square	Pointed	Hand-wrought
WBRHS181656	1590	2	2	Indeterminate; 100	Iron	Architectural/Structural	Fastening	Nail	Common Nail	5		5	40; 40	6	Rose	Two-sided	Rectangular	Chisel	Hand-wrought
WBRHS181710	1599	1	5	100	Iron	Architectural/Structural	Fastening	Nail	Common Nail	53		12	115	15	Flat	NA	Rectangle	Pointed	Hand-wrought
WBRHS181715	U/S	1	1	100	Iron	Architectural/Structural	Fastening	Nail	Common Nail	5		5	54	5	Flat	Four-sided	Square	Pointed	Hand-wrought
WBRHS181716	U/S	1	1	Indeterminate	Iron	Architectural/Structural	Fastening	Nail	Common Nail	19		15	53	12	Rose?	Indeterminate	Square	Indeterminate	Hand-wrought
WBRHS181721	U/S	1	1	Indeterminate	Iron	Architectural/Structural	Fastening	Nail	Common Nail	3	5	5	26		Rose?	NA	Round?	Indeterminate	Hand-wrought
WBRHS181727	U/S	1	15	90?	Iron	Architectural/Structural	Fastening	Nail	Common Nail	10	8	8	82		Indeterminate	NA	Round?	Pointed	Hand-wrought
WBRHS181732	U/S	1	1	100	Iron	Architectural/Structural	Fastening	Nail	Common Nail	8		3	81	4	Rose	Two-sided	Rectangular	Indeterminate	Hand-wrought
WBRHS181739	U/S	1	1	Indeterminate	Iron	Architectural/Structural	Fastening	Nail	Common Nail	1		5	21	9	Indeterminate	Two-sided	Rectangle	Pointed	Hand-wrought
WBRHS181748	1590	1	1	100	Iron	Architectural/Structural	Fastening	Nail	Common Nail	3		6	40		Flat, Round	NA	Round	Pointed	Drawn wire
WBRHS181760	1406	1	1	100	Iron	Architectural/Structural	Fastening	Nail	Common Nail	2		6	32	6	Brad	Four-sided	Square	Pointed	Cut
WBRHS181772	1509	1	1	Indeterminate	Iron	Architectural/Structural	Fastening	Nail	Common Nail	5	8	8	31		Flat, Round?	NA	Round	Indeterminate	Drawn wire?

WBRHS181809	U/S	1	1	100	Iron	Architectural/Structural	Fastening	Nail	Common Nail	2		5	31	5	Rose	Two-sided	Rectangular	Pointed	Hand-wrought
WBRHS182070	3000	1	1	90%	Iron	Architectural/Structural	Fastening	spike		44		1	18.5	1	Indeterminate	snapped	round	indeterminate	indeterminate
WBRHS182071	3000	1	1	90%	Iron	Architectural/Structural	Fastening	hinge		98		22	11.5					pointed	

6.5 METAL AND MISCELLANEOUS

The following fields were recorded during the cataloguing of metal artefacts. The highlighted fields are included in the catalogue below. Data from the additional fields is available in the artefact database stored within the excavation archive.

Date Excavated	Weight (g)	Diameter (mm)
Catalogue Number	Artefact TPQ	Thickness (mm)
Context	Artefact TAQ	Length (mm)
NISP	Dating Notes	Width (mm)
MNI	Text Form	Portion (mm)
% Remains	Text on Item	Secondary Material
Artefact Class	Provenance	Manufacture
Material	References	Special Notes
Activity	Height (mm)	Photographed
Function	Base Diameter (mm)	Conservation Measure
Subfunction	Rim Diameter (mm)	

Catalogue Number	Context	MNI	NISP	%	Material	Activity	Function	Subfunction	Weight	Artefact TPQ	Artefact TAQ	Text Form	Text on Item	Provenance	Portion	Manufacture	Special Notes
WBRHS181098	1412 West Bridge	1	1	50	Iron	Equestrian	Horseshoe	Light Horse?	110						Fragment	Hand-wrought	
WBRHS181100	Box Drain 1	1	1	Indeterminate	Iron	Indeterminate			7						Fragment	Indeterminate	
WBRHS181101	Area 1 West Ridge Surface Finds	1	1	Indeterminate	Iron	Indeterminate			100						Fragment	Indeterminate	Iron loop. Structural fastening?
WBRHS181108	Barrel Drain Cut	1	1	100	Copper Alloy	Economy	Coin	One Farthing	6	1799		Stamped	BRITANNIA 1 FARTHING / GEORGIUS III DEI GRATIA REX 1799	Britain	Complete	Stamped	
WBRHS181109	Area 1 West Ridge Unstratified	1	1	100	Copper Alloy	Economy	Coin	Half Penny	5	1932		Stamped	ONE HALF PENNY. COMMONWEALTH OF AUSTRALIA 1932 / GEORGIVS V.D.G BRITT OMN REX F.D.IND:IMP	Australia	Complete	Stamped	
WBRHS181116	1419	1	1	100	Copper Alloy	Economy	Coin	One Penny	9	1933		Stamped	COMMONWEALTH OF AUSTRALIA. ONE PENNY. 1933 / GEORGIVS V.D.G BRITT OMN: REX F.D.IND:IMP	Australia	Complete	Stamped	
WBRHS181117	1411	1	1	100	Copper Alloy	Economy	Coin	One Cent	2	1966		Stamped	1/ELIZABETH II AUSTRALIA 1966	Australia	Complete	Stamped	
WBRHS181118	Unstratified	1	1	100	Silver	Economy	Coin	One Florin / Two Shillings	11	1936		Stamped	ONE FLORIN TWO SHILLINGS 1936/ GEORGIVS V.D.G BRITT OMN: REX F.D.IND:IMP	Australia	Complete	Stamped	
WBRHS181125	Area 1 West Ridge Surface Finds	1	1	100	Iron	Industry	Tool	Hammer	540						Head of a hammer	Cast	Claw hammer
WBRHS181137	U/S	1	1	100	Steel	Equestrian	Fastening	Carriage Bolt	175						Complete	Machine-made	Round with screw base
WBRHS181138	Area 1 West Ridge Surface Finds	1	1	100	Iron	Equestrian	Horseshoe	Draught Horse?	529						Fragment	Hand-wrought	
WBRHS181140	1600	1	1	100	Iron	Equestrian	Horseshoe	Draught Horse?	840						Complete	Hand-wrought	
WBRHS181171	Area 1 West Ridge Surface Finds	1	2	30	Iron	Industry	Tool	Shovel/Spade	56						In two fragments	Hand-wrought	
WBRHS181177	Area 1 West Ridge Surface Finds	1	1	Indeterminate	Copper Alloy	Indeterminate			14						Fragment	Indeterminate	
WBRHS181178	1412	1	1	50	Iron	Equestrian	Horseshoe	Light Horse?	124						Fragment	Hand-wrought	
WBRHS181184	1412 West Bridge	1	1	Indeterminate	Iron	Indeterminate			109						Fragment	Indeterminate	
WBRHS181194	1406	1	1	100	Copper alloy	Clothing	Closure	Button	1						Complete	Indeterminate	Incised star decoration on surface of domed head

