ABORIGINAL-EUROPEAN INTERACTION ON THE QUEENSLAND FRONTIER: AN ARCHAEOLOGICAL STUDY OF THE BORALGA NATIVE POLICE CAMP, CAPE YORK PENINSULA

A Thesis submitted by
Leanne Bateman BA (Hons)
For the award of Doctor of Philosophy
2020

Abstract

This research examines the multiple elements of daily frontier life at the Native Mounted Police (NMP) camp at Boralga in Cape York Peninsula, Queensland. The everyday domestic function of NMP camps provided the means for paramilitary government forces to carry out sanctioned violence against Aboriginal peoples for over half a century. To date, only a small portion of the historical record and published accounts of Aboriginal-European frontier conflict in Australia has included an archaeological component. Documents regarding the daily lives of the Aboriginal troopers are rare, possibly because this type of information was intentionally omitted, destroyed or simply deemed irrelevant. Information regarding the troopers' cultural identities, domestic and working conditions, hierarchical and collaborative relationships with the European officers, as well as the role of women and how they came to be present at the camps, are overlooked aspects of the NMP. This research investigates activities within the domestic space of an NMP camp by examining the archaeological signature of what now constitutes the most visible physical remains of conflict on the frontier. This study demonstrates that although Aboriginal social and cultural identity was impacted to some degree by exposure to European domestic objects, identity was upheld through maintaining aspects of their own culture, thus creating a sense of place that held some meaning and value.

Even though an adherence to strict European 'civilisation' and military standards was expected, the preservation of various cultural practices was maintained by the troopers (and possibly their wives) by turning non-traditional objects into traditional forms, and by continuing to hunt native fauna using their own methods, most likely to supplement insufficient food rations. Various personal items indicated the presence of Aboriginal women and children residing at the camp, thus shaping personal relationships and the expression of the domestic space. However definitive archaeological evidence confirming the nature of relationships between the officers and the troopers at Boralga proved inconclusive. Most archaeological findings at the study site confirmed historical accounts, and although current spatial arrangements of the structures were inconsistent with the original historical plans, the material evidence associated with specific buildings correlated with most structures identified in the latest survey. It is considered that this research will provide a more holistic contextualisation with which to augment the already established oral testimonies and historic information regarding life on the Queensland frontier.

Certification of Thesis

This Thesis is entirely the work of Leanne Bateman except where otherwise acknowledged. The work is original and has not previously been submitted for any other award, except where acknowledged.

Principal Supervisor: Professor Bryce Barker

Associate Supervisor: Professor Lara Lamb

Student and supervisor's signatures of endorsement are held at the University.

Acknowledgements

This research was funded through the Australian Research Council (DP160100307, The Archaeology of the Queensland Native Mounted Police) and conducted with permission from the Rinyirru Aboriginal Corporation and the Queensland Department of Environment and Heritage Protection (Permit WITK17361716). My thanks goes to Leslie Harrigan and Des Bowen (former and current Chairman, respectively, of Rinyirru Aboriginal Corporation), Rinyirru National Park (CYPAL) Rangers and staff of Queensland Parks and Wildlife Service for facilitating the fieldwork at Boralga. I pay tribute to past and present elders of Rinyirru Aboriginal Corporation and the Rinyirru people. This research has been supported by an Australian government research training program scholarship (RTP), which has lightened my financial burden immensely throughout my research journey, and has allowed me to focus on the PhD thesis rather than ways to meet financial obligations.

I have received immense support from a wide range of people throughout my research. I would like to acknowledge and thank Principal Investigator (PI) Doctor Lynley Wallis for the opportunity to work on this project. My deepest thanks goes to my PhD supervisor, and Chief Investigator (CI), Professor Bryce Barker and CI Associate Professor Heather Burke for their generous support and guidance. I am extremely grateful for the assistance of my second PhD supervisor Professor Lara Lamb for also providing feedback for my thesis. I would also like to acknowledge (PI) Doctor Noelene Cole, who has dedicated many years to Indigenous liaison within the Cape York region and coordinated the investigation of those sites. Over time Noelene has also collected the oral histories of the Aboriginal peoples from that area which has provided crucial information relating to the history of Boralga. I would also like to acknowledge Doctor Kelsey Lowe for the geophysics carried out at Boralga and the site maps. My gratitude also goes to Doctor Cherrie De Leiuen for her contribution to the excavation and her assistance with processing the artefacts. Thanks also to volunteers/students, Alyssa Madden (who assisted with geophysics and mapping), Ryan Taddeuci and the Laura Rangers for their participation.

I am grateful for the boundless knowledge imparted by a number of fellow employees at the Cobb and Co Museum who have an uncanny ability to identify ambiguous metal knick-knacks: thankyou my esteemed colleague, curator Jeff Powell; factory manager Andrew MacDonald; volunteer Bob Edwards - saddler/harness maker and Queensland Museum's technical advisor for 30 years; and

Cobb and Co's farrier Terry Drennan for his advice on horseshoes. I would also like to express my appreciation to Steve Cooper and Kristy Ogden who truly understand the concept of flexibility in the workplace, allowing my nonattendance for several weeks at a time in order to carry out excavations at Cape York. I want to express my deepest gratitude to my parents who have offered endless support, and love to my wonderful daughters Emily and Tessa who have been extremely patient with their preoccupied mother. Last but not least, much love and appreciation to my long suffering partner Kent, who has managed to work around my schedule and endure endless discussions and debates on this topic for many years.

Table of Contents

Abstract ii
Certification of Thesis iii
Acknowledgements iv
List of Figures xvii
List of Tables xxix
Definition of Terms xxxi
Chapter 1 - Introduction 1
1.1 Research question 2
1.2 Aims 2
1.3 Formation of the Queensland NMP and Boralga 3
1.4 A sense of 'place' 6
1.5 Contribution to the field of research 9
Chapter 2 - Literature review 10
2.1 Introduction 10
2.2 The unsuccessful search for massacre sites 12
2.3 Comparing Australian and American frontier encampments 13
2.4 Australian archaeological and historical frontier research 16
2.5 The spatial layout of NMP camps 18
..... 19
2.6 Comparisons of permanent frontier structures to ephemeral NMP camps 21
2.7 'Place' and the domestic space 25
2.8 Women on the frontier 29
2.9 Summary 31
Chapter 3 – The site 32
3.1 Introduction 32
3.2 Geographic details and soil type 33
3.3 Early site observations 34
3.4 Order of events 35

3.5 Preliminary site surveys 38
3.6 Site map 40
3.7 Trench Summaries 41
..... 43
3.8 Excavation context overview 50
3.9 Summary 51
Chapter 4 – Methods 52
4.1 Introduction 52
4.2 Excavation 52
4.3 Cataloguing and data management 53
4.4 Artefact analysis 54
4.4.1 Method glass analysis 54
4.4.2 Method ceramic analysis 59
4.4.3 Method fauna analysis 62
4.4.4 Method metal analysis 64
4.4.5 Method button analysis 65
4.4.6 Method ammunition analysis 66
4.4.7 Method miscellaneous object analysis 67
4.4.8 Method lithic analysis 67
Chapter 5 – Glass 69
5.1 Introduction 69
5.2 Glass chronology and functionality 71
5.3 Overall glass analyses, Boralga NMP site 72
5.3.1 Overall distribution of glass between trenches 72
5.3.2 Overall distribution of glass between contexts 73
5.3.3 Glass objects 74
5.3.4 Identifiable bottle mould seam types at Boralga 75
5.3.5 Glass colour 76
5.3.6 Probable contents of identifiable bottles 77

5.3.7 Probable contents and makers 78
5.3.8 Probable contents between contexts 79
5.3.9 Overall glass dates for Boralga NMP camp 81
5.3.10 Best fit dates for glass between 1875-c1894 82
5.3.11 General date ranges for glass items at Boralga, in order of abundance 83
5.3.12 Object component and NMV 90
..... 91
5.3.13 Knapped glass 92
5.4 Glass analyses, individual trenches 93
5.5 Trench 1 93
5.5.1 Distribution of glass between contexts 93
5.5.2 Glass objects 94
..... 94
5.5.3 Glass colour 95
5.5.4 Probable contents of identifiable bottles 96
5.5.5 Probable contents between contexts 97
5.5.6 Object component and MNV 97
5.6 Trench 3 99
5.6.1 Distribution of glass between contexts 99
..... 100
5.6.2 Glass objects 100
5.6.3 Glass colour 101
5.6.4 Probable contents of identifiable bottles 102
5.6.5 Probable contents between contexts 103
5.6.6 Object component and MNV 104
5.7 Trench 4 106
5.7.1 Distribution of glass between contexts 106
5.7.2 Glass objects 107
5.7.3 Tableware type 108

5.7.4 Glass colour 110
5.7.5 Probable contents of identifiable bottles 111
5.7.6 Probable contents between contexts 112
5.7.7 Object component and MNV 114
..... 114
5.7.8 Knapped glass 115
5.7.9 Knapped glass distribution between contexts – colour and type 116
5.8 Trench 7 117
5.8.1 Distribution of glass between contexts 117
5.8.2 Glass objects 118
5.8.3 Glass colour 119
5.8.4 Probable contents of identifiable bottles 120
5.8.5 Probable contents between contexts 121
5.8.6 Object component and MNV 122
5.8.7 Knapped glass 123
5.8.8 Knapped glass distribution between contexts – colour and type 124
..... 124
..... 125
5.9 Trench 16 127
5.9.1 Distribution of glass between contexts 127
5.9.2 Glass objects 128
5.9.3 Glass colour 129
5.9.4 Probable contents of identifiable bottles 130
5.9.5 Probable contents between contexts 131
5.9.6 Object component and MNV 132
5.10 Trench 20 134
5.10.1 Distribution of glass between contexts 134
5.10.2 Glass objects 134
5.10.3 Probable contents 134

5.10.4 Glass colour 135
5.10.5 Object component and MNV 136
5.11 Results 137
5.12 Discussion 138
Chapter 6 – Ceramic 142
6.1 Introduction 142
6.2 Ceramic history, identification and dating 142
6.3 Dates for decorative methods and designs commonly found at Boralga 144
..... 146
..... 148
6.4 Overall ceramic analysis, Boralga NMP site 152
6.4.1 Overall distribution of ceramic between trenches 152
6.4.2 Overall distribution of ceramic between contexts 153
6.4.3 Technological ware type 154
6.4.4 Technological ware sub-type 154
6.4.5 Functional type 156
6.4.6 Fragment count of identifiable objects 157
6.4.7 Object component 158
6.4.8 Completeness 158
6.4.9 Ceramic MNV all trenches 159
6.4.10 Decoration type 161
6.4.11 Maker's marks/trademarks 164
6.4.12 Clay smoking pipes 165
6.5 Ceramic analyses, individual trenches 169
6.6 Trench 3 170
6.6.1 Distribution of ceramic between contexts 170
6.6.2. Technological ware type 171
6.6.3. Technological ware sub-type 171
6.6.4. Functional type 173

6.6.5 Fragment count of identifiable objects 174
6.6.6. Object component 175
6.6.7 Completeness 176
6.6.8. Ceramic NMV, Trench 3 176
6.6.9. Identifiable motifs 177
6.6.10 Conjoins 178
..... 178
6.7 Trench 4 179
6.7.1 Distribution of ceramic between contexts 179
6.7.2. Technological ware type 180
6.7.3. Technological ware sub-type 180
6.7.4. Functional type 182
6.7.5 Fragment count of identifiable objects 183
6.7.6 Object component 184
6.7.7. Completeness 184
6.7.8 Ceramic NMV, Trench 4 185
6.7.9 Identifiable motifs 187
6.7.10 Conjoins 190
6.8 Trench 7 193
6.8.1 Distribution of ceramic between contexts 193
6.8.2. Technological ware type 194
6.8.3 Technological ware sub-type 194
6.8.4 Functional type 196
6.8.5. Fragment count of identifiable objects 197
6.8.6 Object component 198
6.8.7. Completeness 198
6.8.8 Ceramic NMV, Trench 7 199
6.8.9 Identifiable motifs 200
6.8.10 Conjoins 201

6.9 Trench 11 202
6.9.1 Distribution of ceramic between contexts 202
6.9.2 Technological ware type 203
6.9.3 Technological ware sub-type 203
..... 204
..... 204
6.9.4 Functional type 205
6.9.5. Fragment count of identifiable objects 206
6.9.6 Object component 207
6.9.7 Completeness 207
6.9.8 Ceramic NMV, Trench 11 208
6.9.9 Identifiable motifs 208
6.9.10 Conjoins 210
6.10 Trench 16 211
6.10.1 Distribution of ceramic between contexts 211
6.10.2 Technological ware type 212
6.10.3 Technological ware sub-type 212
6.10.4 Functional type 214
6.10.5. Fragment count of identifiable objects 215
6.10.6 Object component 216
6.10.7. Completeness 216
6.10.8 Ceramic NMV, Trench 16 217
6.10.9 Identifiable motifs 218
6.10.10 Conjoins 220
6.11 Results 222
6.12 Discussion 222
Chapter 7 – Fauna 223
7.1 Introduction 223
7.2 Overall faunal analysis, Boralga NMP site 226

7.2.1 Overall distribution of bone between trenches 226
..... 227
7.2.2 Overall distribution between contexts 227
..... 227
7.2.3 Bone weight and frequency 228
7.2.4 Bone class 230
7.2.5 Bone taxon 231
7.2.6 Bone element, NISP and MNI 232
7.2.7 Length and weight 233
7.2.8 Age by class or taxon 234
7.2.9 Modification 235
7.2.10 Shell 237
7.3 Results 238
7.4 Discussion 238
Chapter 8 – Metal 239
8.1 Introduction 239
8.2 Overall metal analysis, Boralga NMP site 240
8.2.1 Overall distribution of metal between trenches 240
8.2.2 Overall distribution between contexts 241
8.2.3 Metal Type 242
8.2.4 MNI Identifiable metal objects 243
8.2.5 Completeness 243
..... 244
8.2.6 Object modification 245
8.2.7 Horseshoes 249
8.2.8 Nails 252
8.2.9 Spikes 258
8.3 Results 259
8.4 Discussion 259

Chapter 9 - Buttons 261
9.1 Introduction 261
9.1.1 Common button types and dates 261
9.1.2 Single examples 264
9.2 Overall button analysis 265
9.2.1. Material type 265
9.2.3 Button summary 266
9.2.4 Slogans and backstamps 267
9.3 Results 267
9.4 Discussion 267
Chapter 10 - Ammunition 268
10.1 Introduction 268
10.1.1 Ammunition MNI by type 273
10.1.2 Spatial distribution and MNI, all trenches 273
10.1.3 Distribution between Trenches 276
10.1.4 Distribution between contexts 277
10.1.5 Headstamps 277
10.2 Results 278
10.3 Discussion 278
Chapter 11 – Miscellaneous 280
11.1 Introduction 280
11.1.1 MNI miscellaneous objects 280
11.1.2 Concrete 281
11.1.3 Writing slate 282
11.1.4 Slate pencils 282
11.1.5. Bone toothbrush 283
11.2 Results 283
11.3 Discussion 284
Chapter 12 – Lithics and other traditional artefacts 285

12.1 Introduction 285
12.1.1 Spatial distribution 285
12.1.2. Proportion of knapped stone 288
12.1.3 Distribution of Knapped stone between trenches 288
12.1.4 Lithic material 289
12.1.5 Other traditional items and cultural features 290
12.2 Results 293
12.3 Discussion 293
Chapter 13 - Interpretation 294
13.1 Introduction 294
13.2 Ascertaining and confirming the structure and organisation of Boralga 294
13.2.1 Layout and features of Boralga NMP Camp 294
..... 297
3.2.2 Buildings at Boralga NMP camp 297
13.2.3 Archaeological investigation of camp layout at Boralga 299
13.3 Living within the confines of the camp - negotiation and expression of domestic space 308
13.3.1 Hegemony and the domestic space 308
13.3.2 The troopers' negotiation of the domestic space 309
13.3.3 Aboriginal women and domestic space 311
13.3.4 Officers and the negotiation and expression of the domestic space 317
13.3.5 Officers' wives and families within NMP camps 321
13.4 The cultural identity of the Aboriginal troopers – social and domestic relationships 324
13.4.1 Cultural identity 324
13.4.2 Social and domestic relationships 330
13.5 Archaeological comparisons to the already existing historical record 338
13.5.1 What can the material culture record tell us that the historical record can't? 339
Chapter 14 - Conclusion 340
References 342
Appendices 359

Appendix 1. The death of Harry Jones 359
Appendix 2. Trench and context summaries 360
Appendix 3. Data base recording fields for glass artefacts 374
Appendix 4. Mould types and seams 380
Appendix 5. Glass colour 382
Appendix 6. Officer dismissals due to drunkenness 383
Appendix 7. Data base recording fields for ceramic artefacts 384
Appendix 8. Josephson's Australian ointment 389
Appendix 9. Ceramic conjoins 390
Appendix 10. Faunal Data 400
Appendix 11. Rations and Supplies 413
Appendix 12. Data base recording fields for bone 415
Appendix 13. Summary of fasteners 418
Appendix 14. Metal objects 437
Appendix 15. Shaft-tugs 441
Appendix 16. Data base recording fields for metal 443
Appendix 17. Button ligne chart 448
Appendix 18. Data base recording fields for Buttons 449
Appendix 19. Data base recording fields for ammunition 451
Appendix 20. Trench summary of miscellaneous objects 455
Appendix 21. Data base recording fields for miscellaneous objects 456
Appendix 22. Data base recording fields for lithics 458
Appendix 23. Rules for the NMP 468
..... 469
Appendix 24. Troopers recorded as shot dead 472

List of Figures

Figure 1. 1 Location map of the Boralga Native Mounted Police Camp and surrounding area..... 4
Figure 1.2 Movement of NMP camps over time by decade and pastoral district from 1850-1900: A-1850; B-1860; C-1870; D-1880; E-1890 and F-1900. (Map by Kelsey Lowe) 2018……5
Figure 2.1 Sub-Inspector Charles Marrett and his wife riding side-saddle outside of the officers' quarters at Boralga (Cairnes Historical Society, Neg. P12/P12874)……..11
Figure 2.2 Boralga lagoon which was crucial for the existence of the Boralga NMP camp (Photograph Bateman 2016)……..14
Figure 2. 3 Map of Carl Creek NMP camp and paddock within the boundaries of Gregory River, O'shanassy River and Carl Creek (from QSA290307) 14
Figure 2. 4 Palmer River and surrounding NMP camps (Map by Barker *et al*, 2019b) 19
Figure 2. 5 Comparative NMP camp layouts across Queensland at different time periods (Barker *et al*, 2019b:7)..... 20
Figure 2. 6 Example of NMP camp layout at Herbert River barracks in 1874. Sub-inspector's quarters can be seen at the centre rear and the troopers' huts on the left are thatched (State Library of Qld 156880) . 21
Figure 2. 7 Drawing of Fort Wadsworth by sodier Maximillian Miller, c1868-1870 showing the scout camp in the forground and the flagpole in a sacred burial mound (Johnson1996:75) 25
Figure 2. 8 Native Mounted Police at Lower Laura Camp, 1890's..... 27
Figure 2.9 NMP troopers and their wives outside their bark huts at Boralga, 1881 (Qld Police Museum, Neg. PM3691)……..30
Figure 3. 1 Two graves at Boralga cemetery belonging to Alexander Mann and Peter McDermott (Photograph Bateman 2016)……37
Figure 3. 2 Geophysical grid at Boralga NMP camp. Green rectangle is the trooper's huts area (Map by Kelsey Lowe 2016)……38
Figure 3. 3 Kelsey Lowe with the ground penetrating radar and gradiometer behind the officers' quarters (Photograph Bateman 2016)……..39
Figure 3. 4 Results from ground penetrating radar (GPR) left and interpretation right which includes dumps, structures and posts (Map by Kelsey Lowe 2016)……39
Figure 3. 5 Results from magnetic gradiometer (Map by Kelsey Lowe 2016)……39
Figure 3. 6 Overall site map of the Boralga NMP camp showing lagoon and telegraph line (Map by Heather Burke 2019)……40