WBRHS181195	1422	1	1	Indeterminate	Iron	Indeterminate			12						Fragment	Indeterminate	
WBRHS181196	Box Drain - East of Sump (s)	1	2	60	Iron	Food Storage	Can	Container	65						In two fragments	Indeterminate	
WBRHS181199	TP GG24 Spit 3	1	1	Indeterminate	Tin	Indeterminate			6						Fragment	Machine-made	
WBRHS181202	Unstrat TP019 Spit 2	1	1	Indeterminate	Copper alloy	Indeterminate			42						Fragment	Machine-made	Seven copper alloy wires coiled together and bound at the end by a copper alloy sheath
WBRHS181259	Unstrat Top 300	1	1	Indeterminate	Iron	Indeterminate			65						Fragment	Indeterminate	Large circular hole (15 mm) near the middle of the fragment, possibly for a screw
WBRHS181260	Area 1 West Ridge Surface Finds	1	1	Indeterminate	Iron	Indeterminate			32						Fragment	Indeterminate	
WBRHS181262	1412	1	1	100	Steel	Equestrian	Fastening	Carriage Bolt	221						Complete	Machine-made	Round with screw base
WBRHS181265	Box Drain - East of Sump (s)	1	1	Indeterminate	Iron	Indeterminate			33						Fragment	Indeterminate	
WBRHS181266	Unstratified (Supp Area)	1	1	100	Iron	Equestrian	Pelham bit	Bridle	100	1900					One half of a Pelham bit	Indeterminate	Windsor Half-Squadron established 1 Oct 1900
WBRHS181271	1412	1	1	100	Aluminium	Indeterminate			33						Fragment	Machine-made	
WBRHS181275	1427	1	1	100	Copper alloy	Indeterminate			9						Complete	Machine-made	Three wires coiled together
WBRHS181281	Area 1 West Ridge Surface Finds	1	1	Indeterminate	Iron	Indeterminate			31						In three fragments	Indeterminate	
WBRHS181287	Area 1 West Ridge Surface Finds	1	2	40	Iron	Storage	Box	Lid/Container	24						One lid in 2 fragments	Machine-made	
WBRHS181305	1488	1	1	Indeterminate	Iron	Indeterminate			24						Fragment	Indeterminate	
WBRHS181335	Area 1 West Ridge Surface Finds	1	1	10	Copper Alloy	Clothing	Umbrella	Umbrella	18						Copper alloy shaft runner with iron wire 'stretcher' segments	Machine-made	Shaft runner and and fragments of metal umbrella frame; width taken at grip fitting
WBRHS181336	Area 1 West Ridge Surface Finds	1	1	90?	Iron	Storage	Box	Lid	265						Lid of a container?	Indeterminate	
WBRHS181337	Area 1 West Ridge Surface Finds	1	1	Indeterminate	Iron	Indeterminate			2						Fragment?	Indeterminate	
WBRHS181340	TP LL25 Spit 3	1	1	100	Iron	Equestrian	Horseshoe	Light Horse?	165						Complete	Hand-wrought	