Figure 3. 7 Excavation map showing the trooper' huts area at Trenches 6, 7, and 2, the shed at Trenches 13, 14 and 15, Trench 1 and the Constable's quarters (Map by Kelsey Lowe 2016)……..43
Figure 3. 8 Excavation map showing the Officers quarters; Trenches 5, 8 and 9 (Map by Kelsey Lowe 2016)……..45
Figure 3.9 Les Harrigan and the Rinnyurru Rangers at Trench 12 (Photograph Bateman 2016)……46
Figure 3. 10 Excavation map of Boralga showing all Trenches and scarred trees (Map by Kelsey Lowe 2016)……..49
Figure 3. 1 The team excavating Trench 16 with the Laura rangers (Photograph Burke 2018)……..51
Figure 4. 1 Myself at the total station (Photograph Madden 2016)..... 52
Figure 4. 2 Debitage from Trench 7 or trooper's huts area, Boralga (Photograph Bateman 2017)..... 58
Figure 4. 3 Heavily worked glass core from Trench 7 or trooper's huts area, Boralga 58
Figure 4. 4 Glass flake from Trench 7 or trooper's huts area, Boralga (Photograph Bateman 2017)..... 58
Figure 4. 5 Example of NMP cataloging page showing bottle finishes 68
Figure 5. 1 Complete J.T. Morton vinegar bottle (undated) from Trench 4 69
Figure 5. 2 Three body fragments with embossed lettering from Trench 1.'Scotts Emulsion' cod liver oil bottle, dated 1870s onwards (Photograph Bateman 2016)..... 69
Figure 5. 3 Knapped glass flake from Trench 7 or trooper's huts area, Boralga NMP camp 70
Figure 5. 4 Knapped glass flake from Trench 7 or trooper's huts area, Boralga NMP camp 70
Figure 5. 5 Mouth-blown shop crew from West Virginia working at the mould in 1908 71
Figure 5. 6 Overall distribution of glass between trenches..... 72
Figure 5. 7 Distribution of glass between contexts, all trenches..... 73
Figure 5. 8 Fragment count of glass objects, all trenches 74
Figure 5. 9 Portion of identifiable bottle mould seam types, all trenches 75
Figure 5. 10 Quantity of glass colour, all trenches 76
Figure 5. 11 Probable contents of bottles, all trenches 77
Figure 5. 12 Count of items - best fit dates between 1875-c1894, all trenches..... 82
Figure 5. 13 Conjoined finish, neck and shoulder fragments of an ornate 'Champions & Slee'..... 83
Figure 5. 14 'Turn paste' mould dated between c1870-c1920. Complete wine or champagne bottle from Trench 4 (Photograph Bateman 2016)..... 83
Figure 5. 15 'Double collar' applied finish from an alcohol bottle dated between c1840s-1900s. 84
Figure 5. 16 'Brandy' or 'collar with ring' finish dated between 1860-1920s from Trench 16 84
Figure 5. 17 'Lea & Perrins' Worcestershire sauce bottle dated between c1850s-1920s. 85

Figure 5. 18 ‘Lea & Perrins’ Worcestershire sauce ground glass stopper dated between c1850s-1920s, ... 85
Figure 5. 19 ‘Blob top’ finish of an unidentified bottle dated between 1840s-1920 from Trench 16. Glass is covered in a hard, undiagnosed deposit (Photograph Bateman 2018) 85
Figure 5. 20 Square patent finish, neck and partial shoulder fragment of a medicine bottle dated between 1850s-1900s, from Trench 7 (Photograph Bateman 2017) 86
Figure 5. 21 A body fragment from an A Van Hoboken & Co./Rotterdam gin bottle (embossed letters BOK) dated between 1880-1900, from Trench 11 (Photograph Bateman 2017) 86
Figure 5. 22 ‘Blob Seal’ (AVH) located on the shoulder of an AVan Hoboken & Co./Rotterdam gin bottle dated between 1880-1900, from Trench 11 (Photograph Bateman 2017) 87
Figure 5. 23 Applied single collar finish and neck fragment of a wine or champagne bottle from Trench 7, with bevelled top surface around the rim, typical of mouth blown bottles from the 1880s-1930s..... 87
Figure 5. 24 ‘Flared’ or ‘prescription lip’ finish, neck and partial shoulder fragment from a small medicine bottle dated between c1800-1900s. From Trench 16 (Photograph Bateman 2018) 88
Figure 5. 25 Dark green-black, crudely made ‘square case gin’ bottle body and base with chamfered corners and sides, from Trench 1. Dated c1870-1890 (Photograph Bateman 2016) 88
Figure 5. 26 Two grouped body fragments of an Adolpho Wolf’s Aromatic Schnapps bottle dated 1850s-1880s (embossed letters ‘O WOL’). From Trench 11 (Photograph Bateman 2017) 89
Figure 5. 27 Example of ‘post bottom’ base which dates between 1870-1900. Complete ‘St Jakobs oel’ bottle from Trench 16, made by the Charles A Vogeler Company from Baltimore USA, dated post 1824. (Photograph Bateman 2018) 89
Figure 5. 28 Object component, all trenches 90
Figure 5. 29 Bottle components, all trenches 91
Figure 5. 30 Proportion of knapped cores, flakes and debitage, all trenches 92
Figure 5. 31 Debitage from Trench 7, or the trooper’s huts area 92
Figure 5. 32 Distribution of glass between contexts, Trench 1 93
Figure 5. 33 Complete perfume bottle with square patent finish, c1850s-1900s from Trench 1, Square 5, Context 002 (Photograph Bateman 2016) 94
Figure 5. 34 Wine or champagne bottle with missing finish from Trench 1, Context 000 94
Figure 5. 35 Quantity of glass colour, Trench 1 95
Figure 5. 36 Fragments count of probable contents, Trench 1 96
Figure 5. 37 Two body fragments of an Adolpho Wolf’s Aromatic Schnapps bottle dated 1850s-1880s,.... 96
Figure 5. 38 Object component, Trench 1 97

Figure 5. 39 Portion of an aqua coloured ‘three collar finish’ or ‘club sauce finish’ (used for sauce, alcohol and medicine) from Trench 1, Square 5, Context 002 (Photograph Bateman 2016) 98
Figure 5. 40 Bottle **c**omponent, Trench 1 98
Figure 5. 41 Distribution of glass between contexts, Trench 3 99
Figure 5. 42 Fragment count of glass objects, Trench 3 100
Figure 5. 43 Knapped glass flake from Trench 3, Square 2, Context 002 100
Figure 5. 44 Quantity of glass colour, Trench 3 101
Figure 5. 45 Fragment count of probable contents, Trench 3 102
Figure 5. 46 Aqua ‘John Lamont’ bottle body and base for aerated water which dates between 1874-1890, from Trench 3, Context 000 (Photograph Bateman 2016). 102
Figure 5. 47 Object component, Trench 3 104
Figure 5. 48 Base portion of an alcohol bottle Context 000, Trench 3 104
Figure 5. 49 Bottle component of bottle, Trench 3 105
Figure 5. 50 Body, base and shoulder fragment of an olive green wine or champagne bottle. 105
Figure 5. 51 Distribution of glass between contexts, Trench 4 106
Figure 5. 52 Glass stopper for a wide bore bottle or jar found in Trench 4, Square 9, Context 002 106
Figure 5. 53 Fragment count of glass objects, Trench 4 107
Figure 5. 54 Double collar finish and bulbous neck from an alcohol bottle. 107
Figure 5. 55 Tableware type, Trench 4 108
Figure 5. 56 Pressed glass body fragments of an unidentified object with a pattern of finely stippled dots and lines. Trench 4, Square 8, Context 002 (Photograph Bateman 2016) 108
Figure 5. 57 Cut glass body and base portion of a bottle, with two decorative grooves cut along the length (also knapped glass core). Trench 4, Square 10, Context 001 (Photograph Bateman 2016)..... 109
Figure 5. 58 Base and body sherd of a pressed glass tableware object in ‘hobnail’ style from Trench 4, Square 3, Context 002. An associated handle also from Trench 4, would suggest it is a pitcher fragment (Photograph Bateman 2016) 109
Figure 5. 59 Base and body fragment of a plain moulded Lea & Perrins Worsestershire sauce bottle manufacured by Aire and Calder. Trench 4, Square 2, Context 001 (Photograph Bateman 2016) 109
Figure 5. 60 Quantity of glass colour, Trench 4 110
Figure 5. 61 Fragment count of probable contents, Trench 4 111
Figure 5. 62 Body fragments of a ‘Macanochie’ condiment bottle from Trench 4, Context 002 113
Figure 5. 63 Object component, Trench 4 114

Figure 5. 64 Component of bottle – bases, finishes and complete, Trench 4 115
Figure 5. 65 Proportion of knapped cores, flakes and debitage, Trench 4 115
Figure 5. 66 Knapped glass distribution showing colour and type between contexts, Trench 4 116
Figure 5. 67 Olive amber knapped glass flake from Trench 4, Square 9, Context 002 and 116
Figure 5. 68 Olive green knapped glass flake from Trench 4, Square 10, Context 001 116
Figure 5. 69 Distribution of glass between contexts, Trench 7 117
Figure 5. 70 Fragment count of glass objects, Trench 7 118
Figure 5. 71 Glass bead from Trench 7, Square 10, Context 002 (Photograph Bateman 2018) 118
Figure 5. 72 Glass marble from Trench 7, Square 8, Context 002 (Photograph Bateman 2018) 118
Figure 5. 73 Quantity of glass colour, Trench 7 119
Figure 5. 74 Fragment count of probable contents, Trench 7 120
Figure 5. 75 Chinese medicine bottle from Trench 7, Square 10, Context 002 120
Figure 5. 76 Object component, Trench 7 122
Figure 5. 77 Bottle component, Trench 7 123
Figure 5. 78 Proportion of knapped cores, flakes and debitage, Trench 7 123
Figure 5. 79 Distribution of knapped glass between contexts, Trench 7 124
Figure 5. 80 Olive amber knapped glass core from Trench 7, Square 3, Context 001 124
Figure 5. 81 Distribution of core colour between contexts, Trench 7 125
Figure 5. 82 Distribution of flake colour between contexts, Trench 7 125
Figure 5. 83 Distribution of debitage colour between contexts, Trench 7 126
Figure 5. 84 Distribution of glass between contexts, Trench 16 127
Figure 5. 85 Fragment count of glass objects, Trench 16 128
Figure 5. 86 Knapped, olive green tint coloured glass flake from Trench 16, Square 1, Context 002 128
Figure 5. 87 Glass marble from Trench 16, Square 4, Context 002 (Photograph Bateman 2018) 128
Figure 5. 88 Quantity of glass colour, Trench 16 129
Figure 5. 89 Fragment count of probable contents, Trench 16 130
Figure 5. 90 Medicine bottle from Trench 16, Square 2, Context 002 130
Figure 5. 91 Object component, Trench 16 132
Figure 5. 92 Bottle component, Trench 16 133
Figure 5. 93 One of two torpedo bottle bases from Trench 16, Square 7, Context 002 133
Figure 5. 94 Distribution of glass between contexts, Trench 20 134
Figure 5. 95 Quantity of glass colour, Trench 20 135

Figure 5. 96 Body and base (heel) portion of an olive green tint bottle from Trench 20, Square 1, ... 135
Figure 5. 97 Object component, Trench 20..... 136
Figure 5. 98 Base fragment of a wine/champagne bottle. Surface find from Trench 20 136
Figure 5. 99 Two cobalt blue, glass seed beads from Trench 7, Square 14, Context 002..... 139
Figure 5. 100 White, glass seed bead from Trench 7, Square 9, Context 002 139
Figure 5. 101 Per capita consumption of alcohol from 1844-2012 (Anderson 2015:103)..... 141
Figure 6. 1 White granite moulded relief design on a saucer from Trench 16 144
Figure 6. 2 Matching white granite moulded relief design on a coffee cup from Trench 16..... 144
Figure 6. 3 Handpainted, blue edge-banded design on a refined earthenware saucer from Trench 16.... 145
Figure 6. 4 Transfer print, blue edge-banded design on a refined earthenware plate from Trench 16, ... 145
Figure 6. 5 Handpainted, red edge-baned design on a refined earthenware dinner plate from Trench 4. 146
Figure 6. 6 Blue transfer print cable design on the rim of a white granite dinner plate 147
Figure 6. 7 Blue ivy transfer print on a refined earthenware chamber pot from Trench 7, ... 147
Figure 6. 8 Blue transfer print 'Asiatic Pheasant' design on the rim of a refined earthenware platter..... 147
Figure 6. 9 Refined earthenware fragment with a brown transfer print flower motif 148
Figure 6. 10 Refined earthenware fragment featuring brown transfer print of a bird and twig on a patterned background from Trench 11 (Photograph Bateman 2017) 148
Figure 6. 11 Refined earthenware fragment featuring a brown transfer print of a pot plant..... 148
Figure 6. 12 Rockingham glaze teapot lid from Trench 16 149
Figure 6. 13 Rockingham glaze - unidentified hollow ware fragment with the moulded face of a woman 149
Figure 6. 14 Salt-glazed, stoneware body fragment from a storage vessel with a dark brown glaze..... 150
Figure 6. 15 Chinese brownware rim fragment from a barrel jar, ... 151
Figure 6. 16 Overall distribution of ceramic, all trenches 152
Figure 6. 17 Distribution of ceramic between contexts, all trenches 153
Figure 6. 18 Weight of technological ware sub-types, all trenches..... 155
Figure 6. 19 Count of technological ware sub-type fragments, all trenches 155
Figure 6. 20 Count of identifiable functional types - objects and fragments, all trenches 156
Figure 6. 21 Tableware from Trench 16. Conjoined blue band and line dinner plate (Photograph Bateman 2019)..... 156
Figure 6. 22 Ceramic fragment count of identifiable objects, all trenches 157
Figure 6. 23 Object component, all trenches 158
Figure 6. 24 MNV for ceramic, all trenches..... 159

Figure 6. 25 Lid of Josephson's Australian Ointment pot, from Trench 4 160
Figure 6. 26 Underglaze transfer print on a refined earthenware plate from Trench 4 163
Figure 6. 27 Maker's marks on table ware items from Trench 16 (Photograph Bateman 2019) 164
Figure 6. 28 Half section of an undecorated clay pipe bowl from Trench 7 166
Figure 6. 29 Half section of a clay pipe bowl/stem with embossed pattern 167
Figure 6. 30 Moulded relief motif of an Irish harp on a clay pipe bowl from Trench 7 169
Figure 6. 31 Distribution of ceramic between contexts, Trench 3 170
Figure 6. 32 Weight of technological ware sub-types, Trench 3 172
Figure 6. 33 Count of technological ware sub-type fragments, Trench 3 172
Figure 6. 34 Count of identifiable functional types - objects and fragments, Trench 3 173
Figure 6. 35 Base fragment of a stoneware food/drink storage vessel from Trench 3 173
Figure 6. 36 Ceramic fragment count of identifiable objects, Trench 3 174
Figure 6. 37 Fragment of a porcelain bell insulator from Trench 3 (Photograph Bateman 2016) 174
Figure 6. 38 Object component, Trench 3 175
Figure 6. 39 Stoneware body and base fragment of a crock/demijohn from Trench 3 175
Figure 6. 40 MNV for ceramic, Trench 3 176
Figure 6. 41 Refined earthenware plate fragment from Trench 3 (Photogragh Bateman 2016) 176
Figure 6. 42 Conjoined earthenware fragments of a dinner plate from Trench 3 178
Figure 6. 43 Distribution of ceramic between contexts, Trench 4 179
Figure 6. 44 Fragment of an embossed, unidentified porcelain object from Square 9, Context 002 179
Figure 6. 45 Weight of technological ware sub-types, Trench 4 181
Figure 6. 46 Count of technological ware sub-type fragments, Trench 4 181
Figure 6. 47 Count of identifiable functional types - objects and fragments, Trench 4 182
Figure 6. 48 Conjoined neck and rim fragments of a drink storage vessel or demijohn from Trench 4 (Photograph Bateman 2016) 182
Figure 6. 49 Ceramic fragment count of identifiable objects, Trench 4 183
Figure 6. 50 Object component, Trench 4 184
Figure 6. 51 MNV for ceramic, Trench 4 185
Figure 6. 52 Conjoined porcelain tea cup from a child's tea set, Trench 4 186
Figure 6. 53 Porcelain teapot lid from a child's tea set, Trench 4 186
Figure 6. 54 Porcelain saucer from a child's tea set, Trench 4 186
Figure 6. 55 A conjoined stoneware dish from Trench 4 191

Figure 6. 56 A conjoined stoneware dish from Trench 4 191
Figure 6. 57 Conjoined fragments of an unidentified stoneware object 192
Figure 6. 58 Conjoined porcelain saucer/nappie from Trench 4 (Photograph Bateman 2016) 192
Figure 6. 59 Conjoined earthenware dinner plate from Trench 4 (Photograph Bateman 2016) 192
Figure 6.60 Distribution of ceramic between contexts, Trench 7 193
Figure 6. 61 Clay smoking pipe from Square 11, Context 002 (Photograph Bateman 2018) 193
Figure 6. 62 Weight of technological ware sub-types, Trench 7 195
Figure 6. 63 Count of technological ware sub-type, Trench 7 195
Figure 6. 64 Count of identifiable functional types - objects and fragments, Trench 7 196
Figure 6. 65 Personal item from Trench 7. Face portion of a Chinese figurine 196
Figure 6. 66 Ceramic fragment count of identifiable objects, Trench 7 197
Figure 6. 67 Red ware clay pipe bowl fragments from Trench 7 197
Figure 6. 68 Object component, Trench 7 198
Figure 6. 69 Rim fragment of a demijohn from Trench 7 198
Figure 6. 70 MNV for ceramic, Trench 7 199
Figure 6. 71 Lid fragment of a John Gosnell ointment pot from Trench 7 199
Figure 6. 72 Body fragment of an earthenware object with an unidentified registration daimond. 200
Figure 6. 73 Conjoined base and body section of a chamber pot from Trench 7 201
Figure 6. 74 Distribution of ceramic between contexts, Trench 11 202
Figure 6. 75 Body and rim fragment of an unidentified earthenware object from Context 001 202
Figure 6. 76 Earthenware body and rim fragment of an unidentified object from Trench 11 203
Figure 6. 77 Weight of technological ware sub-types, Trench 11 204
Figure 6. 78 Count of technological ware sub-type, Trench 11 204
Figure 6. 79 Count of identifiable functional types – objects and fragments, Trench 11 205
Figure 6. 80 Tableware base/footing fragments – earthenware plate from Trench 11 205
Figure 6. 81 Ceramic fragment count of identifiable objects, Trench 11 206
Figure 6. 82 Conjoined rim and marley fragments of an earthenware dinner plate from Trench 11 206
Figure 6. 83 Object component, Trench 11 207
Figure 6. 84 Handle fragment of an unidentified earthenware object from Trench 11 207
Figure 6. 85 MNV for ceramic, Trench 11 208
Figure 6. 86 Conjoined body and rim fragments with brown transfer print of a leaf. 210
Figure 6. 87 Distribution of ceramic between contexts, Trench 16 211

Figure 6. 88 Conjoined porcelain tea cup from Square 2, Context 002 (Photograph Bateman 2018) 211
Figure 6. 89 weight of technological ware sub-type, Trench 16 213
Figure 6. 90 Count of technological ware sub-type, Trench 16..... 213
Fgure 6. 91 Count of identifiable functional types – objects and fragments, Trench 16..... 214
Figure 6. 92 Conjoined teaware fragments – earthenware saucer from Trench 16..... 214
Figure 6. 93 Ceramic fragment count of identifiable objects, Trench 16 215
Figure 6. 94 Porcelain egg cup from Trench 16..... 215
Figure 6. 95 Object component, Trench 16..... 216
Figures 6. 96 and 6. 97 Earthenware handle and spout fragments from a jug, Trench 16..... 216
Figure 6. 98 MNV for ceramic, Trench 16 217
Figures 6. 99 Porcelain doll shoulder and head fragment. Figure 6. 100 Limb from a porcelain doll 217
Figure 6. 101 Conjoined body fragments with brown transfer print of leaves. 219
Figure 6. 102 Conjoined Halloway's Ointement pot from Trench 16 221
Figure 6. 103 Conjoined refined earthenware dinner plate with embossing from Trench 16 221
Figure 7. 1 Page from the 1899 ration cash book listing the names of Aboriginal troopers and their partners (Photographs Heather Burke 2016)..... 224
Figure 7. 2 Overall distribution of bone, all trenches..... 226
Figure 7. 3 Distribution of bone between contexts, all trenches 227
Figure 7. 4 Possum mandible from Trench 7, Square 3, Context 001 227
Figure 7. 5 Quantity of unidentified bone fragments from Trench 7, Square 5, Context 001 229
Figure 7. 6 Bone class weight, all trenches 230
Figure 7. 7 Bone class frequency (NISP), all trenches..... 230
Figure 7. 8 Identified bone taxon weight, all trenches..... 231
Figure 7. 9 Two snake vertabra from Trench 7 231
Figure 7. 10 Burnt bone, all trenches..... 235
Figure 7. 11 Calcined bone, all trenches 236
Figure 7. 12 Proportion of calcined bone, within trenches 236
Figure 7. 13 Shell NISP, all trenches..... 237
Figure 7. 14 Calcined mussel shell fragments from Trench 7..... 237
Figure 8. 1 Overall distribution of metal, all trenches..... 240
Figure 8. 2 Distribution of metal between contexts, all trenches 241
Figure 8. 3 Quantity of metal type, all trenches..... 242

Figure 8. 4 Middle portion of a tin whistle, Trench 7, Square 12, Context 002 242
Figure 8. 5 MNI identifieable metal objects, all trenches 243
Figure 8. 6 Bootlace hooks from Trench 4, Square 10, Context 001 (Photograph Bateman 2018) 244
Figure 8. 7 British military style snake (or swan) belt buckle from Trench 7, Square 7, ... 244
Figure 8. 8 Thimble from Trench 7, Square 1, Context 001 (Photograph Bateman 2018) 245
Figure 8. 9 Six pieces of melted lead from Trench 16, Context 002 247
Figure 8. 10 Billy hook from Context 000 or surface find 247
Figure 8. 11 Modified nail from Trench 7, Context 001 247
Figure 8. 12 Modified nail from Trench 7, Context 001 247
Figure 8. 13 Wire twisted into a cable and looped 248
Figure 8. 14 One of two straightened horseshoes recovered from Trench 10 (or the blacksmith's/farrier's area), Context 002. Possibly an unfinished spearpoint blank (Phtotograph Bateman 2016) 248
Figure 8. 15 Horseshoe spearpoints in various stages of manufacture 249
Figure 8. 16 Medium sized, round horseshoe which is wider than it is long from Trench 10, Square 4, Context 003 (Photograph Bateman 2017) 252
Figure 8. 17 Quantity of structural and non-structural fasteners, all trenches 254
Figure 8. 18 MNI of structural fasteners, all trenches 255
Figure 8. 19 Varman's Type 2 nail from Trench 16, Square 2, Context 002 255
Figure 8. 20 MNI of non-structural fasteners, all trenches 256
Figure 8. 21 Two brass boot nails from Trench 16, Square 4, Context 002 256
Figure 8. 22 MNI of spikes, all trenches 258
Figure 8. 23 Spike from Trench 7, Square 9, Context 002 258
Figure 8. 24 Popgun from Trench 8, Square 4, Context 002 (Photograph Bateman 2018) 260
Figure 9. 1 Metal NMP uniform button from Trench 7, Square 11, Context 002 261
Figure 9. 2 Metal trouser button from Trench 7, Square 7, Context 001 262
Figure 9. 3 Ceramic 'Prosser" button from Trench 7, Square 18, Context 002 263
Figure 9. 4 Black glass button found at Trench 7, Square 11, Context 002 264
Figure 9. 5 Shell button from Trench 7, Square 14, Context 002 264
Figure 10. 1 Musket ball with a sprue mark found in Trench 7, Context 001. A flat spot is visible at the top. The furrow may be trowel damage or a rifling groove 268
Figure 10. 2 Example of .577 rolled brass foil catridge case with iron base disc attached, for a Snider or Martini-Henry rifle. From Trench 7, Context 002 (Photograph Bateman 2018) 269

Figure 10. 3 Example of .577 brass base disc with the 'KYNOCH No 12 BIRMINGHAM' headstamp..... 270
Figure 10. 4 Tweny gauge pinfire shotgun cartridge from Trench 16, Context 002 270
Figure 10. 5 Example of .442 centre-fire brass revolver cartridge with base disc from Trench 7, Context 002 270
Figure 10. 6 Fired .577 lead projectile from Trench 7, Context 002 271
Figure 10. 7 Three shotgun pellets from Trench 7, Context 002 271
Figure 10. 8 Unfired percussion cap from Trench 7, Context 001 272
Figure 10. 9 Flobert .22 rimfire BB cap for a revolver found in Trench 4, Context 002 272
Figure 10. 10 Pinfire revolver cartridge (9.95 mm) from Trench 7, Context 001 275
Figure 10. 11 Distribution of ammunition between all trenches 276
Figure 10. 12 Highly corroded .577 Snider or Martini-Henry bullet with all components present 276
Figure 10. 14 Example of NMP trooper 279
Figure 11. 1 Sample of circular raised area made of stone and concrete 281
Figure 11. 2 Writing slate with ruled lines visible on the two largest pieces, ... 282
Figure 11. 3 Three fragments of broken slate pencils from Trench 8, Context 001 282
Figure 11. 4 Fragmented bone toothbrush from Trench 4, Context 001 (Photograph Bateman 2016) 283
Figure 11. 5 Amethyst coloured, cut crystal decanter stopper from Trench 4, Context 002 284
Figure 12. 1 Chert core from Trench 7, Context 002 (Photograph Bateman 2018) 287
Figure 12. 2 Proportion of knapped stone, all trenches 288
Figure 12. 3 Distribution of lithics between trenches 288
Figure 12. 4 A broken flake (LBF-medial) with retouch on the distal margin from Trench 4, Context 001. Material type is unidentified (Photograph Bateman 2016) 289
Figure 12. 5 MNI of lithic material 289
Figure 12. 6 Example of ochre on the right, found at Trench 7, Context 001 290
Figure 12. 7 Millstone with slightly worn surface. Boralga NMP camp, surface find 291
Figure 12. 8 Muller with wear on distal edge, surface find at Boralga NMP camp 291
Figure 12. 9 Tree with an oval scar (possibly woomera scar) with a steele axe cut across the centre (Photograph N. Cole 2016) 292
Figure 13. 1 O'Connor's plan of the police reserve on the Laura River, 1877. 295
Figure 13. 2 Site map of the Boralga NMP camp superimposed over O'Connor's 1877 'Plan of Police Reserve on the Laura River', which shows six large buildings (QSA A/40117). Also, Cole *et al's*, (2002) site

plan with five clusters of structural remains: E – constable's quarters; F-G -Trooper's huts; H-shed, possibly blacksmiths forge; J-saddle shed; and S-officer's quarters (Lowe et al, 2018:689)..... 296
Figure 13. 3 Historic plan of Cook district showing Laura, Little Laura, Deighton Rivers, Police Paddock, telegraph reserve, McDermott and O'Beirne's station (Laura station) and various tracks to Cooktown, 1883, Queensland State Archives, A/41364 (Cole 2004:164)..... 297
Figure 13. 4 Sub-Inspector Charles Marrett, his wife Eugenie and an unknown officer ouside the officers quarters at Boralga NMP camp, 1884 (Qld Police Museum 0059)..... 298
Figure 13. 5 The team excavating the officers' quarters at Trench 5. Remnant structural posts are visible in the background and stone hearth is in the foreground (Photograph Bateman 2016)..... 301
igure 13. 6 Bryce Barker using a metal detector to establish spatial patterns..... 302
Figures 13. 7 A. Trench 7, Square 1, southern wall showing cut and fill with a post hole on the right. 303
Figure 13. 8 Bryce Barker excavating the Troopers' huts area at Trench 7 (Photograph Bateman 2016).. 305
Figure 13. 9 Small horseshoe which is very worn at the front and to the side, from Trench 10, Context 002 (Photograph Bateman 2016)..... 306
Figure 13. 10 Example of a horseshoe nail from Trench 10, Context 003..... 306
Figure 13. 11 An NMP officer and troopers on parade, camp and date unknown. The small size of the troopers and their horses would indicate that many were boys rather than full grown men..... 311
Figure 13. 12 Image from the Cooktown ration cash book listing the names of two children..... 314
Figure 13. 13 Two sewing pins from the troopers' huts area (Photograph Bateman 2018)..... 316
Figure 13. 14 Mary at the Laura terminus with Policeman Daniel Fitzgibbon's children, Constance and Ned, ... 316
Figure 13. 15 Mary, who was a servant girl with Rosy and Mr Kennedy (possibly an inspector) at the Laura terminus in the 1899s (Queensland State Archives, Neg. 151976)..... 317
Figure 13. 16 Officer George Murray (in the back second from the left), and his detachment of Native Mounted Police, Rockhampton (State Library of Queensland, Neg no. 10686)..... 319
Figure 13. 17 Brass lock plate and handles recovered from the refuse pit (Trench 4) associated with officer's quarters (Photograph Bateman 2016)..... 320
Figure 13. 18 Children including those of Laura Policeman, Daniel Fitzgibben..... 322
Figure 13. 19 Sketch numbered 32 in Oscars notebook, c1899, which was titled..... 323
Figure 13. 20 Constable Daniel Fitzgibbon at an NMP camp at Cape York Peninsula in 1906, ... 327
Figure 13. 21 Seven troopers from Boralga dressed in traditional lap-laps, but still wearing their kepi uniform hats, 1880 (Cairns Historical Society Neg. PM0651)..... 328

Figure 13. 22 An undated studio portrait of Frederick Walker (James Gratton Pattison Collection) 331
Figure 13. 23 A page from the 1898-1899 rations cash book for the Cooktown NMP camp referring to disciplinary action against Tracker Tommy (Photograph Heather Burke) 335
Figure 13. 24 Black Tracker Carning and his wife at Boulia 1902 336
Figure 13. 25 Trackers and their wives at Rewan Station, Springsure District, c1912 337

List of Tables

Table 2.1 List of known NMP personnel stationed at Boralga from 1875-c1894 11
Table 3.1 Lower Laura (Boralga) Native Mounted Police Camp Chronology 35
Table 5. 1 Makers, dates and probable contents of identifiable bottles from Boralga 78
Table 5. 2 Frequency of probable contents between contexts, all trenches 79
Table 5. 3 Dates and count of identifiable glass items at Boralga 81
Table 5. 4 Frequency of probable contents between contexts, Trench 1 97
Table 5. 5 Frequency of probable contents between contexts, Trench 3 103
Table 5. 6 Frequency of probable contents between contexts, Trench 4 112
Table 5. 7 Frequency of probable contents between contexts, Trench 7 121
Table 5. 8 Frequency of probable contents between contexts, Trench 16 131
Table 6. 1 Technological ware type frequencies for ceramic, all trenches 154
Table 6. 2 Ceramic decoration type, all trenches 161
Table 6. 3 Clay pipe spatial frequency, length and weight 167
Table 6. 4 Clay pipe summary, all trenches 168
Table 6. 5 Identifiable clay pipe motifs on stems and bowls 169
Table 6. 6 Technological ware type frequencies for ceramic, Trench 3 171
Table 6. 7 Count of identifiable motifs from Trench 3 177
Table 6. 8 Conjoined MNV Trench 3 178
Table 6. 9 Technological ware type frequencies for ceramic, Trench 4 180
Table 6. 10 Count of identifiable motifs at Trench 4 187
Table 6. 11 Conjoin MNV, Trench 4 190
Table 6. 12 Technological ware type frequencies, Trench 7 194
Table 6. 13 Count of identifiable motifs at Trench 7 200
Table 6. 14 Conjoin NMV, Trench 7 201
Table 6. 15 Technological ware type frequencies for ceramic, Trench 11 203

Table 6. 16 Count of identifiable motifs at Trench 11 209
Table 6. 17 Conjoin MNV, Trench 11 210
Table 6. 18 Technological ware type frequencies for ceramic, Trench 16 212
Table 6. 19 Count of identifiable motifs at Trench 16 218
Table 6. 20 Conjoin MNV, Trench 16 220
Table 7. 1 Bone weight and frequency per trench, square and context 228
Table 7. 2 NISP and MNI, all trenches 232
Table 7. 3 Bone length and weight summary, all trenches 233
Table 7. 4 Age frequency, all trenches 234
Table 8. 1 Object modification 245
Table 8. 2 Summary of horseshoes 249
Table 8. 3 Nail manufacture method, all trenches 257
Table 8. 4 Head shape and utility, all trenches 257
Table 9. 1 Button material type frequency 265
Table 9. 2 Overall button summary, all trenches 266
Table 9. 3 slogans and backstamps on metal trouser buttons 267
Table 10. 1 Ammunition type and MNI, all trenches 273
Table 10. 2 Ammunition spatial distribution 273
Table 10. 3 Ammunition headstamps 277
Table 11. 1 MNI miscellaneous objects 280
Table 12. 1 Spatial distribution and MNI lithics, all trenches 285

Definition of Terms

Colonialism – the process of expansionist settlement and sociocultural replication adopted by various cultural groups through human history and prehistory (Casella & Voss 2012:1)

Imperialism – centralised appropriative, militaristic, and often violent projects of conquest and dispossession (Casella & Voss 2012:1)

Dispersal - a general euphemism for shooting at or killing aboriginal people as settler boundaries expanded (Ørsted-Jensen 2011:35-40)

Contact archaeology - pertains to the study of cultural sites that contain traditional artefacts such as worked stone, as well as adapted non-traditional technology made from material such as glass, metal or ceramic (Kinsela 2014)

Social landscapes - examines the dynamic, interdependent relationships that people maintain with the cultural, social and physical dimensions of their environment across space and time (Anschuetz *et al*. 2001:159)

Acculturation – Assimilation into a different culture, typically the dominant one (Oxford dictionary 2019). The exchange of cultural features that results when groups come into continuous firsthand contact; the cultural patterns of either or both groups may be changed, but the groups remain distinct (Kottak 2011:599)

The History Wars – Concerned with the obligation of the historian and the demands of patriotism, and operates on the martial principle of conquest, of us against them, right and wrong, of a single correct view of history, a misunderstanding of the discipline of history and a profound hostility to the history profession (Macintyre 2003:77)

Chapter 1 - Introduction

The Queensland Native Mounted Police (NMP) were a major instrument of colonial control and order on the Queensland frontier from 1848 and throughout the second half of the nineteenth century (Bottoms 2013:5). They were essentially a paramilitary force tasked with the 'protection' of settlers encroaching on Aboriginal land, which ultimately resulted in the dispossession of Aboriginal people from their country, and the violent subjugation of their resistance (Bottoms 2013:5). Regardless of the imposing presence of the Queensland NMP and the abundant historical records documenting their actions, very little is known about the Aboriginal troopers themselves (Richards 2008:174). The multiple facets relating to the shared domestic space within NMP camps and the way in which home or 'place' may have been negotiated and expressed by the inhabitants have largely remained unrecorded. To date, archaeological research of early Aboriginal-European frontier interaction within Australia has concentrated mainly on examining the pastoral industry (Harrison 2002; Stuart 1997), missions (Brown, Avery & Goulding 2002; Lydon 2000) and early settlements (Gibbs 2005; Grguric 2008; Rowland 2004; Williamson 2002). Several attempts at examining material evidence relating directly to frontier violence in the form of potential massacre sites have also been initiated (Ryan 2009; Smith *et al*, 2005; Wallis *et al*, 2005), although problems with precisely locating massacre sites and finding diagnostic archaeological material that is massacre-related has resulted in little success (see Barker 2007; Smith *et al*, 2005; Wallis *et al*, 2005).

Difficulties in locating sites most likely relate to the relative number of victims and the spatial distribution of events, as 'dispersals' were often punitive expeditions which involved the systematic wide-ranging killing of small numbers of Aboriginal people at discrete locations (Barker 2007:10). In addition, even if potential massacre sites are located, often the slaughtered were recovered by kin and traditionally interred, or the perpetrators burnt the bodies to cover-up the bloodshed, thus destroying the evidence and rendering the archaeological material difficult to diagnose (Barker 2007:9; Bottoms 2013:63; Richards 2008:33-35, 41). Barker (2007:12) states that archaeologically the focus should not be on skeletal remains, but on the more tangible and durable material culture relating to frontier interaction. Therefore, this study examines frontier conflict through the investigation of domestic life within the NMP Camp at Boralga, with the aim of examining the tangible 'definitive artefacts' contained within the very support structure that enabled a web of violence to be generated throughout the region.

1.1 Research question

How does the expression and negotiation of the domestic space carried out by former occupants at the Boralga NMP camp reinforce social and cultural identity, and how does the archaeological evidence depart from the historical record?

1.2 Aims

1. Ascertain and confirm the structure and organisation of the NMP camp at Boralga
2. Provide a more nuanced and detailed picture of how individuals lived within the confines of the camp with a focus on negotiation and expression of domestic space
3. Using the theoretical framework of 'place', elicit insights into the social and cultural identity of the Aboriginal troopers, and their domestic relationships at the Boralga NMP camp
4. Compare and contrast the archaeological evidence to the already existing historical record and oral testimony to explore contradictions and complexities

This research uses 'place' as a theoretical framework to investigate the cultural and social identity of NMP camp occupants within the domestic space at Boralga. This approach marries the conceptions of people with material form in a built environment that has spawned violent collective action and a revision of identities. This thesis investigates a range of historical evidence relating to Native Police life in the form of photographs, maps, archival records, personal diaries, memoirs, oral histories and importantly, the material culture from archaeological excavations. The information will assist in the interpretation of camp organisation and give insights into the cultural and social identity of the troopers, daily activities, interactions between the Queensland NMP and settlers, working and living conditions at the camp, the expression of hierarchical arrangements, and the roles undertaken by women. It is anticipated that the investigation will add to, strengthen and shed some light on the complex interrelationships between Aboriginal and non-Aboriginal people on the Queensland frontier, with a view to providing a more nuanced reconstruction of identity and domestic interaction. This research will endeavour to illuminate and incorporate the Aboriginal experience of frontier contact, departing from the Eurocentric accounts recorded in earlier historical and archaeological works that reflect the thinking of the time (e.g. Allan 1973; Birmingham 1992; Laurie 1957).

1.3 Formation of the Queensland NMP and Boralga

The Boralga NMP camp is located on the floodplain of the Laura River, at the southern extremity of Rinyirru National Park. The site, also known as the Lower Laura Camp, and the Deighton Camp is situated near Boralga Swamp, approximately 18 km downstream from the township of Laura on Cape York Peninsula (see Figure 1.1). Previously, tropical Cape York Peninsula lent itself to intensive resource use by large Aboriginal populations within the riverine and coastal environments (Morwood 1995:39). The land was organised into hundreds of distinct territories, with at least 12 different language groups moving in 'appropriate and customary ways' throughout the landscape under investigation (Aboriginal Land Claim to Lakefield National Park 1996:87, cited in Cole 2004:158). However, complex systems of lore, and physical and spiritual associations with the land were systematically destroyed following the proclamation of the Palmer River Goldfields in October 1873 (Cole 2004:157). Although the Palmer gold rush was short-lived, ending in 1879, pastoralism continued to drive European settlement throughout Cape York Peninsula, with white pioneers of the cattle industry motivated by the prospect of taking up runs in newly discovered regions around the Laura, Olive Vale, Battle Camp, Breeza Plains and Deighton areas (Cole 2004:167).

Initial subjugation of the Aboriginal population in Queensland by the NMP began in 1848, eleven years before the colony was formally separated from New South Wales. Aboriginal men serving as uniformed, armed and mounted troopers under the command of white officers, were used by the already established Queensland colonial government to eliminate Aboriginal resistance to white incursions (Bottoms 2013:5). Tenacious resistance by Aboriginal groups on the frontier led to the implementation of the first northern deployment of the New South Wales NMP, who arrived on the Macintyre River in 1849 (Bottoms 2013:33). The contingent was recruited and led by Commandant Frederick Walker and consisted of 14 Aboriginal troopers from the Murrumbidgee area, with whom Walker had worked previously (Walker 1850:4). Their primary function was to patrol frontier pastoral stations and check for news of 'depredations', remove any perceived threats, and control strong resistance by Aboriginal groups within the area, therefore following a long tradition utilised by the British Empire of using local Indigenous people for policing roles (Richards 2008:9). Interestingly, the troopers were not usually permitted to be involved in the arrest of white settlers or so called 'civilised criminals' (Richards 2008:17, *Port Denison Times* 1864). In addition to the troopers' roles within the force, their remarkable bush skills were utilised for tracking lost

individuals (Whipham 1883), blazing new roads to facilitate mineral rushes, delivering mail and escorting travellers to their destinations (Cole 2004:171).

Figure 1. 1 Location map of the Boralga Native Mounted Police Camp and surrounding area (Map by Alyssa Madden 2017)

Much of the Boralga district was taken up by Harry Jones during the gold rush in 1874, and for several years the Jones family operated a store, hotel and butcher shop on the busy Palmer track which passed through their land (Cole *et al.* 2002; Cole 2004:161). Not long after the Boralga district was established, the first Sub-Inspector, Stanhope O'Connor and 24 troopers were stationed at the Laura camp in 1875 (*Brisbane Courier* 1876:3; Cole 2004:161; Richards 2008:253). The Boralga NMP camp is one of the most recently used and one of the longest lasting in Australia, spanning an extensive period of almost 20 years, from 1875 until c1894 (Cole 2004). By 1884, the composition of the detachment had been reduced to a sub-inspector, six troopers and 21 horses, and this arrangement remained fairly constant for the next 10 years (Cole 2004:167). The NMP force was officially disbanded in 1904, but operations continued into the twentieth century, with NMP troopers assigned to remaining police stations and often renamed 'trackers with firearms', from around 1887 onwards (Parliamentary votes and proceedings 1887).

Figure 1.2 shows the movement of this paramilitary force as it was implemented to 'subdue' Aboriginal resistance to European incursions on their land for over 50 years, resulting in violent subjugation in the form of massacres, extra-judicial executions and reprisals (Barker *et al*, 2019b) .