WBRHS181348	1466	1	1	100	Aluminium	Food Storage	Seal	Ring Pull	2	1960s	1980s				Complete	Machine-made	
WBRHS181349	TP KK09 Spit 1	1	1	100	Copper alloy	Clothing	Closure	Eyelet	1						Complete	Machine-made	
WBRHS181355	Barrel Drain Cut	1	1	100	Copper Alloy	Economy	Coin	One Farthing	6	1799		Stamped	BRITANNIA 1 FARTHING / GEORGIUS III DEI GRATIA REX 1799	Britain	Complete	Stamped	
WBRHS181361	TP BB19 Spit 1	1	1	100	Copper alloy	Clothing	Closure	Button	4						Complete	stamped	
WBRHS181362	1427	1	1	100	Aluminium	Food Storage	Seal	Ring Pull	<1	1960s	1980s				Complete	Machine-made	
WBRHS181367	Area 1 West Ridge Surface Finds	1	1	100	Copper alloy	Clothing	Closure	Clasp	4						Complete	Machine-made	Possible clasp for ribbon or fine cloth?
WBRHS181368	Unstratified	1	1	100	Silver	Economy	Coin	One Florin	11	1944		Stamped	FLO RIN 1944 AUSTRALIA/ GEORGIVS VI D:G: BR: OMN: REX F:D:IND:IMP.	Australia	Complete	Stamped	
WBRHS181373	Area 1 West Ridge Surface Finds	1	1	100	Copper alloy	Sewing	Implement	Thimble	5						Complete	Stamped	
WBRHS181374	Unstratified	1	1	100	Silver	Economy	Coin	Six Pence	2	1928		Stamped	SIXPENCE 1928 / GEORGIVS V D.G.BRITT: OMN: REX F.D.IND:IMP	Australia	Complete	Stamped	
WBRHS181378	Area 1 West Ridge Surface Finds	1	1	Indeterminate	Lead	Indeterminate			66						Fragment?	Indeterminate	
WBRHS181380	1420	1	1	100	Copper Alloy	Economy	Coin	One Penny	9	1921		Stamped	COMMONWEALTH OF AUSTRALIA. ONE PENNY. 1921 / GEORGIVS V.D.G ...	Australia	Complete	Stamped	
WBRHS181383	Area 1 Unstratified	1	1	100	Iron	Equestrian	Horseshoe	Draught Horse	427						Complete	Hand-wrought	
WBRHS181389	Area 1 West Ridge Surface Finds	1	1	40	Iron	Equestrian	Horseshoe	Light Horse?	102						Fragment	Hand-wrought	
WBRHS181394	Area 1 West Ridge Surface Finds	1	1	100	Iron	Food Storage	Seal	Bottle Cap	4						Complete	Machine-made	
WBRHS181412	Area 1 West Ridge Surface Finds	1	1	Indeterminate	Iron	Indeterminate			11						Fragment	Indeterminate	
WBRHS181413	U/S	1	1	100	Steel	Equestrian	Fastening	Carriage Bolt	211						Complete with Washer	Machine-made	Round with screw base, square washer attached
WBRHS181417	1427	1	1	50	Copper alloy	Food Preparation	Cutlery	Spoon	13						Fragment	Stamped	
WBRHS181435	1412 West Ridge	1	1	80	Copper Alloy	Storage	Box	Lid	3	1850s	1920s				Face and Clip	Machine-made	Prince of Wales's Three Feathers heraldic symbol, stamp moulded in relief on painted red background, clip mounted, upper mount missing (possibly hinge?). Lid for small circular box (pills or matches?)

WBRHS181441	1412 West Ridge	1	3	Indeterminate	Iron	Indeterminate			27						In three fragments	Indeterminate	
WBRHS181489	1412	1	1	100	Copper alloy	Clothing?	Closure?	Button	2						Complete		Head of loop shank button with missing loop shank
WBRHS181638	1411	2	2	Indeterminate	Iron	Indeterminate			9						Fragment	Indeterminate	
WBRHS181639	1497	1	1	100	Copper alloy	Clothing	Closure	Stud	1						Complete	Machine-made	Stud fastener for leather or heavy cloth
WBRHS181644	1497	6	6	Indeterminate	Iron	Indeterminate			52						Fragment	Indeterminate	
WBRHS181662	1497 Barrel Fill	1	1	Indeterminate	Iron	Food Preparation	Cutlery	Fork	23						Fragment	Stamped?	
WBRHS181673	1433 West Ridge Rubbish Pit	2	2	Indeterminate	Iron	Indeterminate			63						Fragment	Indeterminate	
WBRHS181679	1497 Barrel Fill	2	2	Indeterminate	Iron	Indeterminate			63						Fragment	Indeterminate	
WBRHS181685	1411	1	1	100	Iron	Food Storage	Seal	Bottle Cap	4						Complete	Machine-made	
WBRHS181691	1497 Barrel Fill	1	1	Indeterminate	Iron	Indeterminate			97						Fragment	Indeterminate	
WBRHS181708	1411	1	1	Indeterminate	Iron	Indeterminate			195						Fragment	Indeterminate	
WBRHS181709	1590	2	2	100	Copper alloy	Clothing	Closure	Button	2				Yes; obscured		Complete	Pressed	Two buttons with the same indiscernable inscription on exterior surfaces
WBRHS181714	1509	1	1	Indeterminate	Iron	Equestrian	Fastening	Carriage Bolt	184						Fragment	Machine-made	Heavily corroded
WBRHS181720	1509 Box Drain 1 Fill	1	1	100?	Copper alloy	Architectural/Structural	Fastening	Bracket	116						Complete?	Machine-made	Copper alloy flat bracket containing oxidized remains of highly oxidized iron artefact. Architecture/Structural?
WBRHS181722	Area 1 West Ridge Surface Finds	1	4	Indeterminate	Iron	Food Storage	Storage	Container	43						Fragment	Machine-made	
WBRHS181726	1433 West Ridge Rubbish Pit	2	8	Indeterminate	Iron	Indeterminate			8						Fragment	Indeterminate	
WBRHS181728	D35 Spit 5	1	3	Indeterminate	Iron	Indeterminate			11						Fragment	Indeterminate	
WBRHS181733	1427	1	1	90	Aluminium	Food Storage	Storage	Ring Pull	9	1960s	1980s				Fragment	Machine-made	Lid of ring pull can, ring pull removed

WBRHS181754	1590	1	1	100	Copper alloy	Clothing	Closure	Button	1						Complete	Pressed	Decorative cross-hatch routletting on rim surface
WBRHS181766	1509	1	1	80?	Iron	Food Preparation	Cutlery	Spoon/Fork?	23						Fragment	Stamped?	
WBRHS181797	U/S	1	1	Indeterminate	Iron	Indeterminate			8						Fragment	Indeterminate	
WBRHS181803	U/S	1	1	100	Iron?	Indeterminate			13						Complete	Indeterminate	
WBRHS182072	3000	1	1	100%	iron	transport	stable	horse shoe	266	c. 1800					complete		
WBRHS182073	3000	2	2	100%	iron	transport	stable	split horse shoe	316						complete		

6.6 BONE

The following fields were recorded during the cataloguing of bone artefacts. The highlighted fields are included in the catalogue below. Data from the additional fields is available in the artefact database stored within the excavation archive.