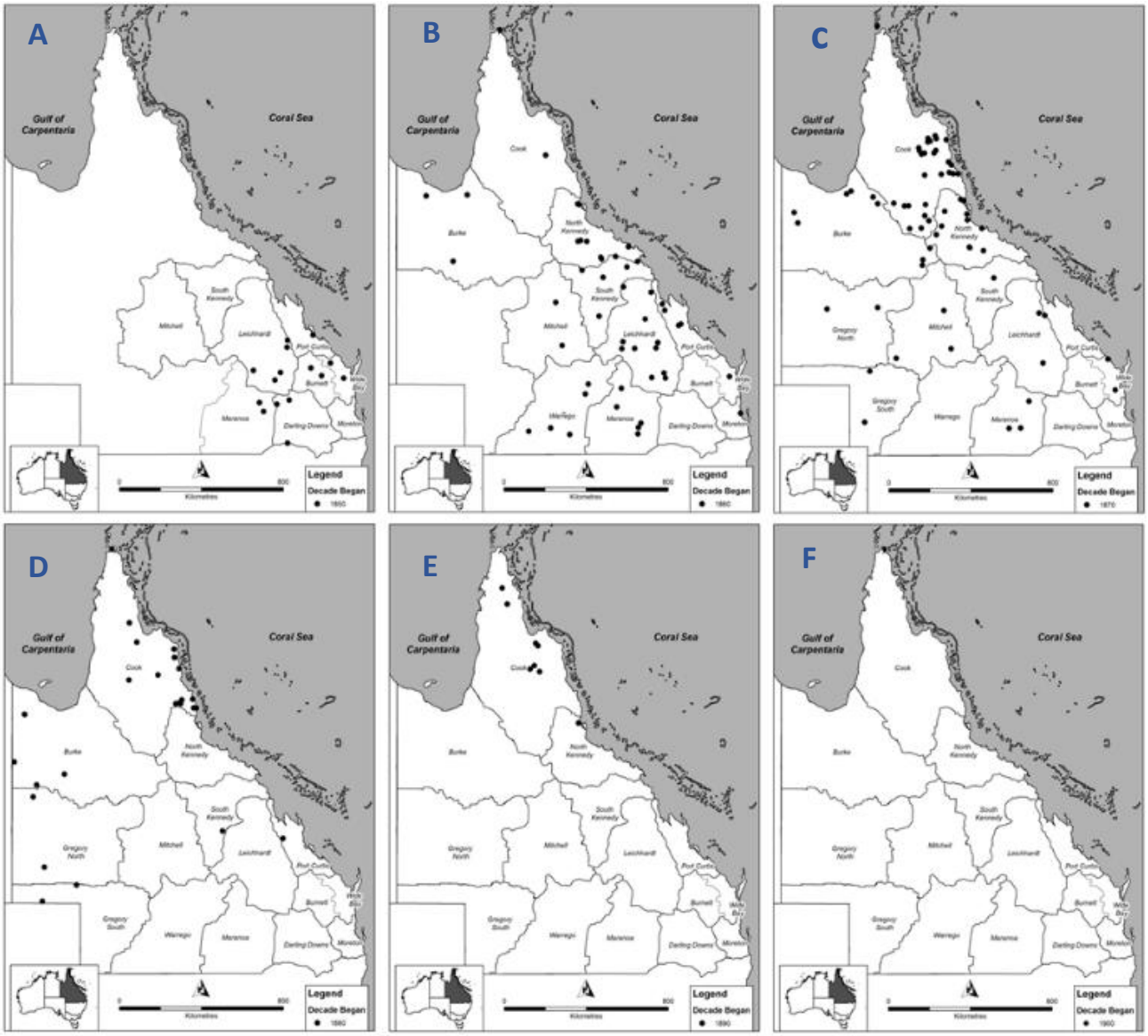


Figure 3.2 Movement of NMP camps over time by decade and pastoral district from 1850-1900: A-1850; B-1860; C-1870; D-1880; E-1890 and F-1900. Only camps with relatively secure locations are included (Map by Kelsey Lowe 2018)

1.4 A sense of 'place'

Place is characterised by Gieryn (2000:464) as a geographic location that comprises an assemblage of things that has physicality (whether built or natural), such as a room, shed, mountain top or river bank, but Gieryn also believes that place is invested with meaning and value. The concept of 'space' within the landscape can also be regarded as the 'lived' space which is brought into being by human experiences (Thomas 2001:172), but space can also be viewed as detached from material form and cultural interpretation, and conceived more as theoretical geometries such as volume, size, shape, distance and direction (Hillier & Hanson 1984). Therefore, the domestic 'space' can be viewed as the 'lived' or interpreted as a geometric expanse, and 'place' can be understood as the assemblage of objects and constructs imbued with meaning and value within a particular location. According to Gieryn (2000:466), there are three defining features of place: location, material form and meaningfulness, therefore place is not only a construct created through physical manifestations such as buildings and pathways, but can also be perceived, felt, understood, imagined, narrated and interpreted (Soja 1996:10). In spite of the materiality of place, the meaning and value is flexible when experienced by different people or cultures (Gieryn 2000:464), such as the vast transformation of 'place' experienced by Aboriginal people following colonisation and displacement by European settlers, which was changeable over time and inevitably challenged. Throughout history place has frequently transformed into sites encompassing power struggles, annexation, absorption, resistance and ultimately contestation (Feld & Basso 1996:5). Thus, place endures as an essential component of social and historical change (Friedland & Boden 1994), and therefore lends itself as a suitable framework for this study.

To fully understand the definition of place, is to enquire into the commonalities and differences between these locations of varying magnitude, and to understand how place can influence a wide range of social practices and historical transformation (Gieryn 2000:464). The creation of places occur as people attribute qualities to the material and social things assembled there: safe or dangerous, public or private, ours or theirs, unfamiliar or known, rich or poor, old or new, beautiful or ugly, accessible or not, Black or White (Gieryn 2000:472). Although place contains these experiences of social relatedness, in various ways it is often taken for granted in every-day-life (Casey 1998:10; Feld & Basso 1996:11). Casey (1998:10), argues that it is only when we are disoriented or lost that we think about the basic notion of place, mainly because place is so much with us and we with it. Place as an indispensable constituent of any landscape and must not be

considered as a geographical or cartographic entity, but as a basic unit of lived experience (Casey (2008:44). All places that we see or traverse, anchor and locate even as they resist and repel, and lend inhabitants their own distinctive identities (Casey 2008:44). A sense of place can be more clearly demonstrated when ranking the perceived desirability within most urban neighbourhoods. For example, 'place stratification' models relate to patterns of residential dispersion often based on key variables, such as zones occupied by particular ethnic groups, resulting in advantaged groups (or individuals) striving to distance themselves from the less advantaged (Alba & Logan 1993:1389). This aligns with Bourdieu's principle of classification which defines distances as predictive of encounters, affinities, sympathies or desires, therefore people living at the top of the space have less chance of marrying people located at the bottom, as they are less likely to physically meet (Bourdieu 1996:19). In other words, spatial usage creates the determining conditions of social life (De Certeau 1988:129). Thus, the perception of 'neighbourhood' does not necessarily pertain to cartographic arrangements of houses and streets, but is relational to ongoing practical discursive conceptions of people (Gieryn 2000:472).

As a result, place is elemental to social life and historical transformation, such as organised patterns of close interaction that comprise network-formations and collective action, the stabilisation and durability of differences and hierarchies, and also the embodiment of otherwise intangible cultural norms, values, memories and identities (Whitaker 1996). Adding to this notion, Casey (1996:44) states that, "the eventful potency of places includes their cultural specificity", and as such, time, history and culture are so deeply inscribed in places as to be inseparable from them. Silliman (2009:21), asserts that when analysing archaeological material culture from colonial sites, importance must also be placed on interrelationships and recognising the role of practice and memory in identity when questioning the nature of change and continuity. The resulting interpretation thus provides a more grounded and suitably scaled depiction of past cultural practices (Silliman 2009:21). These outcomes pertaining to place develop uniquely from material forms gathered at a particular site, and are in part a consequence of the meanings that people invest in place (Gieryn 2000:474).

The concept of place can be intrinsically linked to the lived space. Following an ethnography of the aboriginal desert peoples of Central Australia, specifically the peoples of Pintupi country, Myers (1991:67) questions the processes by which space becomes 'country', where a story gets attached to

an object as part of the Pintupi habit of mind and looks beyond objects to events, and sees in objects a sign of something else. Myers (1991:47) states that, "all transformations are a matter of the 'projection' or alternatively the 'reproduction' of determinate social actions and structures". The researcher describes 'country' as the system of significant places as specified by the Dreaming, which represents "a projection into symbolic space of various social processes".

For colonial settlements, the lived space is structured through daily domestic tasks and repetitive actions, such as the repeated scenarios of sleeping, working, dining, relaxing, etiquette and even the way refuse is discarded (Lightfoot *et al* 1998:201). These repetitive actions generate much of the material culture recovered by archaeologists, with these patterned accumulations imbued with meaning and value being some of the most interpretable types of deposits in the archaeological context (Lightfoot *et al,* 1998:201). Delle (1998:3), states that historical archaeologists are uniquely situated to analyse the cognitive and social elements of European colonial expansion through the manifestations of space which leave behind material residue. Therefore, by examining routine arrangements and the various objects that invoke a sense of place within the built environment, such as items used for food preparation, cooking, maintenance, relaxation, tool production, personal hygiene, etiquette as well as the spatial patterns of refuse disposal, it is possible to predict a person's underlying structural principles and belief systems (Lightfoot *et al*, 1998:201).

This notion was demonstrated through the archaeological investigations of empires, which explores early case studies of domestic routines and daily life under imperialism (Voss 2008:191). Voss (2008:191) focussed on household life and examined the excavations and analyses of the physical remains of household architecture, craft production, foodways and other material culture from colonial settlements. The researcher found that assemblages of meaningful objects were especially useful for the investigation of households in Spanish-colonial America, as they demonstrated ways in which indigenous women responded to and influenced the outcomes of imperial projects. These studies included Spanish colonial households in Mexico, Louisiana, Bolivia and Peru, and demonstrated that material culture and indigenous technologies were integrated into public arenas of colonial life within architecture, and even influenced dining and dress styles. Investigations into the households at Mission La Purisima in Alta California concluded that indigenous women's activities showed continuity, thus instilling a sense of place, as opposed to the indigenous men whose roles changed significantly as a result of their integration into craft production and colonial

agriculture (Deetz 1963). A similar outcome was documented by Mason (1963:73) who observed the continuity of indigenous ceramic traditions, indicating that Native American women were a powerful force for cultural conservatism from generation to generation. The women in these case studies succeeded in maintaining aspects of their cultural identity and a sense of place that had meaning which endured as an essential component of social life.

1.5 Contribution to the field of research

This thesis will utilise a multidisciplinary approach, with a primary focus on archaeological exploration of the NMP domestic space, therefore this examination of historic activities surrounding Aboriginal-European contact encompasses a completely different perspective with regard to the collection and use of evidence at NMP sites, as it does not rely on historical documentation alone. Although a strong body of historical and oral information relating to frontier conflict has been comprehensively compiled (e.g. Bottoms 2013; Evans 2007, Loos 1982; Ørsted-Jensen 2011; Reynolds 2006; Richards 2008; Skinner 1975), there is a paucity of corresponding archaeological signatures for these events. This research was funded through the Australian Research Council, The Archaeology of the Queensland Native Mounted Police and conducted with permission from the Rinyirru Aboriginal Corporation and the Queensland Department of Environment and Heritage Protection. The overall ARC project encompasses a general broad-scale investigation of the range of responses to the presence of, and activities carried out by, the Queensland NMP. However, this study is unique and differentiates itself from the general ARC project in several ways: Boralga was one of the longest operating NMP camps and is one of the richest NMP sites to be investigated to date, therefore this study will contribute to the overall project in a way that provides groundwork for future comparisons to other NMP camps. The written, oral and material evidence relating to a single specific location associated with the Queensland NMP will be examined in detail, giving a new perspective on the daily activities carried out by the inhabitants, with a particular focus on the negotiation and expression of activities and relationships within the domestic space. This thesis will also provide a significant scholarly contribution to contemporary international discourse surrounding colonialism and conflict within other settler societies.

Chapter 2 - Literature review

2.1 Introduction

It is likely that the negotiation of shared domestic space undertaken by the troopers living in NMP camp settings would have been multifaceted and complex when considering the multiple realities of settlement and frontier interaction, isolation, power inequality, economic disparities and maintaining cultural identities within a lifestyle dominated by European systems of discipline. Just as the Aboriginal troopers and their kin were forced to adjust to external forces within the context of NMP camps, so too were the officers and their families. The power differential and negotiation of domestic space within NMP camps was also experienced within other colonial settings and is therefore somewhat comparable to mission life in early colonial settlement. According to Flexner and Ball (2016:730), the colonial setting necessitated adjustments on the part of European missionaries, and as such, material culture was believed to empower them with a marker of difference and 'civilisation', providing a place of emotional comfort and safety for themselves and their families in exotic locations. Thus 'objects do not just provide a stage setting to human action; they are integral to it' (Gosden & Marshall 1999:169).

Similar to other NMP camps, Boralga had a domestic component not only associated with officers and troopers, but women and children as well (Qld Police Museum, Neg. PM3691). The banal and familiar domestic objects recovered from Boralga, such as toothbrushes, medicine bottles and tableware, not only provided camp occupants with daily needs and comfort in this very remote area, but also enabled the NMP to successfully fulfil their duties of sanctioned violence beyond the borders of the camp. Hence, along with these domestic items were also objects more specific to the NMP objective, such as uniform buttons and a large quantity of ammunition. Similar to frontier research in America, the examination of objects from military camps rather than massacre sites looks at frontier activities and cross-cultural engagement through a completely different lens. Over time numerous people from diverse backgrounds occupied the NMP camp at Boralga. Table 2.2 lists the known NMP personnel stationed there from 1875-c1894. Figure 2.1 Shows a photograph of Sub-Inspector Charles Marrett who occupied the camp between 1879 and 1884, and his wife Eugenie who was at Boralga between 1881 and 1884. The man riding the horse is unknown.

Table 1.1 Known NMP personnel stationed at Boralga from 1875-c1894

Name or number of people	Rank or position	Boralga tenure	Age when posted
Stanhope O'Connor	Sub-Inspector 2nd class	1875	25
24 men	Troopers	1875	
Hervey Fitzgerald	Inspector	1876	30
Edwin Townsend	Sub-Lieutenant	?	32
8 men	Troopers	1880	
Joseph Judge	Constable	1880-1881	
Charles Marrett	Sub-Inspector	1879-1884	26
1 woman	Officer's wife Eugenie	1881-1884	
5 men	Troopers	1883	
Michael Linehan	Camp keeper	1890-1892	53
Joseph Waters	Camp keeper	1893-1893	24
Smith	Constable	1894	
6 men	Troopers	1894	
6 women	Trooper's Wives	1894	

Figure 4.1 Sub-Inspector Charles Marrett and his wife riding side-saddle outside of the officers' quarters at Boralga (Cairnes Historical Society, Neg. P12/P12874)

Chapter 2 outlines the unsuccessful search for massacre sites in Australia and compares Australian massacre research to studies carried out in the United States of America (USA). Comparisons are then made between Australian and American frontier encampments which identifies similarities and differences in the strategic placement of frontier defenses, dispossession of land, and resultant reduced resources. This chapter acknowledges both historical and archaeological research fundamental to the further understanding of relations between Aboriginal peoples and European settlers on the Australian frontier. The spatial layout of NMP camps is also investigated outlining important replicable elements as well as the frequency of NMP camps throughout Queensland. A comparison between frontier structures, specifically the enduring architecture of American forts and the ephemeral nature of NMP camps in Australia, inform the current research of the similarities and contrasts of various elements that are implemented in divergent ways. Place and the domestic space are also explored, with this section focusing on the concept that objects imbued with meaning and value reinforce a sense of place in exotic locations, such as the European-ordered and regulated spatial setting of Boralga. Lastly, women on the frontier are acknowledged, and although these women may not have volunteered to live in these locations, case studies demonstrate that women possibly created new kinds of 'places' in what was predominantly a male-oriented environment.

2.2 The unsuccessful search for massacre sites

In the USA, archaeological investigation has endeavoured to enhance the historical record regarding frontier violence between colonial and Indigenous populations (Hall & Silliman 2005; Scott 2003; Scott *et al*. 1998; Smiley 1999; Wetherington & Levine 2014). Although primary historical resources, such as newspaper accounts, private hand-written diaries, memoirs and archival records, as well as oral testimonies relating to massacres in Australia are plentiful, in contrast to the US, the body of evidence lacks a corresponding archaeological signature (Barker 2007:9). This is most likely due to the nature of frontier violence and the difficulties associated with precisely locating archaeological evidence at massacre sites in Australia. When considering the rare archaeologically documented massacre sites to date, including the Woolgar (Wallis *et al.* 2005) and Panton River sites (Smith *et al.* 2005), Irvinebank (Genever 1996) is the only site that suggests a precise massacre location indicated by archaeological material.

Examination of the material culture at the Boralga Native Police camp can be compared to the research carried out on sites in the USA, where frontier conflict has become an important area of

archaeological investigation (Wetherington & Levine 2014). Research carried out at battle sites, such as Cienguilla (1854), Adobe Walls (1874), and the massacres of Sand Creek (1864) revolves around locating archaeological material from the general vicinity of historically known and orally recorded incidents (Scott 2003). For example, numerous historical sources have documented that large numbers of Native Americans were left where they were slaughtered at the Sand Creek massacre in Colorado which was supposed to have taken place at their village. However, subsequent archaeological exploration at the Native American village site resulted in the discovery of a substantial amount of European cultural material, but no Native American skeletal remains (Scott 2003). It was the abundant archaeological evidence in the form of domestic cultural material and militaria which aided in the eventual location of this long sought-after frontier site, and the exposure of the military activities that had taken place there. Similarly, the research undertaken at Boralga is not focused on locating human remains at massacre sites, but rather investigating the archaeological material evidence relating to daily life at the police camp itself, in order to best investigate the paramilitary presence, and to give a new and different perspective to frontier events and activities that occurred there.

2.3 Comparing Australian and American frontier encampments

A significant body of archaeological research was carried out recently in the US pertaining to European-American colonisation and frontier military fortification, which can be usefully compared to European settlement and NMP camps within Australia. Research by Arnott and Maki (2019:153) has shown that Fort Wadsworth, constructed in South Dakota during the 1864 Dakota Campaign, was knowingly built on top of Native American burial grounds. Fortified sites often had a crucial tactical and symbolic purpose for colonisers in their pursuit of hegemony over local lands, resources and people (Lightfoot 2019:171). During this time, military dispossession of important indigenous landscapes, and restricting access to culturally significant places was an attempt to displace Native American people. This created enormous conflict among settlers, the US military and the Oceti Sacowin people, as well as seven other allied tribes within the surrounding area (Arnott & Maki 2019:154). The research conducted in Dakota showed that, similar to NMP camps in Australia, frontier defenses expanded and transformed sacred indigenous landscapes into constructs of settler security. The placement of NMP camps in Australia was also strategic, and an important consideration for their placement was the presence of permanent water. These locations were often

spiritual places that held special significance to Aboriginal people, whose relationship with water as well as land was crucial to cultural vitality, resilience and survival (Altmen & Jackson 2008:207). These permanent water sources were in the form of lagoons (see Figure 2.2 Boralga lagoon) or rivers, such those encircling the Carl Creek NMP camp, which had formations of tributaries surrounding the area creating a natural border (see Figure 2.3).