Date Excavated	Family/Subfamily	Age
Catalogue Number	Genus	Butchering Marks?
Project	Skeletal Element	References
Excavation Area	Side	Butchering Location
Context	Proximal/Distal	Butchering Tool
NISP	Animal/Species	Associated Meat Cut
MNI	Weight (g)	Photographed
Whole/Partial/Fragment	Length (mm)	Conservation Measure
Class	Width (mm)	Notes

Catalogue Number	Context	NISP	MNI	Whole/ Partial/ Fragment	Class	Family/ Subfamily	Genus	Skeletal Group	Skelelel Element	Side	Proximal/ Distal	Animal/ Species	Weight (g)	Age	Butchering Marks (Y/N)	Butchering Location	Butchering Tool	Notes
WBRHS181169	U/S	1		Fragment	Mammal (large)	Bovinae	Bos	Appendicular	Femur	Right	Proximal	Cow	77		N			
WBRHS181175	U/S	1		Partial	Mammal (medium)	Caprinae	Ovis	Axial	Rib	Right	Midshaft	Sheep	32		N			
WBRHS181242	1422	1	0	Partial	Mammal (medium)	Caprinae	Ovis	Appendicular	Radius	Right	Distal	Sheep	37		Y	Through shaft	Hacksaw	
WBRHS181293	1422	1	1	Partial	Mammal (medium)	Caprinae	Ovis	Appendicular	Femur	Right	Proximal	Sheep	44		N			
WBRHS181338	U/S	1		Partial	Mammal (large)	Bovinae	Bos	Appendicular	Femur	Left	Proximal	Cow	466		Y	Through shaft	Hacksaw	
WBRHS181379	1422	1	0	Whole	Mammal (medium)	Caprinae	Ovis	Appendicular	Metapodial	Left	Complete	Sheep	28		N			
WBRHS181395	U/S	1		Partial	Mammal (large)	Bovinae	Bos	Appendicular	Os Coxae (Hip)	Right	Anterior	Cow	394		Y	Through shaft of illum	Hacksaw	Hip bones present: Ischium, Pubis, Acetabulum. Illum removed. 60% complete half of Os Coxae
WBRHS181423	1422	1	1	Partial	Mammal (small)	Canidae	Canis	Axial	Rib	Indeterminate	Neck and Body	Dog	2		N			
WBRHS181440	U/S	1		Partial	Mammal (medium)	Caprinae	Ovis	Axial	Rib	Left	Neck and Body	Sheep	34		N			
WBRHS181460	1412	1	0	Partial	Mammal (medium)	Caprinae	Ovis	Axial	Mandible	Right	Cranial	Sheep	64		N			
WBRHS181466	1412	1	0	Partial	Mammal (large)	Bovinae	Bos	Appendicular	Femur	Indeterminate	Distal	Cow	136	Young	Y	Through shaft	Hacksaw	Probably juvenile, presence of unfused distal epiphyseal plate, and condyles absent
WBRHS181472	1412	1	1	Partial	Mammal (medium)	Caprinae	Ovis	Appendicular	Os Coxae (Hip)	Right	Anterior	Sheep	44		N			Hip bones present: Illum, Pubis, Acetabulum, & Ischium (partial). 80% complete half of Os Coxae
WBRHS181478	1412	1	1	Partial	Mammal (large)	Bovinae	Bos	Appendicular	Femur	Indeterminate	Midshaft	Cow	180		Y	Through bone (twice- distal and proximal ends of fragment)	Hacksaw	
WBRHS181484	1412	1	1	Partial	Mammal (large)	Bovinae	Bos	Appendicular	Femur	Indeterminate	Distal	Cow	177	Young	Y	Through shaft	Hacksaw	Probably juvenile, presence of unfused distal epiphyseal plate, and condyles absent
WBRHS181490	1412	1	0	Partial	Mammal (large)	Bovinae	Bos	Appendicular	Metapodial	Indeterminate	Distal	Cow	62	Young	Y	Through shaft	Hacksaw	Probably juvenile, presence of unfused distal epiphyseal plate, and condyles absent
WBRHS181491	1412	1	0	Fragment	Mammal (medium)	Caprinae	Ovis	Appendicular	Scapula	Right	Caudal	Sheep	85		N			
WBRHS181492	1427	1	1	Whole	Mammal (medium)	Caprinae	Ovis	Appendicular	Metatarsus	Left	Complete	Sheep	42		N			
WBRHS181493	U/S	1		Fragment	Mammal (large)	Bovinae	Bos	Axial	Lumbar vertebrae	Indeterminate	Indeterminate	Cow	25		N			
WBRHS181494	U/S	1		Partial	Mammal (medium)	Caprinae	Ovis	Appendicular	Tibia	Left	Distal	Sheep	13		N			
WBRHS181495	U/S	1		Partial	Mammal (large)	Bovinae	Bos	Appendicular	Tibia	Right	Proximal	Cow	114		Y	Through vertical bone	Indeterminate	
WBRHS181497	1412	1	0	Partial	Mammal (large)	Bovinae	Bos	Axial	Thoracic vertebrae	Indeterminate	Caudal & Cranialis	Cow	78		Y	Through vertical bone	Hacksaw	
WBRHS181498	U/S	1		Partial	Mammal (medium)	Caprinae	Ovis	Appendicular	Radius	Right	Distal	Sheep	29		Y	Through midshaft		
WBRHS181499	U/S	1		Fragment	Mammal (large)	Bovinae	Bos	Axial	Lumbar vertebrae	Indeterminate	Indeterminate	Cow	20		N			
WBRHS181500	1599	1	1	Partial	Mammal (small)	Leporidae	Lepus	Appendicular	Tibia	Right	Proximal	Rabbit	2		N			
WBRHS181501	1599	1	0	Partial	Mammal (medium)	Caprinae	Ovis	Appendicular	Os Coxae (Hip)	Right	Anterior	Sheep	10		N			Hip bones present: Pubis & Ischium
WBRHS181503	U/S	1		Partial	Mammal (medium)	Caprinae	Ovis	Axial	Rib	Right	Neck and Body	Sheep	36		Y	Through midshaft	Hacksaw	
WBRHS181504	U/S	1		Partial	Mammal (large)	Bovinae	Bos	Axial	Lumbar vertebrae	Indeterminate	Indeterminate	Cow	49		Y	Through shaft	Hacksaw	
WBRHS181505	1599	1	0	Partial	Mammal (medium)	Caprinae	Ovis	Appendicular	Ulna	Left	Proximal	Sheep	11		N			
WBRHS181506	1599	1	0	Partial	Mammal (medium)	Caprinae	Ovis	Indeterminate	Tibia	Right	Indeterminate	Sheep	23		N			
WBRHS181507	1599	1	1	Partial	Mammal (medium)	Caprinae	Ovis	Appendicular	Scapula	Right	Anterior	Sheep	12		N			Separate faunal artefact(s) both catalogued under Cat#181507. Two right scapula present in Cxt[1599]. Therefore MNI = 1
WBRHS181507	1599	1	0	Partial	Mammal (medium)	Caprinae	Ovis	Appendicular	Tibia	Left	Midshaft	Sheep	31		Y	Through midshaft		Separate faunal artefact(s) both catalogued under Cat#181507.
WBRHS181509	U/S	1		Partial	Mammal (small)	Canidae	Canis	Axial	Mandible & Teeth	Right	Midshaft	Dog	24		N			3 x Premolars & 2 x Molars
WBRHS181510	1488	2	0	Partial	Mammal (medium)	Caprinae	Ovis	Axial	Vertebra	Indeterminate	Indeterminate	Sheep	31		N			Separate faunal artefact(s) all catalogued under Cat#181510. Likely same Ovis as Cat#181747 (MNI=1). Therefore MNI = zero
WBRHS181510	1488	1	0	Partial	Mammal (medium)	Caprinae	Ovis	Appendicular	Radius & Ulna	Right	Proximal	Sheep	24		N			Separate faunal artefact(s) all catalogued under Cat#181510. Likely same Ovis as Cat#181747 (MNI=1). Therefore MNI = zero. Proximal fragment includes fused radius and ulnae.
WBRHS181510	1488	2	0	Partial	Mammal (medium)	Caprinae	Ovis	Appendicular	Metapodial	Indeterminate	Midshaft	Sheep	26		Y	Across midshaft	Knife	Separate faunal artefact(s) all catalogued under Cat#181510. Likely same Ovis as Cat#181747 (MNI=1). Therefore MNI = zero
WBRHS181510	1488	2	1	Partial	Mammal (medium)	Caprinae	Ovis	Appendicular	Scapula	Left	Anterior	Sheep	70		N			Separate faunal artefact(s) all catalogued under Cat#181510. Two anterior scapula fragments are present. One is likely the same Ovis as Cat#181747 (it therefore is MNI = zero). The second fragment is an additional MNI=1.
WBRHS181511	1599	1	1	Partial	Mammal (medium)	Caprinae	Ovis	Appendicular	Scapula	Right	Anterior	Sheep	24		N			Separate faunal artefact(s) all catalogued under Cat#181511. Two right scapula present in Cxt[1599]. Therefore MNI = 1
WBRHS181511	1599	1	0	Partial	Mammal (large)	Bovinae	Bos	Appendicular	Scapula	Right	Anterior	Cow	73		N			Separate faunal artefact(s) all catalogued under Cat#181511. Likely same Bos (cow). Therefore MNI = zero
WBRHS181511	1599	1	1	Partial	Mammal (large)	Bovinae	Bos	Appendicular	Scapula	Left	Anterior	Cow	95		Y	Through midshaft	Hacksaw	Separate faunal artefact(s) all catalogued under Cat#181511. Likely same Bos (cow). Therefore MNI = 1
WBRHS181512	1453	1	1	Fragment	Mammal (medium)	Caprinae	Ovis	Appendicular	Scapula	Indeterminate	Anterior	Sheep	22		Y	Across shaft	Knife	