Figure 2.2 Boralga lagoon which was crucial for the existence of the Boralga NMP camp (Photograph Bateman 2016)

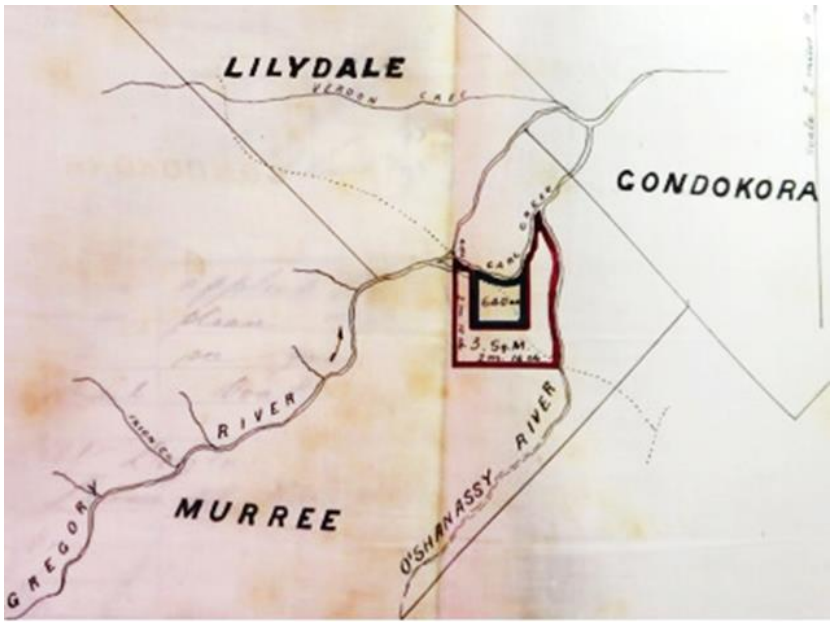


Figure 2. 1 Map of Carl Creek NMP camp and paddock within the boundaries of Gregory River, O'shanassy River and Carl Creek (from QSA290307)

Further similarities become apparent when comparing the dispossession of Aboriginal land in Australia to the attainment of Indian land in Dakota and is particularly poignant in view of the military processes undertaken. The passage of the Indian Removal Act of 1830 in the US, meant that issues pertaining to the department of Indian affairs were transferred to the Department of War, enabling the forced removal of Dakota tribes and other American Native people from their homelands, which became the primary US Indian policy under Andrew Jackson (Waziyatawin 2008). Consistent with NMP objectives in Australia, imperialist influences eventually used any strategy possible to create 'empty lands' or a perceived *terra nullis* as a means for settlers to 'legally' claim the 'newly opened land' to begin pastoralist ventures and various other industries (Arnott & Maki 2019:154).

Between 1837 and 1851 agents of the US government exerted influence over Dakota tribes and took over 24 million acres of their homelands between the Mississippi and Missouri rivers in exchange for reservations, annuity payments, provisions and 'civilisation' programs (Anderson 1997:204). The difference within the Australian context, is that no official agreement or treaty was made for Aboriginal territory to be exchanged, but instead land was taken by force by authorities as needed. In the US, over 100 000 settlers moved into 'newly opened land' seeking free farmland, following assurances that all Indians had been removed, and that the new territories were safe (Anderson 1997:204). Paralleling Australian colonisation scenarios, all people involved, including both indigenous populations and new settlers, were entangled in a deeply flawed imperialist project (Wolf 2006, cited in Arnott & Maki 2019:154). Similar to the new settlers in America, the Australian pastoralists soon learnt that even though they held legal title to their runs, their permanent settlement was perceived as intruding on Aboriginal land. The Dakota people were forced to hunt and gather food beyond the reservation boundaries in order to supplement insufficient, spoiled food and delayed payments, which brought them into conflict with other tribes and white settlers (Anderson 1997). A similar issue arose in Australia, as Aboriginal territory was taken for pastoral leases and trade routes, less hunting grounds were available to them, with one of the more common complaints conveyed by settlers in Queensland being the spearing of cattle. In addition to this, spearing cattle was also a way of attacking the very economy driving pastoralists into Aboriginal territory, and thus was an effective means to rid the district of white settlers (Bottoms 2013:32).

Numerous accounts have been documented of station owners and the NMP retaliating to cattle spearing by carrying out 'dispersals'. One complainant was John Hardie from Fassifern Station, who requested that Lieutenant Wheeler patrol the area after his cattle was speared in 1861, whereby a subsequent violent attack on Aboriginal people took place (Bottoms 2013:14). Retaliatory vigilante action by landowners and stockman around the Goondiwindi area resulted in the deaths of at least 47 Aboriginal people, which began as reprisals for killing cattle (Bottoms 2013:32). In 1847, the leaseholder of Carbucky Station, D. Lanarch lost over half of the 1600 head of cattle he had brought to his run, and as a result sold the Station to W. B. Tooth for a vastly reduced price. Walkers detachment came upon some Gambuwal people killing cattle near the new owner's camp, resulting in a 'dispersal' that insured they 'did not carry on their former depredations with impunity' (Bottoms 2013:34).

Comparisons between the above case study conducted at Fort Wadsworth and Australian NMP camps with regard to strategic placement of frontier defenses, dispossession of land, and resultant reduced resources, demonstrates many similarities between Australian NMP camps and American forts. The comparisons exemplify how the colonial governments implemented similar strategies for interacting with first nations people, such as maintaining access to trade networks, attaining permanent resources and expanding their newly acquired territories. The comparisons show that the colonial agents of Fort Wadsworth had similar objectives to the Queensland colonial government, in that the primary intention was to protect immigrant settlers from attacks carried out by indigenous peoples who had been previously dispossessed and to protect the infrastructure of newly formed industries, trade links and communication lines.

2.4 Australian archaeological and historical frontier research

As Australian investigation into early colonial settlement has been rather extensive, the following section briefly outlines and acknowledges both historical and archaeological research fundamental to the further understanding of relations between Aboriginal peoples and European settlers on the Australian frontier. Aspects of their research are expanded upon in more detail throughout this thesis. Previously, investigation of the Australian frontier has mainly focused on early settlements, such as the formative work carried out by Clive Turnbull (1974), Lyndall Ryan (1981) and the James Cook University group of historians on the Tasmanian frontier, principally Henry Reynolds (2006). Also significantly, Noel Loos (1982) and Bruce Breslin (1992) conducted some of the first comprehensive

research regarding Aboriginal resistance to European settlement in northern Australia, with Lesley Skinner (1975) producing the first research specific to the Native Mounted Police, in what was later to become Queensland. Later, work by Neville Green (1995) on the Forrest River Massacres and Mike Rowland's (2004) study of the atrocities perpetrated on the Woppaburra people on the Keppel Islands, highlighted the vast reduction in population as a direct result of frontier settler violence. Martin Gibbs' (2005) archaeological research on frontier settlement included a faunal analysis of a whaling station at Cheyne Beach near Albany, giving insights into life on a remote maritime industrial frontier.

Lyndall Ryan's (2009 & 2013) work investigates the location and mapping of massacre sites, and covers the controversies surrounding massacres in Tasmania and NSW during settler colonialism; she has also reviewed frontier debates from their origins in 1835 through to 2008, and recently collaborated with Jane Lydon to publish 'Remembering the Myall Creek Massacre' in 2018. Likewise, Raymond Kerkhove (2015) specialises in mapping Aboriginal-settler conflict sites, and together with Frank Uhr (2019), specifically explored how frontier violence and resistance wars were experienced and lived by both European and Aboriginal people within the Toowoomba region, with a main focus on the battle at One Tree Hill. Libby Connors' (2015) extensive frontier research culminated in the book 'Warrior', which investigates white settlement in southern Queensland throughout the 1840s from the point of view of Aboriginal leader Dundalli, who died protecting his country. Additionally, the seminal work of historians Bill Thorpe (1996), Raymond Evans (2007), Jonathon Richards (2008), Robert Ørsted-Jensen (2011) and Timothy Bottoms (2013) all highlight the vast extent of frontier violence.

Some non-invasive archaeological exploration has been conducted at Aboriginal missions, such as Corranderk outside of Melbourne by Jane Lydon 2000 and Ebenezer in Victoria by Steven Brown *et al.* (2002) and Jane Lydon (2009). A considerable amount of archaeological focus has been allocated to the Australian pastoral industry, with several field seasons carried out at Old Lamboo Station by Rodney Harrison in 1997 and 1999. Harrison then explored themes that have emerged from a study of the pastoral industry within Australia such as his work on shared landscapes (2004), and the adoption of metal as a raw material for post-contact indigenous technologies rather than widely described flaked glass, and believes that metal had far wider and more prolonged impacts on the development of post-contact technologies (2002:67). Earlier work undertaken by Iain Stuart

(1997) investigated squatting landscapes in NSW, which led to the argument that squatters used the landscape to 'create, express and defend their position and status'. Simultaneously, the Kinchega Archaeological Research Project conducted by Paul Rainbird *et al*. (1997) and Penelope Allison (1997, 1998, 1999) started out by looking at cross-cultural interactions, but has since focused largely on household archaeology at the old homestead site. Alistair Paterson (1999) investigated the archaeology of cultural contact between Aboriginal peoples and pastoral settlers within the Lake Eyre Basin, and Lesley Head and Richard Fullagar's (1997) work represented an account of the Aboriginal archaeology of pastoral contact within the Kimberly region.

The research on early mining landscapes by Geraldine Mate in 2010 explored the gold mining settlement at Mount Shamrock, and investigates significant elements pertaining to construction of the physical and social landscapes undertaken by the residents. In 2008, Nicolas Grguric detailed the various weapon types used on the frontiers of South Australia and the Northern Territory in his examination of the association between the design of defensive structures and the types of weapons used. Research related specifically to the archaeology of massacre and frontier conflict has been published by Bryce Barker (2007), Mirani Litster and Lynley Wallis (2011) and Pamela Smith *et al.* (2017). The above-mentioned historical and archaeological research has profoundly changed previous understandings regarding frontier relations and interaction between Aboriginal Australian peoples and European settlers through comprehensive research and open discourse regarding colonial settlement and events surrounding the 'The History Wars'.

2.5 The spatial layout of NMP camps

The frequency of camp locations throughout Queensland varied, with the quantity being determined by a complex interplay of factors, including the demographic of both European and Aboriginal populations within an area and the degree of Aboriginal resistance to European incursion (Barker *et al*, 2019b:5; Richards 2008:7). For example, isolated and expansive areas that encompassed sparse pastoral runs, such as the plains of western Queensland, required fewer police camps, whereas areas with denser European (and Chinese) populations, such as the Palmer River goldfields, required more (see Figure 1.2). Figure 2.4 shows the camps on the Palmer which spanned a period of three decades due to the influx of transient settlers that continued to inhabit the area (Barker *et al*, 2019b:5). A higher number of NMP camps were also established near areas rich in food resources that could sustain higher Aboriginal population densities (Barker *et al*, 2019b:5).

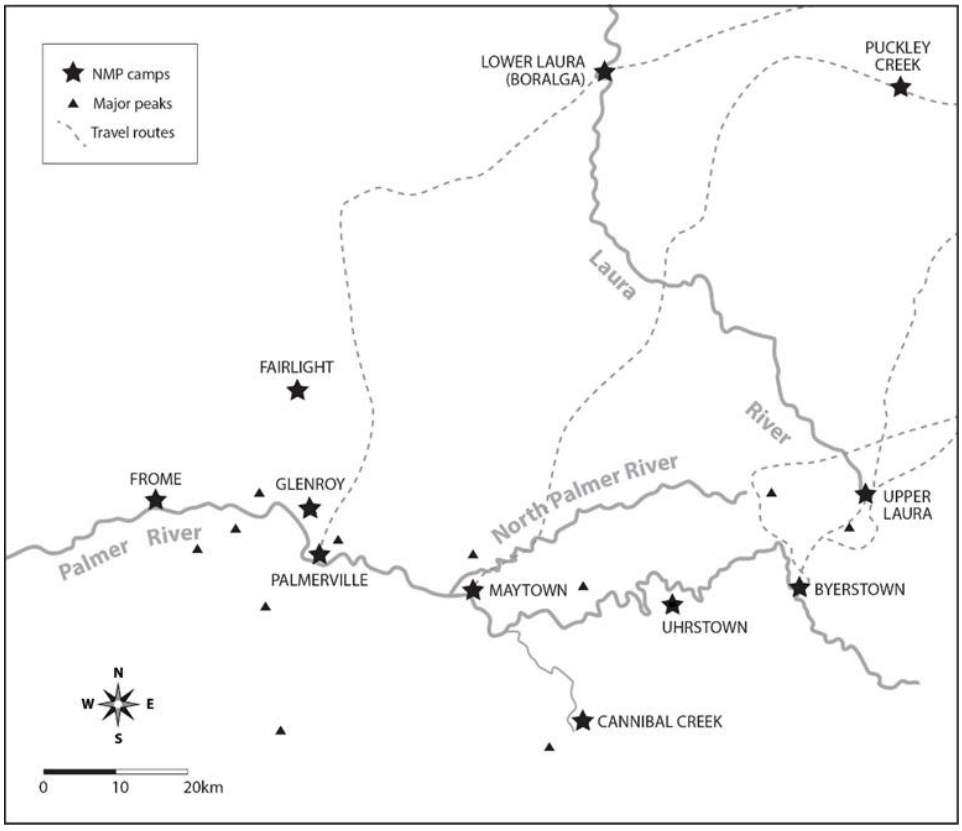


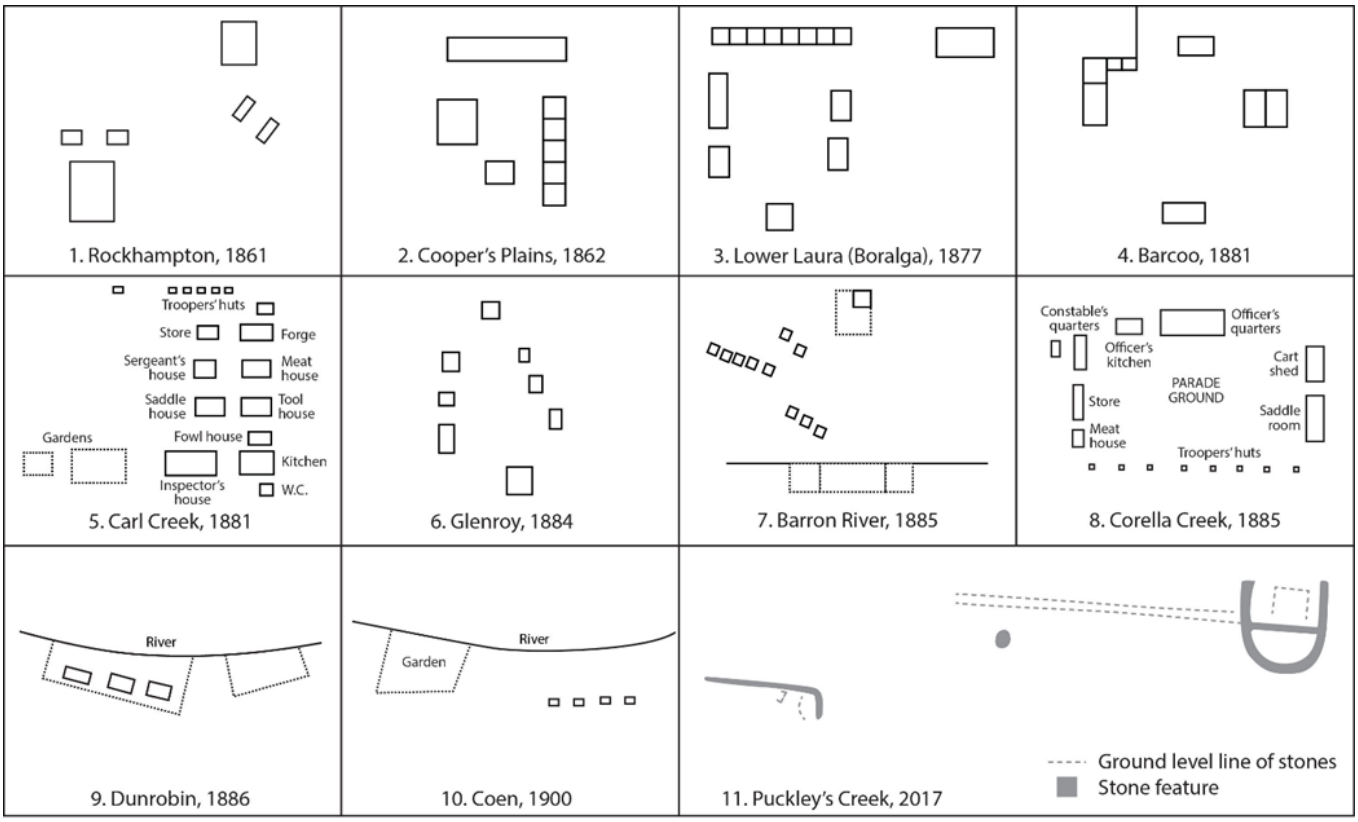
Figure 2. 2 Palmer River and surrounding NMP camps (Map by Barker *et al*, 2019b)

Archival records and archaeological research have demonstrated that NMP camps were usually comprised of a 'main' base camp in an established district, with multiple smaller 'patrol' camps that were occupied over varying periods of time, depending on the objective and terrain (Barker *et al*, 2019b:5). The 'main' camp was made up of important replicable elements which usually encompassed an officer's quarters, several troopers' huts, blacksmith's forge, storeroom, and a horse paddock (Barker *et al*, 2019b:8). Senior officers were often located closest to the entrance point, with the constable's quarters in close proximity, however the troopers' huts were usually outermost at the opposite end of a parade ground, creating distinct hierarchical and spatial separations between the officers and troopers (Barker *et al*, 2019b:9).

No jail or lockup has ever been located or documented at an NMP camp, as the main objective was to 'disperse' Aboriginal people without due legal process rather than arrest them. A lack of uniformity in camp layouts was not uncommon, possibly due to the officer's individual preference, or perhaps reflecting different phases of rebuilding (Barker *et al*, 2019b:8). Nevertheless, some NMP camps had a degree of consistency in layout that replicated a paramilitary theme, such as

arrangements in rows or quadrangles (see Figure 2.5 & 2.6), a design which most likely protected supplies and arms, and created space for utilitarian areas (Barker *et al*, 2019b:8). Lamond (1953:27) who was a station manager and NMP camp visitor, described a typical camp layout as follows:

> The sub-inspector's quarters, perhaps bark walls and earth floor…Then there was the camp sergeant's quarters, even less pretentious than the sub-inspectors – in fact rather crude…Then came the troopers' huts, wurlies, mig-mias, gunyahs, call them what you will; they line the parade ground…As stores had to be kept on hand for at least six months, perhaps longer, a store-room was necessary to the camp; also harness shed, rooms for this and that and, of course, a horse yard.



SOURCES: 1. QSA COL/A24/62/30; **2.** Private collection; **3.** QSA A/44857; **4.** QSA290277; **5.** Slack 1990:82; **6.** QSA290306; **7.** QSA290311; **8.** QSA290311; **9.** QSA243588; **10.** Private collection; **11.** Archaeological site recording.

Figure 2. 3 Comparative NMP camp layouts across Queensland at different time periods (Barker *et al*, 2019b:7)

Figure 2. 4 Example of NMP camp layout at Herbert River barracks in 1874. Sub-inspector's quarters can be seen at the centre rear and the troopers' huts on the left are thatched (State Library of Qld 156880)

2.6 Comparisons of permanent frontier structures to ephemeral NMP camps

The archaeological signature of NMP camps exemplifies the transient nature of frontier policing, which is in contrast to other relatively short-lived European occupation sites on the frontier, that were more permanent in structure such as abandoned pastoral stations (Barker *et al,* 2019b:11). Similar to stock camps and prospectors' dwellings, most NMP camps were intended to be temporary, regardless of the eventual duration of occupation. This was reflected in the overall lack of enduring architecture, designed instead for expedience and frugality (Barker *et al,* 2019b:11). Frugality also extended to the domestic objects used, thus the nature of the artefact assemblages at the NMP camps explored thus far have incorporated ordinary nineteenth century ceramic, glass and metal items. Along with the domestic objects were items specific to the NMP objective, such as ammunition, buttons and other objects relating to their policing role. Allen (2008) conducted a study on the northern Australian settlement at Port Essington, located on the Northern Territory's Cobourg Peninsula, which was occupied for nearly a decade between 1838-1849 by the military. In contrast to Boralga, buildings at this site were intended for longevity and incorporated large-scale permanent architecture (Allan 2006). Comparable findings were also documented by Paterson (2006:104), whose historical archaeological research explored abandoned pastoral stations in western Australia, revealing a high degree of commitment to settlement that was visible in the permanency of structures

and the presence of various luxury objects. For example, Old Sherlock Station was decorated with cast iron decorative lace, possessed a fireplace faced with white marble and another with black slate, and several rooms were decorated with painted tiles. In addition, evidence of a wide range of luxury ceramics was also found on the ground surface (Paterson 2006:104).

Similar to Boralga's spatial arrangements, the organisation of settlement at Old Sherlock Station revealed a deliberate demarcation between the headstation and the buildings allocated to pastoral workers, who were possibly a mix of European and Aboriginal people (Paterson 2006:104). Paterson (2006:105) argues that the permanency of structures with regard to these early stations was apparent in the stone masonry for buildings and yards, and the organised arrangements of the structures. Despite being in a remote region, expensive materials were transported to this location in order for the owners to project their taste and standing in the area (Paterson 2006:104). These findings test the assumption that many pastoral runs were make-shift and abandoned due to failure and suggest a strong commitment by the owners in terms of money, labour and effort in order to establish and continue occupation (Paterson 2006:104).