WBRHS181513	1599	1	0	Fragment	Mammal (medium)	Caprinae	Ovis	Axial	Cervical vertabrae	Indeterminate	Indeterminate	Sheep	3		N			
WBRHS181515	U/S	1		Partial	Mammal (large)	Bovinae	Bos	Appendicular	Scapula	Right	Midshaft	Cow	44		N			
WBRHS181516	U/S	1		Partial	Mammal (medium)	Caprinae	Ovis	Appendicular	Metacarpal	Right	Distal	Sheep	11		N			
WBRHS181517	1599	1	0	Partial	Mammal (medium)	Caprinae	Ovis	Appendicular	Humerus	Left	Distal	Sheep	12		Y	Through shaft	Hacksaw	
WBRHS181518	U/S	1		Partial	Mammal (medium)	Caprinae	Ovis	Appendicular	Long bone	Indeterminate	Midshaft	Sheep	26		Y	Through bone (twice-distal and proximal ends of fragment)	Hacksaw	
WBRHS181519	1599	1	0	Partial	Mammal (medium)	Caprinae	Ovis	Appendicular	Tibia	Indeterminate	Proximal	Sheep	10	Young	N			Probably juvenile, presence of unfused proximal epiphyseal plate, shaft likely articulates with Cat#181523. Therefore MNI = zero
WBRHS181521	1427	1	0	Partial	Mammal (medium)	Caprinae	Ovis	Appendicular	Scapula	Left	Anterior	Sheep	24		Y	Through anterior articulation and shaft	Hacksaw	
WBRHS181522	1412	1	1	Partial	Mammal (large)	Equidae	Equus	Appendicular	Femur	Left	Distal	Horse	453		Y			
WBRHS181523	1599	1	1	Partial	Mammal (medium)	Caprinae	Ovis	Appendicular	Tibia	Left	Proximal	Sheep	9	Young	N			Probably juvenile, presence of unfused proximal epiphyseal plate, condyle likely articulates with Cat#181519. Therefore MNI = 1
WBRHS181524	U/S	3		Partial	Mammal (medium)	Caprinae	Ovis	Axial	Rib	Indeterminate	Midshaft	Sheep	48		Y	Through midshaft	Hacksaw	
WBRHS181560	1433	16	1	Fragment	Mammal (large)	Bovinae	Bos	Axial	Rib	Indeterminate	Indeterminate	Cow	59		N			
WBRHS181564	U/S	1		Whole	Mammal (medium)	Caprinae	Ovis	Appendicular	Metacarpal	Right	Whole	Sheep	26		N			
WBRHS181587	U/S	1		Partial	Mammal (large)	Equidae	Equus	Axial	Cervical vertabrae	Indeterminate	Caudal & Cranialis	Horse	95		N			
WBRHS181593	U/S	1		Partial	Mammal (large)	Bovinae	Bos	Axial	Thoracic vertebrae	Indeterminate	Caudal & Cranialis	Cow	65		Y	Through vertical bone	Indeterminate	
WBRHS181603	1508	1	1	Partial	Mammal (large)	Bovinae	Bos	Appendicular	Os Coxae (Hip)	Right	Anterior	Cow	47		N			Hip bones present: Pubis & Acetabulum
WBRHS181604	1366	1	1	Whole	Mammal (large)	Bovinae	Bos	Appendicular	Astragalus	Left	Whole	Cow	120		N			
WBRHS181605	1497	1	0	Fragment	Mammal (medium)	Indeterminate	Indeterminate	Appendicular	Long bone	Indeterminate	Midshaft	Indeterminate	15		Y	Through bone (twice-distal and proximal ends of fragment)	Hacksaw	
WBRHS181609	1508	1	1	Partial	Mammal (medium)	Caprinae	Ovis	Appendicular	Humerus	Right	Distal	Sheep	39		N			
WBRHS181610	1366	1	0	Partial	Mammal (large)	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	12		N			
WBRHS181611	1497	1	1	Partial	Mammal (medium)	Caprinae	Ovis	Appendicular	Metapodial	Indeterminate	Distal	Sheep	13		N			
WBRHS181615	1508	1	0	Partial	Mammal (large)	Bovinae	Bos	Axial	Rib	Indeterminate	Midshaft	Cow	37		N			
WBRHS181616	1555	1	1	Partial	Mammal (medium)	Caprinae	Ovis	Axial	Thoracic vertebrae	Indeterminate	Cranialis	Sheep	51		N			
WBRHS181617	1497	1	1	Fragment	Mammal (large)	Bovinae	Bos	Appendicular	Long bone	Indeterminate	Midshaft	Cow	72		Y	Through flat bone	Hacksaw	
WBRHS181621	1508	1	0	Whole	Mammal (large)	Bovinae	Bos	Axial	Teeth	Left	Mandible	Cow	2		N			1x Premolar
WBRHS181622	1497	1	1	Partial	Bird	Phasianidae	Gallus	Appendicular	Femur	Right	Distal	Chicken	2		N			
WBRHS181623	1508	1	0	Partial	Mammal (medium)	Caprinae	Ovis	Appendicular	Metacarpal	Right	Proximal	Sheep	4		N			
WBRHS181627	1508	1	0	Whole	Mammal (large)	Bovinae	Bos	Axial	Teeth	Left	Mandible	Cow	5		N			1 x Incisor
WBRHS181628	1497	1	0	Partial	Mammal (medium)	Caprinae	Ovis	Appendicular	Scapula	Left	Anterior	Sheep	15		N			
WBRHS181633	U/S	1		Partial	Mammal (medium)	Caprinae	Ovis	Appendicular	Scapula	Left	Midshaft	Sheep	42		N			
WBRHS181634	1555	1	0	Partial	Mammal (medium)	Caprinae	Ovis	Appendicular	Rib	Indeterminate	Midshaft	Sheep	46		Y	Across midshaft	Hacksaw	
WBRHS181640	1420	1	1	Partial	Mammal (large)	Bovinae	Bos	Appendicular	Femur (head only)	Indeterminate	Proximal	Cow	27	Young	Y	Across head	Hacksaw	Probably juvenile, presence of unfused epiphyseal plate at head
WBRHS181645	U/S	2		Partial	Mammal (medium)	Caprinae	Ovis	Appendicular	Os Coxae (Hip)	Left	Anterior	Sheep	39		N			Hip bones present: Ilium & fragment (unID)
WBRHS181646	U/S	4		Fragment	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	Indeterminate	0.3		N			
WBRHS181668	U/S	1		Partial	Mammal (large)	Bovinae	Bos	Axial	Rib	Indeterminate	Midshaft	Cow	69		Y	Through flat bone	Hacksaw	
WBRHS181671	U/S	1		Fragment	Mammal (medium)	Caprinae	Ovis	Appendicular	Rib	Indeterminate	Midshaft	Sheep	32		Y	Through flat bone		
WBRHS181672	U/S	1		Partial	Mammal (large)	Bovinae	Bos	Axial	Lumbar vertebrae	Indeterminate	Cranialis	Cow	114	Young	Y	Through bone (twice-right side and caudal side)	Hacksaw	Probably juvenile, presence of unfused epiphyseal plate at cranialis articulation.
WBRHS181677	U/S	1		Whole	Mammal (medium)	Caprinae	Ovis	Appendicular	Radius	Right	Whole	Sheep	38	Young	Y	Midshaft regular clean oval break	Gunshot?	Probably juvenile, presence of unfused epiphyseal plate at distal articulation. Unusual regular oval shaped clean break into midshaft, surrounded by exterior black stain. Evidence of gunshot?
WBRHS181678	U/S	1		Partial	Mammal (large)	Bovinae	Bos	Appendicular	Metacarpal	Left	Distal	Cow	68	Young	Y	Through shaft	Hacksaw	Probably juvenile, presence of unfused epiphyseal plate at distal articulation.
WBRHS181683	U/S	2		Fragment	Mammal (medium)	Caprinae	Ovis	Axial	Rib	Indeterminate	Midshaft	Sheep	64		Y	Through bone (twice-distal and proximal ends of fragment)	Hacksaw	
WBRHS181684	U/S	1		Partial	Mammal (large)	Bovinae	Bos	Axial	Teeth	Right	Maxilla	Cow	6		N			1 x Molar. Separate faunal artefact catalogued under Cat#181684.
WBRHS181684	U/S	1		Partial	Mammal (medium)	Caprinae	Ovis	Axial	Teeth	Left	Maxilla	Sheep	7		N			1 x Molar. Separate faunal artefact catalogued under Cat#181684.
WBRHS181689	U/S	1		Partial	Mammal (large)	Equidae	Equus	Appendicular	Os Coxae (Hip)	Left	Anterior	Horse	217		Y	Through shaft of ilium	Hacksaw	Hip bone present: Ilium, hacksaw through shaft for animal food production
WBRHS181690	U/S	1		Partial	Bird	Phasianidae	Gallus	Appendicular	Radius	Right	Distal	Chicken	8		N			
WBRHS181695	U/S	1		Partial	Mammal (medium)	Bovinae	Bos	Appendicular	Os Coxae (Hip)	Indeterminate	Anterior	Cow	41		Y	Through bone (twice-distal and proximal)	Hacksaw	Hip bone present: cross-cut segment of Ischium
WBRHS181696	U/S	1		Partial	Mammal (medium)	Caprinae	Ovis	Axial	Sternum	Indeterminate	Proximal	Sheep	13		N			
WBRHS181701	U/S	2		Partial	Mammal (medium)	Caprinae	Ovis	Axial	Rib	Right	Neck and Body	Sheep	80		Y	Through shaft	Hacksaw	

WBRHS181701	U/S	1		Partial	Mammal (large)	Bovinae	Bos	Axial	Rib	Right	Neck and Body	Cow	61	Young	Y	Through shaft	Hacksaw	Separate faunal artefact catalogued under Cat#181701. Probably juvenile, presence of unfused proximal epiphyseal plate at head.
WBRHS181702	U/S	1		Partial	Mammal (large)	Bovinae	Bos	Appendicular	Tibia	Left	Midshaft	Cow	127		Y	Through bone (twice-distal and proximal)	Hacksaw	Separate faunal artefact(s) all catalogued under Cat#181702. Likely same Bos (cow). Therefore MNI = zero
WBRHS181702	U/S	1		Fragment	Mammal (large)	Bovinae	Bos	Appendicular	Scapula	Indeterminate	Anterior	Cow	32		Y	Through midshaft	Hacksaw	Separate faunal artefact(s) all catalogued under Cat#181702. Likely same Bos (cow). Therefore MNI = zero
WBRHS181719	1607	1	1	Partial	Mammal (medium)	Caprinae	Ovis	Appendicular	Scapula	Right	Anterior	Sheep	13		N			
WBRHS181725	U/S	1		Whole	Mammal (medium)	Suidae	Sus	Axial	Teeth	Left	Indeterminate	Pig	4		N			1 x Canine
WBRHS181747	1488	1	1	Partial	Mammal (medium)	Caprinae	Ovis	Appendicular	Femur	Left	Distal	Sheep	64		Y	Through distal base	Hacksaw	Likely same Ovis as Cat#181510. Therefore MNI=1
WBRHS182067	U/S	2	2	proximal	Mammal (large)	Bovinae	Bos	Axial	rib	right	proximal	cow	76		n			
WBRHS182068	U/S	1	1	mid section	Mammal (large)	Bovinae	Bos	Appendicular	long bone	Indeterminate	Midshaft	cow	25		n			
WBRHS182069	U/S	1	1	complete	aves	anatidae	Nettapus	Appendicular	long bone	left	complete	duck/goose	5		n			
WBRHS182074	U/S	2	2	Partial	Mammal (large)	Bovinae	Bos	Axial	ribs	Indeterminate	Midshaft	cow	51		n		saw	
WBRHS182075	U/S	1	1	Partial	Mammal (large)	Bovinae	Bos	Appendicular	long bone	Indeterminate	Midshaft	cow	21.5		n			

6.7 SHELL

The following fields were recorded during the cataloguing of shell artefacts. The highlighted fields are included in the catalogue below. Data from the additional fields is available in the artefact database stored within the excavation archive.