In light of Paterson's findings, ornate, permanent architecture at pastoral stations may also be viewed as a political statement and speaks to the identity of those inhabiting them. Police stations, courthouses and jails in other contexts such as townships, not only have a practical purpose, but are also intended for similar public statements that pertain to empire, order and civilisation. These constructs or 'places' have the capacity to dominate people through geographic location, built form and symbolic meaning, therefore building-types can differentially become terrains of power (Gieryn 2000:475). Nevertheless, as in the case of the abandoned pastoral stations, the hold of place on power is not always permanent or absolute (Markus 1993, cited in Gieryn 2000:475). Thus, the execution of constitutional power is intimately connected with place, as the geography and built environments organise political behaviour and collective action, with the control of land and material constructs on it being a way of ensuring effective state sovereignty (Gieryn 2000:476). Accordingly, place enables power to travel and spread its reach over people and territory (Gieryn 2000:476). However, in contrast to imposing government buildings and permanent architecture, it could be argued that continued and enforced frugality at NMP camps contributed to a 'light' presence on the landscape which enabled them to be part of a 'secret war'.

Other frontier constructions that contrasted to the ephemeral nature of NMP camps were American forts, which were permanent, fortified structures with an imposing presence. Due to the paucity of archaeological literature pertaining to Australian NMP camps, archaeological studies conducted on American forts are useful and relevant for comparisons, as their ultimate function was similar. Both structures housed personnel, whose duty was to confront resistance by indigenous groups following settler incursions. However, one very obvious difference is the highly defensive nature of American forts, which was partly due to the fact that much of the Native American population were armed with rifles acquired from fur traders (Silverman 2016), unlike Australian Aboriginal peoples who fought settler encroachment using traditional weapons. Originally the construction of American forts conformed to the authoritative handbook, *A treatise on field fortification*, intended for use by the regular army, under the supervision of professional army engineers (Mahan 1862, cited in Arnott & Maki 2019:157). However, many of the frontier troops in America were inexperienced, and advances in weapons technology created greater dangers for them, which meant that more modern construction techniques were needed. According to Mahan (1862:xviii), the untrained volunteer has the greatest need for fortification:

> "Place the militia soldier behind a breastwork, and an equilibrium between him and his more disciplined enemy is immediately established: with a feeling of security in his position, his confidence in his own exertions is restored"

Different styles of construction and materials were used depending on who built the fort and its location, however almost all-American forts were more permanent in nature than Australian NMP camps. Due to the use of firearms by indigenous populations, even forts built by vigilante groups were more substantial than Australian NMP camps. One such fort was built by Hans Juelson for the Norwegian farmers in Tordenskjold Township (Arnott & Maki 2019:163). Juelson was appointed their captain and their neighbor Berge Lee his lieutenant, and together they oversaw the construction of a 'sod fortification' located on the top of a hill. The construction was a rectilinear redoubt with an interior curtain wall (3-4 ft thick and 4.5 ft high). The walls were made from solid blocks of sod from the nearby prairie and provided protection from the gun wielding Sioux nation (Arnott & Maki 2019:163).

The various considerations for American fort locations also differed to ideal NMP camp locations in Australia, as permanent water and a suitable paddock for police horses was a greater priority than commanding views over the area. The Boralga NMP camp was located on a moderate rise, and although the parade ground would have been relatively clear of trees (and still is), the camp is surrounded by sparse stands of eucalypt and melaleuca woodlands with areas of stunted vegetation. Even though the trees are rather spaced apart, they obscure much of the view beyond 200 m, particularly south west towards the Laura River where the vegetation is lower and denser. 'The command of heights' was of utmost importance for the American militia, as places of high ground provided a wider view of their rivals' movements, offered greater tactical strength by hampering uphill attacks and enabled the building of powerful defensive strongholds (Clausewitz 1976:352).

In 1864, Major John Clowney located a site for a fort that would protect the major transportation routes on the James River which ran through the centre of Dakota territory (Johnson 1996:12). This site caused authorities great concern, as it was in contrast to other fort sites which usually had a commanding view of the surrounding countryside. Instead Fort Wadsworth was located on a low knoll, with tree-fringed lakes and marshes on every side which would provide ideal cover for an ambush, perfected by the Dakota during previous attacks on military encampments (Arnott & Maki 2019:157). Nonetheless, Fort Wadsworth turned out to be a substantial encampment comprised of multiple buildings and a parade ground in quadrangle style, surrounded by thick walls and a turret (Figure 2.7). A Military Agency Scout Camp was located at the fort periphery (outside the protective walls) and was used to house Dakota scouts, whose primary job was to police the surrounding area (Johnson 1996, cited in Arnott & Maki 2019:157). The architecture of American forts contrasted significantly to the ephemeral and frugal nature of Australian NMP camps, where defensive walls encircling camps were not deemed necessary as attacks on NMP camps have never been reported, and even though the Aboriginal troopers' huts were segregated from the officers' quarters, no physical boundary existed between them, which was in contrast to the Dakota scouts who were housed outside of the fort walls.

The above comparisons between frontier structures, specifically the enduring architecture of American forts compared to the ephemeral nature of NMP camps in Australia, inform the current research on similarities and contrasts regarding permanence, spatial layout, demarcation, location, construction material, function and socio-economic status. These comparisons highlight how similar

objectives of colonialism in America and Australia were implemented in divergent ways by colonial powers to achieve a similar outcome. Many of the artefacts recovered from these American forts provide an exceptional opportunity for comparing the daily domestic practices of the elite and commoners within particular zones, similar to the demarcated areas at Boralga. The density and nature of the archaeological material found within these zones at American forts demonstrate the occupation and economic status of the occupants with some artefacts similar to those recovered from Boralga such as items used for horse maintenance, tools, alcohol bottles, musical instruments and tobacco pipes (Lightfoot 2019:173)

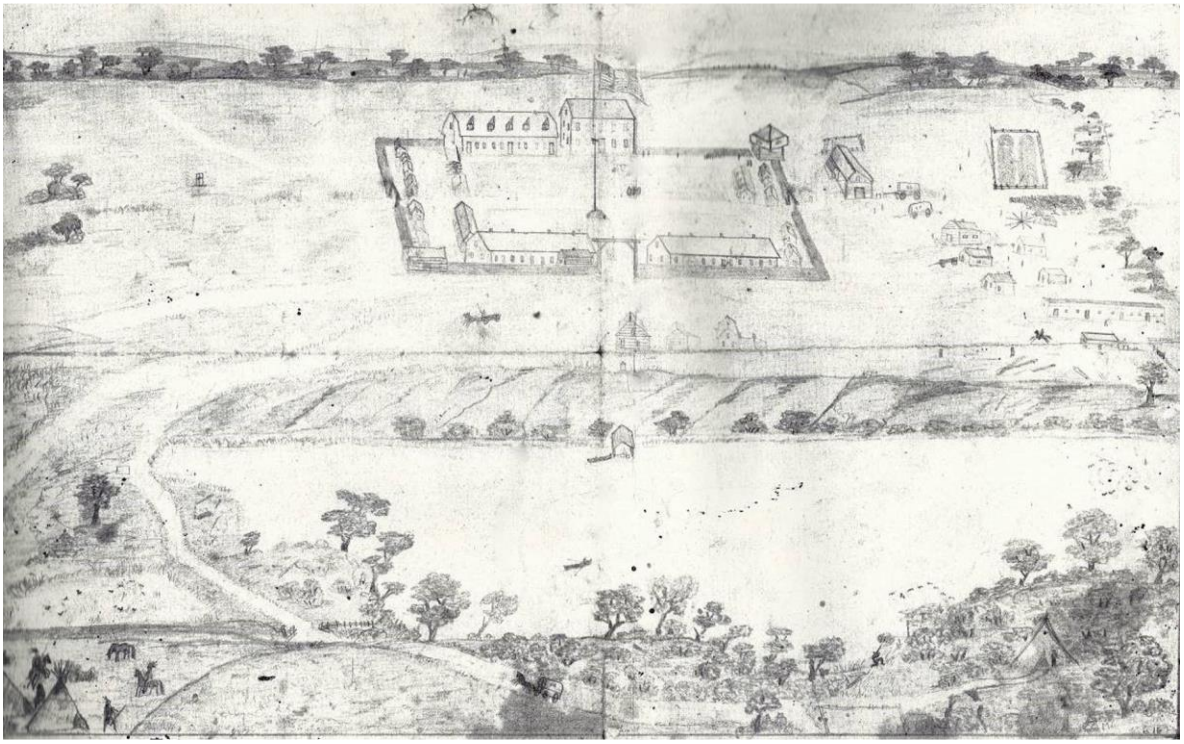


Figure 2. 5 Drawing of Fort Wadsworth by sodier Maximillian Miller, c1868-1870 showing the scout camp in the forground and the flagpole in a sacred burial mound (Johnson1996:75)

2.7 'Place' and the domestic space

There was a general assumption within colonial society that material items were a significant marker that differentiated 'civilisation' from 'savagery', and that objects were candid reflections of the inner state of the person's soul and of the family's moral state (Raibmon 2003:71). Furthermore, objects reinforced a sense of place, as places are created when people ascribe qualities to the material and social forms gathered there: ours or theirs, rich or poor, accessible or not (Gieryn 2000:472). Thus 'place' includes objects imbued with value and meaning along with the built environment. For

example, material culture played two contrasting roles within missions: it highlighted the difference between 'civilised' missionaries and the 'savage' peoples with whom they interacted (Flexner & Ball 2016:728), and it was also a means of co-opting Aboriginal groups into European agendas by introducing culturally produced objects imbued with a new and intriguing sense of place. Likewise, comparisons could be drawn regarding NMP recruitment tactics, which involved offering young Aboriginal men access to European goods and steady rations, if not wages. An excerpt from '*The Queenslander* on 2 March 1872 (cited in Richards 2008:125) states that the recruits were 'evidently proud of their dark blue jackets, military caps and striped trousers'.

These objects attributed with meaning and images of new places were arbitrary but real in their consequences (Gieryn 2000:473), and the high rate of desertions by new recruits demonstrated a change of mind when they realised the devastating consequences associated with the eye-catching uniforms (Richards 2008:122). One of the many issues directly related to recruitment and European civilising ideals on Aboriginal people can be demonstrated by NMP volunteer Bungaree, who had a long-term familiarity with white systems and principals acquired though a European education and years of servitude from a very young age. However, Bungaree's career options were still very restricted, even though he had a similar upbringing to the white son in the family (Collins 2000). Thus, joining the NMP was the more attractive opportunity among very few prospects. Therefore, in essence, the broader structural violence that fostered the system of 'colonised labour' transformed Aboriginal society into a workforce that was essentially 'unfree' regardless of how it appeared on the surface or was otherwise described (Thorpe 1996).

In part, the capacity to assert power over people comes through the geographic location, built form and symbolic meaning of place, thus places such as mission stations and NMP camps facilitated state domination and control, and enabled power to travel and extend its reach over people and territory (Gieryn 2000:475). The distinct difference between missions and the NMP was that the intent of the NMP was paramilitary in its early phase (Richards 2008:8), therefore the system of organisation within camps was not intended to educate or convert people, nor was it oriented explicitly towards families, but was primarily directed at single men amongst whom discipline had to be enforced (Richards 2008:140). This included wearing and upkeeping uniforms and living in a very European-ordered and regulated spatial setting that required the troopers to carry out a certain range of European activities, such as parade, drill, patrols and domestic duties. Even though notions

of domesticity were fundamental to colonial projects and often extreme pressure was placed on Aboriginal peoples to conform to Victorian expectations regarding bourgeois customs (Raibmon 2003:69), the NMP establishment was not necessarily interested in the typical 'civilisational experiment' often carried out in missions. A photograph taken at the Boralga NMP camp demonstrates that, although an adherence to European military standards was expected, occasionally there was some negotiation of identity taking place within this location. Figure 2.8 shows, the troopers wearing lap-laps whilst wearing their kepi uniform hats.

Figure 2. 6 Native Mounted Police at Lower Laura Camp, 1890's
(Cairns Historical Society Neg. P08/P08275)

It should be acknowledged that challenges can be encountered when using data (artefactual, photographic or documentary) for reconstructing cultural associations or boundaries within a shared space used by different cultural groups (McCarthy 2008). Frontier zones typically encompass a variety of overlapping cultural characteristics, particularly where Aboriginal-European interactions were mostly filtered through European behavioural codes (although sometimes this was vice versa), thus archaeological distributions do not always reflect expected facets of the culture under investigation (McCarthy 2008). Silliman (2009:216) asserts that archaeologists also need to rethink artefact categorisation within the context of social memory, or the way in which archaeologists

typically apply classification schemes to what they perceive as conventional traditional objects, as the baseline can move forward. Silliman (2009:216) uses Rodney Harrison's (2002:72) study as a fitting example, whereby archaeological research combined with Aboriginal oral histories revealed that Aboriginal people considered metal match tins (wax vestas boxes) as Aboriginal artefacts, even though the objects do not fit into an archaeological view of long-term Aboriginal history.

Social and spatial contexts within a location in which different categories of artefacts are moved about are key to disentangling material culture to give it some interpretive meaning (Elton 1996; Parker 2002; Williamson 2002). For example, Williamson (2002) investigated a remote settler site in Burghley, expecting to find assemblages of European artefacts that reflected remote frontier life and links with world economic systems and trading networks. However, consistent with Boralga, the site also revealed Aboriginal flaked stone artefacts as well as post-contact flaked glass, bringing to light a new set of questions pertaining to site use and the nature of Aboriginal-European interaction within this frontier zone in north-west Tasmania. The Burghley and Boralga sites are somewhat similar, in that they were both multi-ethnic and multi-functional historical sites, containing artefacts that were difficult to identify in terms of who 'used, modified, discarded and reused' the items. Nonetheless, the Aboriginal occupants from both sites appear to have found meaning in place through the continuation of culturally manufactured objects within European ordered settings. Comparable to the multiple excavations carried out at Boralga, the various trenches at Burghley generated an overall view of spatial patterns of discard, and Williamson (2002) advocates that by piecing together the different threads of evidence from the various datasets which included Aboriginal assemblages, glass, ceramic, nails and ammunition, distinct patterns emerged that would not be evident if the archaeological material was examined in isolation.

The study of daily practices that generate these objects which reinforce a sense of place within the domestic space can provide insights into different peoples' worldviews, social identities and cultural meanings (Lightfoot *et al,* 1998:201). In essence, the ordering of daily life provides a microcosm of the broader organisational principles and cultural categories of individuals (Lightfoot *et al,* 1998:201). Ortner (1984:154) attests that "all cultural practices are predicated upon and embody within themselves the fundamental notions of temporal, spatial, and social ordering that underlie and organise the system as a whole". Thus, people constantly enact and reproduce their fundamental structural principles in the performance of ordering their daily lives (Lightfoot *et al,* 1998:201).

However, during the process of culture contact, values and cultural categories are often creatively modified and adjusted during encounters with others, and consequently, people will modify cultural practices in ways that both make sense of others and best suit their own interests (Sahlins 1981:33-37).

2.8 Women on the frontier

In a study of Aboriginal women and newcomer men working in the sealing industry off southern Australia during the 1800s, Russell (2007:18) described colonial domestic spheres as appearing to be mundane settings and believes that people have a preconceived notion of what domesticity should look like at any given time in history. However, the sealing settlement demonstrated that domesticity can manifest in countless diverse forms with inherent contradictions and conflicts regarding relationships, particularly when hybridity is taken into consideration (Russell 2007:18). Of particular interest to the current study, is the presence of women within NMP camps, who similar to the women within the sealing industry, may not have been there voluntarily, and possibly created new kinds of 'places' in what was predominantly a male-oriented environment (Edmonds 2010:54).

Although historic photographs show images of Aboriginal women and children living in what appears to be a serene domestic setting at the Boralga NMP camp, it is not known exactly how they came to be there. They may have been legitimate wives of the troopers and were brought with them to the camps and others may have been abducted during patrols. According to Richards (2008:155), troopers were known to capture Aboriginal women who survived NMP attacks for their own sexual exploitation, as did the white officers. He also describes a second group of Aboriginal women who formed stable, long term relationships with the troopers, who were expected to carry out domestic duties at the camp. Regardless of their origin, all Aboriginal women were referred to in the records by the derogatory term of 'gins' (Richards 2008:155). Images can be very helpful in the reconstruction of history, nonetheless Lydon (2017:198) states that "sentimental and lurid reconstructions arouse suspicions in us all". She observed that formal portraits taken in 1860 of overdressed Aboriginal Christians at the Poonindie mission were intended to demonstrate the subjects' 'essential humanity and equality' but in reality, the images emphasised notions of coercion and imposed simulation of European ideals. Whilst formal nineteenth century attire would not have been worn on a daily basis, the images of Aboriginal women at Boralga dressed in their 'best'

demonstrate that European discipline extended to them as well (Figure 2.9). The photograph was originally from Sub-Inspector Charles Marrett's collection.

Figure 2.9 NMP troopers and their wives outside their bark huts at Boralga, 1881
(Qld Police Museum, Neg. PM3691)

Documents from the Queensland State Archive have revealed correspondence between Walter E. Roth (1903), Northern Protector of Aborigines, and the Under Secretary from the Home Department regarding food rationing and the mistreatment of women, giving some insight into the relationships and attitudes towards women within NMP camps by authorities. He refers to an extract written to the Under Secretary by the Commissioner of police when discussing the distribution of food rations:

> Gins of native troopers have never been taken into account in the recruitment or engagement under police regulation any more than the wives of any white man recruited for general police. Aboriginals when recruited are generally single, and cannot at any time be said to be 'married'. They annex and discard gins at pleasure and no sort of police control over the women has ever been authorised

Walter E. Roth continues on the second page, stating that:

> As far as my experience goes the presence of these 'gins' in the police camps is a convenience for the constable (married or single) in charge: they practically work without wages as servants for him, and without his paying for their keep',
>
> Roth, WE, 1903, Letter to the Under Secretary Home Department 05/02/1903 (Queensland State Archives, ID87382)

2.9 Summary

Documentation regarding the lives of the Aboriginal troopers is very rare, possibly because this type of information was deliberately omitted, destroyed or simply believed to be unnecessary. Thus, information that specifically focusses on the domestic space at NMP camps is largely nonexistent. However valuable information relating to domestic archaeology has been attained at colonial settler sites in Australia, such as whaling stations, pastoral settlements and missions, as well as American forts which are pertinent to the current study. The archaeology of violent frontier interaction in Australia is relatively new, with the very limited number of massacre sites archaeologically documented representative of the difficulties described by Barker (2007) regarding the location of precise conflict locations and discovering unambiguous massacre-related evidence. The research conducted at US frontier sites has demonstrated the benefits of focusing on the domestic space within frontier encampments, rather than concentrating directly on massacre sites consisting of sparse, less durable material evidence.

Chapter 3 – The site

3.1 Introduction

'The Archaeology of the Queensland Native Mounted Police: Aboriginal-European interactions on the Queensland frontier' is an ARC Discovery Project. The archaeological investigations at Boralga were carried out subsequent to consultation with the traditional owners affiliated with the Rinyirru Aboriginal Corporation, who were also participants in the project. The excavations at Boralga were also conducted with the permission of the Queensland Department of Environment Protection. Leslie Harrigan and Des Bowen (former and current Chairman, respectively, of Rinyirru Aboriginal Corporation), Rinyirru National Park (CYPAL) Rangers and staff of Queensland Parks and Wildlife Service facilitated the fieldwork. Those involved in the project at Boralga are Principal Investigators (PI) Doctor Lynley Wallis, (PI) Doctor Noelene Cole, Chief Investigators (CI) Associate Professor Heather Burke, (CI) Professor Bryce Barker, and Doctor Kelsey Lowe conducted the geophysics. Others who also carried out excavations at the site were Doctor Cherrie De Leiuen, and volunteers/students, Alyssa Madden, Ryan Taddeuci, and the Laura Rangers.

The knowledge of this culturally and historically significant site provided many years ago by Aboriginal trackers Jerry and George Musgrave, provided the impetus for other researchers to explore Boralga further. Many of the posts from the various buildings were still present when the site was revisited by Cole *et al*. (2002), with multiple refuse areas and at least five main clusters of structural remnants identified. Due to changes in the camp layout over time, the original historical plans were of limited use in that they were neither detailed nor spatially accurate, and did not match the contemporary layout. By utilising a combination of archaeological and geophysical techniques in 2016, the built environment and use of space was better understood, with eight separate structures identified, allowing for more productive excavations within known activity areas (Lowe *et al.,* 2018:689). For the current study, identifying the social elements of 'place' was undertaken by examining the objects routinely used in daily practices within these activity areas, with the aim of evaluating aspects of day to day life within the domestic space and the cultural identity of those who occupied the site.

Chapter 3 gives an overview of the geographic details and soil type at Boralga and the surrounding area. The early site observations summarise the recent history of the site before the current excavations were carried out and explains the connection that Aboriginal trackers, Jerry Musgrave

and George Musgrave have to Boralga. A table listing the order of events clarifies the history of the site in a more simplified way. The preliminary site surveys section describes the processes leading up to and informing the excavations, such as the initial search line, geophysics and magnetometry, which in turn assisted the understanding of formation processes, site layout, and human interactions with the environment. The comprehensive site map shows the spatial layout of all 20 trenches, the location of the lagoon and approximate route of the original telegraph line. Trench summaries are outlined followed by an excavation context overview which explains in detail the various occupation phases and issues taken into consideration when carrying out the analysis and interpretation of the site.