Date Excavated	Whole/Partial/Fragment	Species
Catalogue Number	Class	Weight (g)
Context	Valve	Techonomic process
NISP	Family/Subfamily	Photographed
MNI	Genus	Conservation Measure

Catalogue Number	Context	Whole/ Partial/ Fragment	Class	Valve	Family/ Subfamily	Genus	Species	NISP	MNI	Weight	taphonomic processes	Photographed? DSCN	Conservation Measure
WBRHS181529	U/S	fragments	Bivalve	N/A	Arcidae	-	-	1	-	<1		No	Cleaned
WBRHS181534	U/S	fragments	N/A	N/A	Indeterminate shell	-	-	1	-	<1		No	Cleaned
WBRHS181535	U/S	whole	Bivalve	right	Arcidae	Anadara	Anadara trapezia	1	1	2		No	Cleaned
WBRHS181535	U/S	fragments	Bivalve	N/A	Arcidae	Anadara	-	1	-	1		No	Cleaned
WBRHS181536	1599	whole	Bivalve	left	Ostreidae	Saccostrea	Saccostrea cuccullata	2	-	25		No	Cleaned
WBRHS181536	1599	whole	Bivalve	right	Ostreidae	Saccostrea	Saccostrea cuccullata	1	1	44		No	Cleaned
WBRHS181541	1427	whole	gastropod	N/A	Batillariidae	Pyrarus	Pyrarus ebeninus	1	1	5	worm bore hole through body	No	Cleaned
WBRHS181546	U/S	fragments	Bivalve	N/A	Ostreidae	-	-	2	-	3		No	Cleaned
WBRHS181548	1592	fragments	Bivalve	N/A	Arcidae	-	-	2	-	2		No	Cleaned
WBRHS181552	U/S	partial	gastropod	N/A	Batillariidae	Pyrarus	Pyrarus ebeninus	1	1	14		no	Cleaned
WBRHS181554	U/S	fragments	Bivalve	N/A	Arcidae	-	-	1	-	<1		No	Cleaned
WBRHS181558	U/S	partial - umbo and teeth	Bivalve	right	Arcidae	Anadara	Anadara trapezia	1	1	1		No	Cleaned
WBRHS181565	1411	whole	Bivalve	right	Arcidae	Anadara	Anadara trapezia	2	-	9		No	Cleaned
WBRHS181565	1411	whole	Bivalve	left	Arcidae	Anadara	Anadara trapezia	1	1	3		No	Cleaned
WBRHS181571	U/S	fragments	Bivalve	N/A	Ostreidae	-	-	1	-	<1		No	Cleaned
WBRHS181577	U/S	whole	gastropod	N/A	Batillariidae	Batillaria	Batillaria australis	1	1	<1		No	Cleaned
WBRHS181582	1508	whole	Bivalve	right	Ostreidae	Saccostrea	Saccostrea cuccullata	8	8	132	one valve growing on the teeth of another	No	Cleaned
WBRHS181583	U/S	fragments	N/A	N/A	Indeterminate shell	-	-	1	-	<1		No	Cleaned
WBRHS181588	1592	fragments	Bivalve	N/A	Ostreidae	-	-	1	-	5		No	Cleaned
WBRHS181589	U/S	whole	gastropod	N/A	Batillariidae	Batillaria	Batillaria australis	1	1	2		No	Cleaned
WBRHS181594	U/S	fragments	Bivalve	N/A	Arcidae	-	-	7	-	4		No	Cleaned
WBRHS181601	1412	whole	Bivalve	right	Ostreidae	Saccostrea	Saccostrea cuccullata	2	2	46		No	Cleaned
WBRHS181601	1412	fragments	Bivalve	N/A	Ostreidae	-	-	2	-	1		No	Cleaned
WBRHS181601	1412	whole	Bivalve	left	Ostreidae	Saccostrea	Saccostrea cuccullata	1	-	3		No	Cleaned
WBRHS181607	U/S	fragments	N/A	N/A	Indeterminate shell	-	-	1	-	2		No	Cleaned
WBRHS181613	U/S	whole	Bivalve	left	Arcidae	Anadara	Anadara trapezia	1	1	3		No	Cleaned
WBRHS181619	U/S	fragments	N/A	N/A	Indeterminate shell	-	-	1	-	2		No	Cleaned
WBRHS181625	U/S	whole	Bivalve	right	Ostreidae	Saccostrea	Saccostrea cuccullata	1	1	15		No	Cleaned
WBRHS181631	1422	fragments	Bivalve	N/A	Ostreidae	-	-	1	-	8		No	Cleaned
WBRHS181759	U/S	whole	Bivalve	left	Ostreidae	Saccostrea	Saccostrea cuccullata	1	1	17		No	Cleaned
WBRHS181764	U/S	fragments	Bivalve	N/A	Ostreidae	-	-	9	-	22		No	Cleaned
WBRHS181768	1433	fragments	Bivalve	N/A	Ostreidae	Saccostrea	-	8	-	39		No	Cleaned
WBRHS181781	1412	whole	Bivalve	left	Arcidae	Anadara	Anadara trapezia	1	1	18		No	Cleaned
WBRHS181787	U/S	fragments	Bivalve	N/A	Ostreidae	-	-	2	-	11		No	Cleaned
WBRHS181788	U/S	whole	Bivalve	right	Ostreidae	Saccostrea	Saccostrea cuccullata	2	1	36		No	Cleaned
WBRHS181788	U/S	fragments	N/A	N/A	Ostreidae	-	-	2	-	12		No	Cleaned
WBRHS181804	U/S	fragments	N/A	N/A	Indeterminate shell	-	-	4	-	6		No	Cleaned