3.2 Geographic details and soil type

Boralga is situated within the Laura basin, which contains dissected sandstone hillslopes and residual alluvial sands derived from the sandstones in the lowlands (Biggs & Philip 1995; Morgan *et al*. 1995, cited in Lowe *et al*. 2018:687). The research area is part of the Eastern Uplands Physiographic Region and includes uplands and coastal areas of the western part of the Cape York Peninsula, including the Great Escarpment. The Battle Camp formation makes up the uppermost part of this area, which is characterised by a conglomerate of shaly sandstone and leached shale of the Lower Cretaceous age (Lucas & de Keyser 1865, cited in Lowe *et al.* 2018:687). A major feature in the peninsula's hydrology, the Laura River Basin extends from the edge of the continental shelf into Princess Charlotte Bay to the east (Smart & Rasidi 1979, cited in Lowe *et al*. 2018:687). The soil at the Boralga site is typically classified as hydrosol and comprised mostly of alluvial sands with a high clay content (Lowe *et al*. 2018:687). The upper horizons are usually dark grey (10YR4/1), fine loamy sand with some organic matter, overlaying a mottled grey-greyish brown (10YR5/2) layer or occasionally a bleached fine, loamy sand horizon (Lowe *et al*. 2018:687). A mottled yellow-brown (10YR/3) sandy clay loam underlies this layer which becomes increasingly alkaline with depth, with soil pH ranging from 5.5-6.5 (Lowe *et al.* 2018:687). The sediment becomes very firm when it is dry, and at times was difficult to excavate below 30 cm.

3.3 Early site observations

No official excavations had been carried out at the site subsequent to this projects archaeological excavations in 2016. However, two previous reports which noted the presence of ant bed floors were informed by expert Aboriginal trackers, Jerry Musgrave and George Musgrave, both Kuku Thaypann speakers and Traditional Owners of the Rinyirru National Park (Cole *et al,* 2002). Jerry Musgrave, who had a connection to Boralga through his employment as a tracker with the Queensland police force and the cattle industry, guided Ernie Stephens from the Cairns Historical Society to the site in 1972, where they found old yard posts and ant bed floors (Stephens 1972:1). In a subsequent community archaeology project, Dr Noelene Cole, Tommy George and Dr George Musgrave (2000), who succeeded his elder brother Jerry as the police tracker a Laura, identified a raised flat area near the eroded southern approach to Boralga lagoon, as the remains of an antbed floor which most likely marked the location of the Troopers' huts (Cole *et al,* 2002:142).

The Boralga NMP camp was initially identified as a place of significance and high heritage value by community consultants during the 1999 Laura oral history project (Laura oral history project 1999, cited in Cole 2000:1). Due to the longevity of the camp, the area contains abundant material remains, with the majority of artefacts appearing to be associated with building remnants and features including structural posts and ant bed floors. However, individual items were also scattered randomly across the surface, possibly due to site disturbance. Several factors may have contributed to the widespread artefact overlay, including the fact that the camp is quite well known throughout the region to locals, amateur historians and bottle collectors (Cole 2000:3). Significant disturbance has occurred since Cole's first recording of the site in 1999, with looting of easily recognisable archaeological material taking place at two refuse areas (Trenches 3 and 5). In the past, Boralga has been subject to various site formation processes, such as the dismantling and removal of camp buildings by the police in 1894 following its official closure, its subsequent use as a stock camp, faunal disturbance by feral and domestic animals as a result of pastoral activities, natural depredation such as floods and bushfires, prolonged visitation and general artefact removal over time (Cole 2000:3).

3.4 Order of events

Table 3.1 Lower Laura (Boralga) Native Mounted Police Camp Chronology
Laura community archaeology project 1998-2001 (Courtesy of Noelene Cole)

Date	Chronology of Boralga
1873	Cooktown founded October 1873 (Port for Palmer goldfields)
1873	Howard George (first Gold Commissioner for the Palmer River) and Archibald Macmillan (Northern Engineer for Public Roads) and a party of prospectors and police left Cooktown to blaze a track to the Palmer diggings. This route became known as the dray track to Palmerville or Macmillan's track
1874	Harry Jones took up Boralga, and for several years the Jones family conducted a hotel, store and butcher's shop on the busy Palmer track which passed through the property
1875	Stanhope O'Connor appointed Sub-Inspector at Laura camp 1 January 1875-1880.
1875	Telegraph line erected from Cooktown to Palmerville, built from 1874-1876
1875	Alexander Mann speared by Aboriginal peoples near Boralga on the telegraph line and was buried at the Boralga cemetery
1876	Government sent a boat to carry travellers across the Laura River. 'The boatman was very much alone, and I found that the blacks had taken the opportunity of eating him (Corfield 1921:69)
c1876	Gold warden Walter Hill, stationed at Byerstown, says that his friend, and Officer Edwin Townsend (in charge of Native Police camp at Laura), buried his three dogs at the police camp and erected fences around their graves with headstones.
1877	Letter from Sub-Inspector Stanhope O'Connor to the Commissioner of Police, Brisbane, describing the country around Lower Laura; includes maps and plans
1879	Sub-Inspector Stanhope O'Connor and five (or six) native police troopers from Lower Laura Boralga sent to Victoria to track the Ned Kelly gang
1880	Sub-Inspector Stanhope O'Connor resigned from the Police Force
1880	Annual report of Inspector Hervey Fitzgerald, officer in Charge of the Cook Police District; lists staffing of Laura Native Police camp as 1 sub inspector, 1 constable and 8 troopers
1883	Bradford's expedition sets out to survey the route of the Cape York Telegraph line and travels from Cooktown to the Laura Telegraph Office (about 64 miles from Cooktown), and then to Blacksoil (afterwards named Fairview)
1884	Harry Jones makes a petition to obtain increased police protection
1884	Sub-Inspector Charles Marrett's detachment at Boralga - 1 officer, 6 troopers, 21 horses

1884	5 March, letter from Inspector Hervey Fitzgerald stating that 'there have been no reports of depredations from this quarter (Deighton area) for some time'. Jones is still running the 'public house'. Fitzgerald accuses Jones of being 'notoriously untruthful, course and vindictive'
1884	Harry Jones signs lease for new run – Boralga No. 1
1884	20 December, correspondence between Commissioner Seymour, Inspector Isely and Sub-Inspector Marrett pertaining to complaints by petitioners that police are not doing enough to patrol the area for Aboriginals. Complainants include Harry Jones and Samuel Byrnes
1884	Peter McDermott (partner in Laura Station with O'Beirne) is buried in the Boralga Cemetery after falling from his horse (Cole 2004:163)
1887	Harry Jones of Boralga and Koolburra Stations manages Laura Station for O'Beirne. Jones was later shot in the head and killed by an Aboriginal boy named 'Joker' at Koolburra Station
1887	Cape York Telegraph line is completed and the telegraph office shifts to Fairview (from Old Laura)
1888	Cooktown-Palmer railway reaches Laura River – town of Laura dates from then onwards
1888	Laura Telegraph Office reopens at the Laura camp
1890	Donald Mackenzie of Lakefield and O'Beirne of Laura report blacks killing cattle on their runs – Inspector Fred Murray requests 'please authorise two more troopers for Laura'
1890	21 March, Native Police camp at Laura under Sub-Inspector Lamond broken up and a constable with 3 trackers stationed there. Sub-Inspector Lamond stationed at Herberton with a tracker and the remaining two trackers to be discharged
1890	Letter from Commissioner Seymour stating that 'the permanent camp with double detachment has been fixed at Laura from which place Breeza can be well patrolled'
1893	Letter forwarding application from Sub-Inspector Poingdestre for transfer to the Laura camp
1893	December 12, correspondence from authorities re: Inspection of Laura Police camp. Report says, 'does not recommend breaking up the Laura detachment as this would require a new camp further north'. 'The Aboriginals very numerous especially in the wet season'. 'The Laura and Musgrave detachments have to work together for their own safety'
1894	Constable Smith in charge, Constable Waters (Camp keeper), 6 trackers and 6 women. Quarters for officer in charge; six rooms and kitchen built with slabs and iron roof. Constables quarters: two rooms and kitchen with built with slabs and iron roof Office and two spare rooms built with slabs and iron roof Store built with slabs and iron roof Saddle and forage room built with slabs and iron roof Trackers quarters – round bush timber and iron roof Shed used as a forage and cart shed built with slabs and iron roof

1894	Letter from W. Finucane, Commissioner of Police to Inspector Hervey Fitzgerald requesting to close the police station at Laura
1894	Telegram from Inspector Hervey Fitzgerald to Commissioner of Police: 'have offer of 60 pounds cash for old buildings Laura Barracks provided paddock given in and block of country known as Old Laura telegraph office reserve can be leased'
1894	15 August, authorities recommend that a ton of iron on the Laura Native Police Barracks be removed to Highbury
1894	Document A4134 Laura Camp Station – to be closed and removed to Piccaninny Creek at Coen temporarily
1895	Telegram from Inspector Hervey Fitzgerald from Cooktown – 9am – 'leaving for Laura return today, blacks reported troublesome there'
1970	Ernie Stephens taken by Gerry Shepherd (brother of George Musgrave, father of Nancy Coleman), retired tracker, to Boralga site
1972	Ernie Stephens returned to search for the graves at Boralga – located two graves
1989	George Musgrave (police tracker) showed the site to members of UNE team including, J. Ruig and Noelene Cole
1998-2001	Noelene Cole researches Boralga with George Musgrave, Tommy George and their families as part of a community archaeology project (Cole *et al,* 2002; Cole 2004)

Figure 3. 1 Two graves at Boralga cemetery belonging to Alexander Mann and Peter McDermott (Photograph Bateman 2016)

Figure 3.1 Shows the two graves situated in a small cemetery at the periphery of the research site belonging to Alexander Mann, who was speared by Aboriginal people at the Laura River crossing in 1875, and Peter McDermott of Laura Station who died after a fall from his horse in 1884 (Cole 2004:163)

3.5 Preliminary site surveys

Because of the widespread dispersal of artefacts and the large area under investigation, an initial search line was conducted to flag the location of scattered surface items and scar trees, which were then plotted using a GPS and recorded using a Total Station. Geophysics, including Ground Penetrating Radar (GPR) and magnetometry carried out by Dr Kelsey Lowe, was used to identify subsurface features, which in turn assisted the understanding of formation processes, site layout, and human interactions with the environment (see Figures 3.2, 3.3, & 3.4). As the site under investigation is so extensive, these non-invasive instruments were vital for identifying subsurface anomalies both horizontally and vertically, such as refuse areas, stone foundations, pathways, post holes, walls and flooring, thus allowing for a more informed site plan and more productive excavations (Lowe *et al*. 2018:689). The Magnetic Gradiometer covered the large open area rapidly and identified iron-rich material such as metal or iron rich-soil, burnt features and refuse areas (Lowe *et al.* 2018:689; see Figure 3.5). A metal detector was also used to locate metal items in situ and establish any patterns in the discard beneath the ground surface.

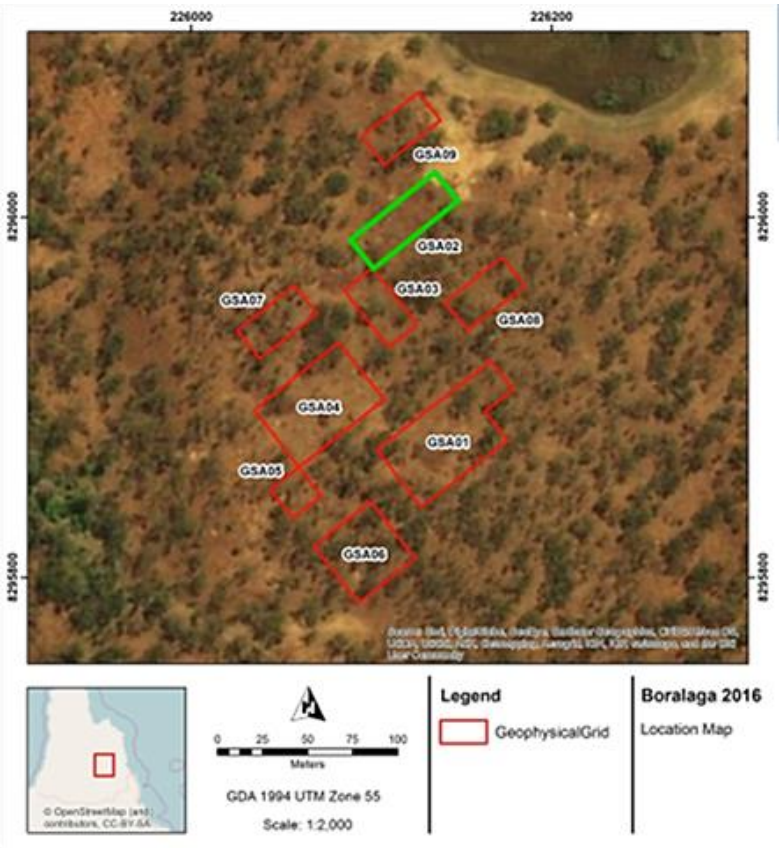


Figure 3. 2 Geophysical grid at Boralga NMP camp. Green rectangle is the trooper's huts area (Map by Kelsey Lowe 2016)

Figure 3. 3 Kelsey Lowe with the ground penetrating radar and gradiometer behind the officers' quarters (Photograph Bateman 2016)

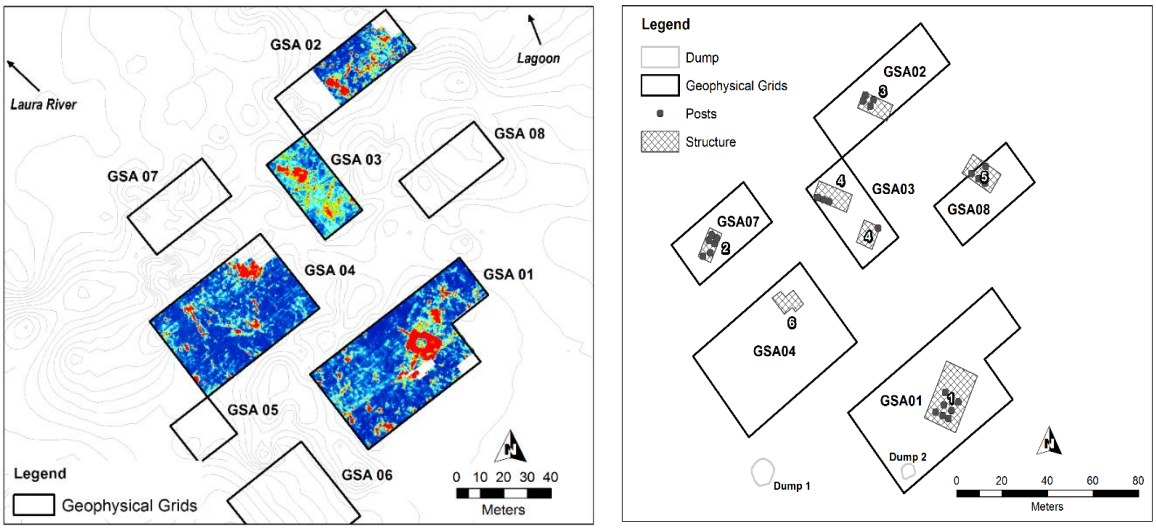


Figure 3. 4 Results from ground penetrating radar (GPR) left and interpretation right which includes dumps, structures and posts (Map by Kelsey Lowe 2016)

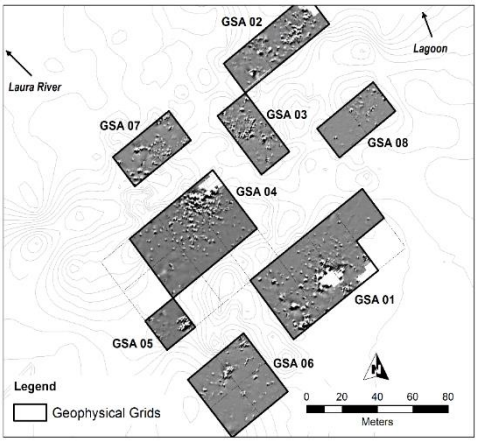


Figure 3. 5 Results from magnetic gradiometer (Map by Kelsey Lowe 2016)

3.6 Site map

Figure 3.6 Shows a detailed site map that includes all 20 trenches, the location of the lagoon and the approximate route of the original telegraph line. Each trench is outlined in detail in the trench summaries in Section 3.7

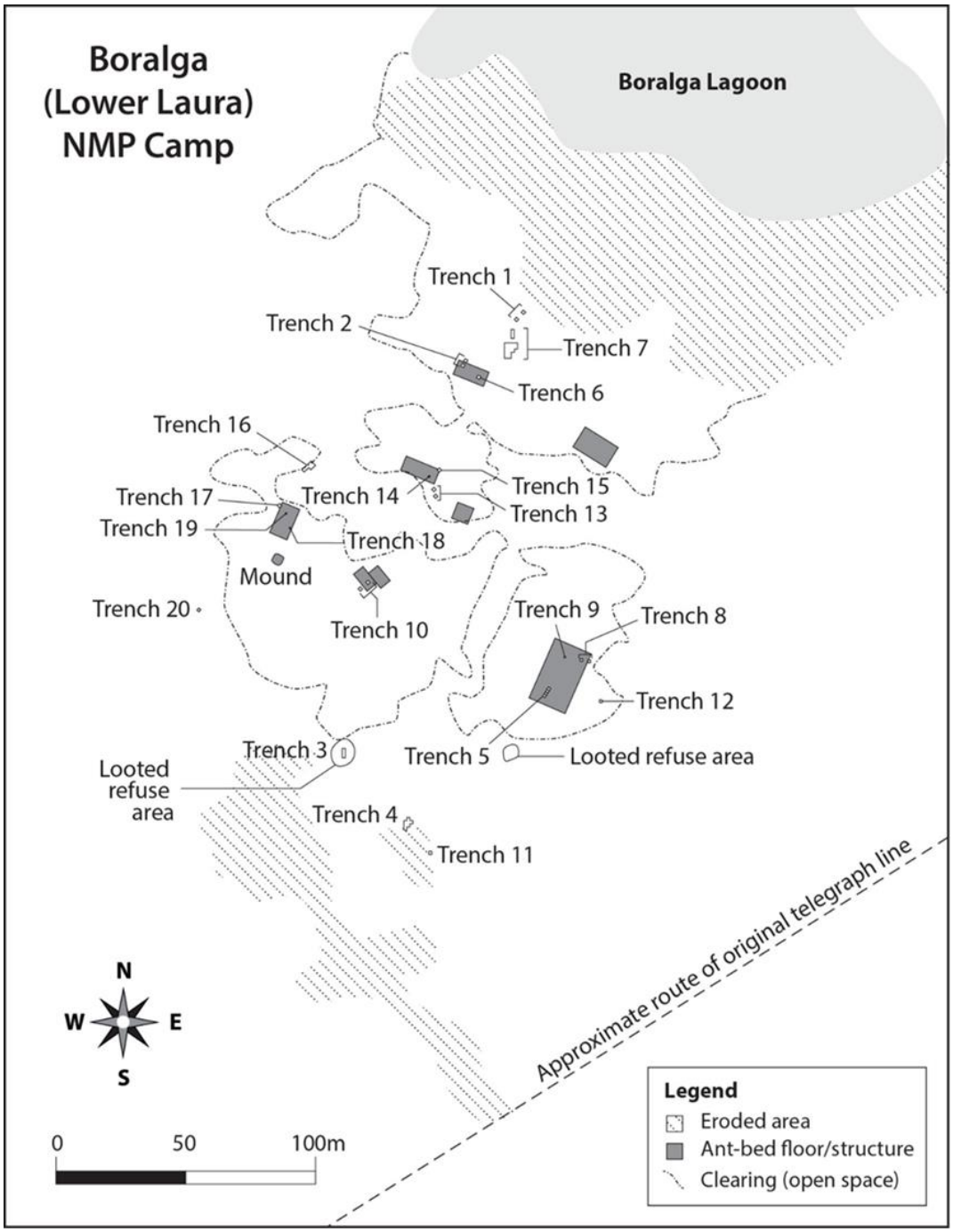


Figure 3. 6 Overall site map of the Boralga NMP camp showing lagoon and telegraph line (Map by Heather Burke 2019)

3.7 Trench Summaries

Trench 1

- Located on the edge of an area overlooking the lagoon with several metal detector hits
- Low density of archaeological materials in both squares, including bottle glass, buttons, cartridges, bone and a wax vesta box
- Two squares excavated (1 and 5)

Trench 2

- Located at possible Trooper's hut facing lagoon and SE of Trench 1
- 4.1 m trench sited partly inside structure and partly outside to capture activity in both areas
- Sited immediately flush with western posts (presumed western wall) to capture the edges of the interior. Two squares excavated (2 and 3)

Trench 3

- Located over a large primary rubbish pit on the western side of the site, that has been excavated by bottle hunters
- Trench was sited through the centre of the pit to sample the extent of material remaining
- A large scatter of broken bottles and ceramics were across this area and a deposit had been mounded around the circumference forming the pit
- Bottle collectors have removed around 30 cm of deposit across a large circular area; remaining material was extremely shallow and broken
- One square excavated (2)

Trench 4

- Primary rubbish pit unexcavated by bottle hunters
- Located on the slope of the hill below the officer's quarters and above the gully
- Geophysics anomaly present
- Various items were visible on the surface with more apparent just below the surface
- Several large obvious artefacts were embedded in the surface including a Josephson's Australian ointment pot lid, a lamp burner, bottle bases and ceramic fragments
- Soil discoloured by ash and charcoal
- Trench started with two squares aligned N-S
- Trench 4 was extended initially to the east and west before changing to the south and SE
- Large quantities of material recovered from Square 8

- Contexts in all squares are the same
- Contexts 001 and 002 containing the majority of the artefacts
- Geophysical anomaly was extended to the south of Squares 2 and 8 and was clearly a visible, round feature
- Context 002 in both Squares 3 and 9 was a very hard, baked deposit with artefacts, charcoal inclusions and baked stone/clay. This is presumably the geophysics signature
- Clear layer of charcoal was visible in the southern wall of Square 9, along with the neck of a 'Champion's and Slee' vinegar bottle

Trench 5

- Located at the officer's hut, with Square 4 starting in the hearth
- Metal items sparsely scattered around the clearing
- The Trench was oriented N-S on flat ground, but no visible artefacts are on the surface within the squares
- Square 4 was located within the fireplace
- Squares 1-3 presumably inside the structure to sample the floor area
- Squares 3 and 4 were excavated; Square 4, Context 002 contained a hard-baked deposit with a wooden log on a post in the north eastern corner
- Square 3, Context 002 consisted of hard baked sediment, with nails being the most common artefact
- Trench 5 abandoned due to lack of artefacts

Trench 6

- Located on what is thought to be the troopers' huts about 6m east of Trench 2
- Geophysics suggested an anomaly in this area
- Deposit was mounded, and surface was grey and ashy, unlike Trench 2
- No surface artefacts were visible
- The removal of the top layer revealed a similar hard baked clay deposit as in Trench 2, which was lacking in cultural material.
- Trench was abandoned due to lack of artefacts and relocation of geophysics anomaly further SE

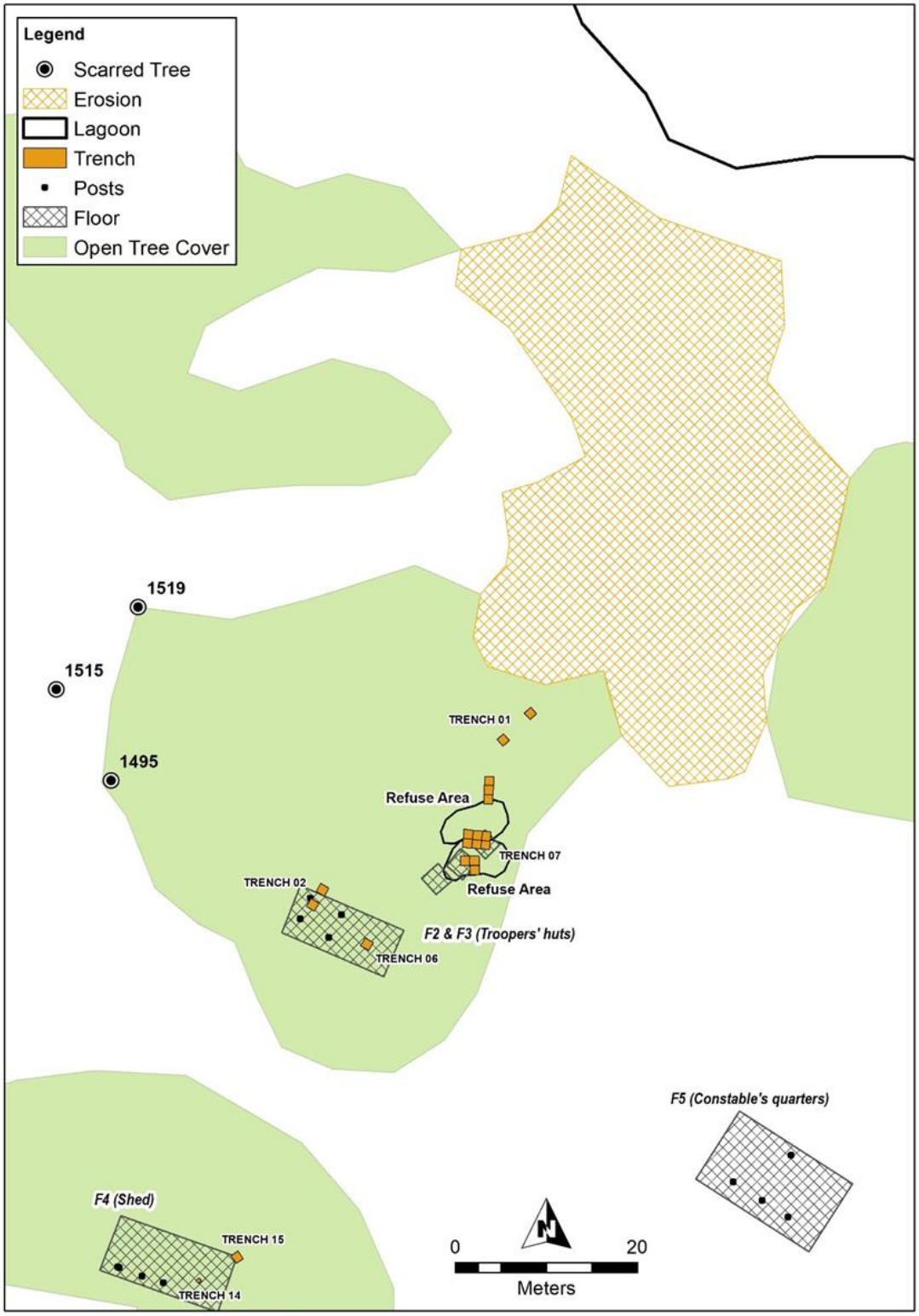


Figure 3. 7 Excavation map showing the trooper' huts area at Trenches 6, 7, and 2, the shed at Trenches 13, 14 and 15, Trench 1 and the Constable's quarters (Map by Kelsey Lowe 2016)

Trench 7

- Primary rubbish pit
- Was set up with four squares, but only three squares were excavated initially (1, 2 and 3)
- Square 1 located near what may have been the troopers' huts
- Located in an open, grassy area beside the lagoon and SE of Trench 1
- Geophysics suggested a large anomaly indicated by the magnetometer and there were many metal detector hits in this area
- No visible surface artefacts
- Trench 7 was extended on the 18/08/16 to follow an identified geophysics anomaly with three extra squares strung up across the northern side of the original trench (Squares 5, 6 and 7)
- Squares 5 and 7 excavated
- A section in the southern wall of Square 1 showed a possible post hole in the SW corner, with a noticeable pit/depression surrounding it
- This was also identified in the adjoining squares 2 and 3
- A second post hole was identified in the eastern wall of Square 5
- Excavations on Squares 8 to 18 were carried out at the second excavation

Trench 8

- Orientated E-W and located NE of Trench 5, near what is believed to be the officers' quarters
- Set up with four squares, with two excavated (1 and 4)
- Geophysics showed a significant anomaly in this area
- Several metal artefacts were scattered sparsely on the surface
- Trench 8 was located on flat ground within a clearing
- Four upright bush pole timber posts and a stone-lined 'hearth' were associated with the structure

Trench 9

- This was a 50cm x 50cm square located on a ~4 m diameter circular, raised area, the surface of which was covered with pebbles (~5-10 cm in size) and sections of concrete
- The trench was sited 5 m west of Trench 8 and 20 m north of Trench 5 within the vicinity of the officers' quarters

Figure 3. 8 Excavation map showing the Officers quarters; Trenches 5, 8 and 9
(Map by Kelsey Lowe 2016)

Trench 10

- Located in what was thought to be the blacksmith's/farrier's area and sited over a large geophysics anomaly
- Set up with four squares, but only two were excavated (1 and 4)
- Quite a few metal objects were on the surface (including several horseshoes) visible on the surface surrounding the trench and a thick coil of wire within Square 1
- Site had a large, low, visible mound at the southern end and a smaller mound at the northern end
- This smaller mound had the orange/hard stones on the surface that were associated with the mound and feature at Trenches 8 and 9

Trench 11

- Located SE of Dump 2 (Trench 4) on open sloping ground below and to the west of the Officers' quarters
- Glass and ceramic were visible on the surface, which was mainly concentrated in the centre of the square
- One square excavated (1)

Trench 12

- Possibly secondary rubbish pit
- Sited over a geophysics anomaly at the rear (east) of the officers' quarters (see Figure 3.7)
- Large geophysics anomaly showed up running roughly E-W
- Trench was sited across the anomaly to test, with one square in the centre of the anomaly excavated (3)
- This revealed a low-density scatter of glass and ceramic (handful of pieces), one cartridge, a concentration of fine, twisted wire (resembling garden wire) and a large iron object in situ which was later identified as part of a brand and removed

Figure 3.9 Les Harrigan and the Rinnyurru Rangers at Trench 12 (Photograph Bateman 2016)

Trench 13

- Trench 13 was sited over a geophysics anomaly near one of the troopers' huts
- This was a horseshoe-shaped anomaly that appears to be around the outside of another feature (possible structure)
- Set up with six squares, but only two excavated (1 and 6)

Trench 14

- Trench 14 was a 50cm x 50cm square located to the west of Trench 13 and in the centre of a mound associated with a shed

Trench 15

- Trench 15 was a 1 x 1m square sited within one end of the horseshoe-shaped anomaly

Trench 16

- Primary rubbish pit
- Sited over a geophysics anomaly on NW margin of site
- Trench 16 was a 2m x 1m square, with both squares excavated
- Trench 16 contained a domestic deposit (probably scattered on the original ground surface rather than dug into a pit)
- Deposit included ceramic, bottle glass, metal buckles, cartridges, horseshoes and other metal
- All artefacts were sitting at the base of Context 002 at the interface with 003 (some were embedded in 003, probably sitting in depressions in the original ground surface
- Excavations on Squares 3 to 7 were carried out at the second excavation

Trench 17

- Trench 17 was a 1m x 1m square which only had low density deposits of metal providing the geophysics signature

Trench 18

- Sited over a section of a possible troopers' hut to the south of Trench 16 to sample a potential ant bed floor associated with the structure
- Two rows of standing posts suggested at least part of a structure – the row of westernmost lower than the row of easternmost posts, suggesting a possible skillion verandah
- Trench 18 was sited east of the two rows of posts on a low mound that may have indicated the 'inside' of the structure

Trench 19

- Sited inside the possible verandah of the structure sampled by Trench 18 to gauge whether there was any difference between them
- Contexts were the same as found in Trench 18

Trench 20

- Was a 1m x 1m trench excavated as a possible refuse pit
- Located in a heavily grassed area which were the downslopes of the structure sampled by Trenches 18 and 19
- Surface scatter of a camp oven and broken bottles (two dark green bottle bases with asymmetrical pushups, two Lea and Perrins bottles missing their finishes and some olive green bottle glass
- Old bucket and flour barrel located downslope towards the gully
- Artefactual material was only located on the surface
- Test pit located on the eastern corner to test depth

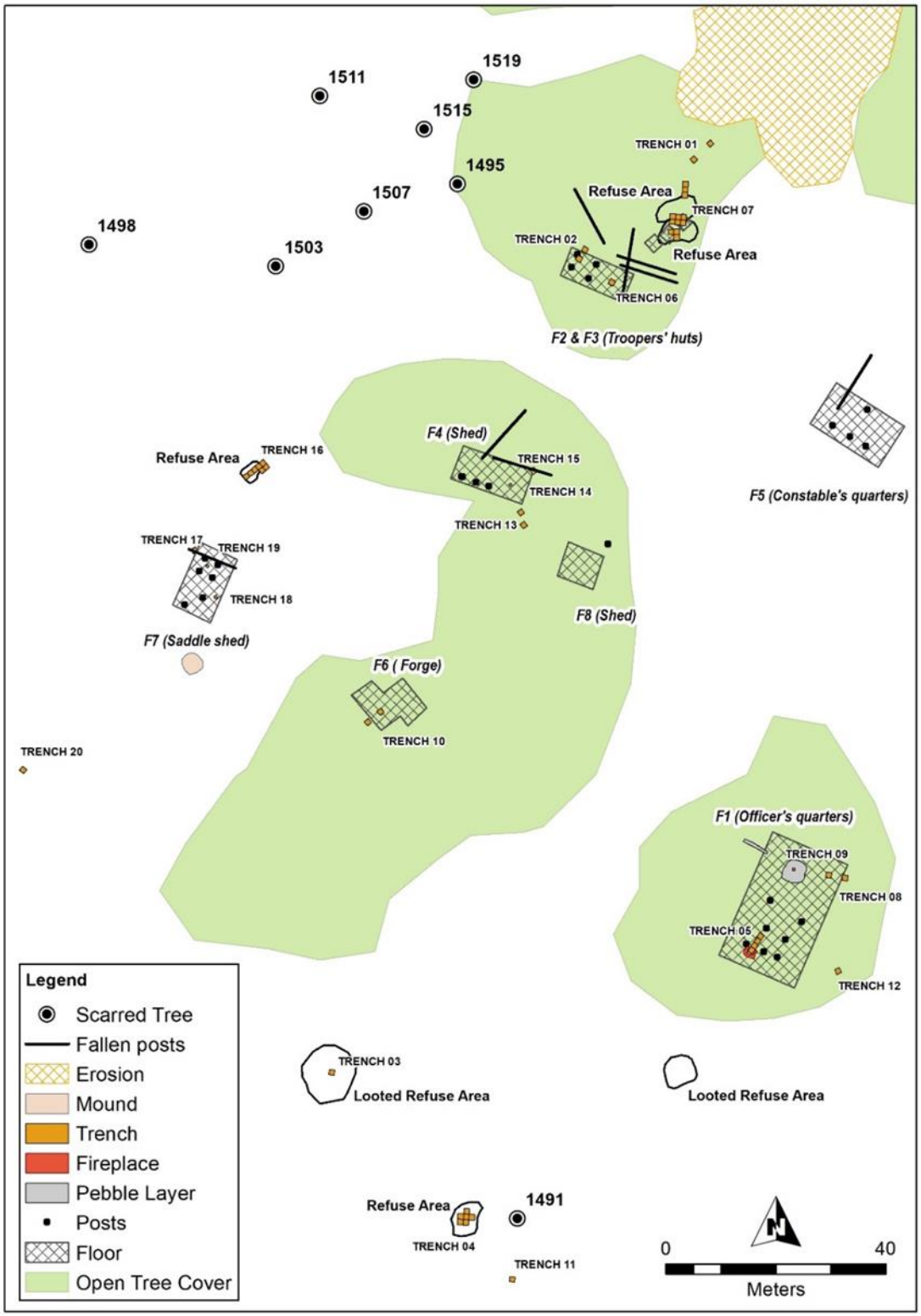


Figure 3. 10 Excavation map of Boralga showing all Trenches and scarred trees
(Map by Kelsey Lowe 2016)

3.8 Excavation context overview

The artefacts were analysed in such a way as to facilitate functional, spatial and temporal information useful for intrasite comparisons. In this instance temporality is vital, as Boralga was possibly a 'palimpsest', and thus may have been a multi-use site with different occupants using similar items over an extended period of time. Therefore, the deeper contexts provided improved evidence with regard to who may have utilised what item, and when. Context 000 (surface finds) was problematic, as the police reserve came under various pastoral leasing agreements subsequent to its closure in 1894, before being included as part of the Lakefield National Park in 1979 (Cole 2004:168, Pearce 2000). Consequently, the contemporary ground surface could possibly encompass stock camp overlay as well as NMP camp artefacts, as objects more specific to the pastoral objective, such as camp ovens (found on the ground surface) and a cattle branding iron may be evidence of this. In addition, Boralga is flat, lightly timbered and contains a large permanent water hole, perfect for pastoral use, and the reason why it was initially chosen as an ideal NMP camp site. In the event that a stock camp was present, determining the origin of objects on the contemporary ground surface becomes problematic, particularly with regard to metal items such as wire, horseshoes and harnesses parts, which could belong to either NMP or stock camp occupants. The same issue also applies to objects recovered from Context 001, where the two occupation phases would also converge.

The upper horizons consisted of dark grey, loamy, fine sand interspersed with organic matter. Context 002 usually consisted of mottled greyish brown silt that was very compact, though at times was relatively easy to excavate. Context 002 was often around 10 cm below the ground surface and contained items comprising numerous bullets for police issue rifles, horseshoes and a significant number of police jacket buttons, indicating the NMP horizon which dated between 1875 and c1894. Context 002 often came down onto a mottled yellow-brown sandy clay loam, which was the beginning of Context 003. This was where the artefact densities significantly decreased, however horseshoes were still found within this layer. Trench 7, or the troopers' huts area was an exception, as many of the NMP artefacts were found within the first 10 cm, including a military snake belt buckle, bullets for police issue rifles and police jacket buttons which were recovered from Contexts 001 and 002. One explanation for this is that Trench 7 was located near the lagoon, which was subject to seasonal flooding, causing some of the fine grey silt that comprised the top surface layers

to erode away, almost exposing the underlying artefacts. A full context summary is outlined in Appendix 2.

3.9 Summary

Due to the longevity of the NMP camp at Boralga, the area contained abundant material remains which have accumulated over time through the repetitive actions of daily practices carried out at the site. The value and importance of understanding the research site and its formation processes was a firm basis for the overall interpretation of the archaeological material. On the ground surface the site was comprised of structural remains and abundant surface scatter which were easily visible, whereas the surveys, geophysics and magnetometry greatly assisted in locating activity areas underground. A complication was that Boralga may have been a multi-use site with different occupants using similar items over an extended period of time. This meant the possibility of artefacts from separate occupations converging within contexts, however archaeological material recovered from the excavations revealed that the deeper contexts contained definitive artefacts belonging to the NMP.

Figure 3. 2 The team excavating Trench 16 with the Laura rangers (Photograph Burke 2018)

Chapter 4 – Methods

4.1 Introduction

Chapter 4 commences with a detailed description of the methods used for the excavations undertaken at Boralga and is followed by an overview of the system adopted for cataloguing the recovered artefacts. Specifics of the programs capabilities are outlined, including data storage, data management and various other aspects relevant to the artefact portion of the data base. The final section in this chapter systematically describes in detail the methods used for analysing each artefact category.

4.2 Excavation

Twenty trenches were identified and excavated by hand, with datum points and reduced levels recorded using a Total Station. Excavation techniques used at Boralga were in line with standardised field methodology. As horizontal information was needed over large expanses of the site, an open-area context system of excavation was employed, therefore the trenches were generally shallow but spatially extensive. The majority of trenches began with one or two 1m x1m squares, which were extended in the relevant direction depending on the existence of sub-surface anomalies revealed through GPR, subsurface features, or the presence of high artefact densities revealed through excavation. The soil was sieved through 4 mm gauge mesh for initial excavations in 2016, but was reduced to 3.2 mm for subsequent excavations in 2018. The artefacts were bagged and labelled with the trench number, square and context. Sediment samples were taken, and excavation details noted on electronic recording forms and field notes. Photographs of each new context documented the various contexts and artefacts in situ. The excavated material was then washed and stored for cataloguing.

Figure 4. 1 Myself at the total station (Photograph Madden 2016)

4.3 Cataloguing and data management

All artefacts were catalogued according to a system developed by Associate Professor Heather Burke of Flinders University, before being transferred to a Microsoft Excel spreadsheet. All measurements were taken using a Mitutoyo electronic digital Vernier (model 500-196-20) and items were weighed using EK-i series precision scales (model EK6100i). The total length of all scales used in photographs are equal to 10 cm. In the event of cropped photographs each black or white square is equal to 1 cm. Research on the ARC project has been multidisciplinary, and investigators involved in various aspects of the project contributed information to a central data base hosted by Environmental Systems Solutions. The project's data base stores a range of data types such as historical primary sources, multi-media, artefact, site, excavations and spatial data. The data management system (DMS) used for cataloguing artefacts has been regularly adapted and improved to meet the needs of this study. The various categories which comprise the artefact portion of the data base include, ceramic, glass, buttons, metal, weapons and ammunition, bone, culturally modified trees, lithics and miscellaneous objects. A querying module within the DMS allows users to generate meaningful summaries of the system content, including:

- GIS datasets that would be incorporated into other databases and computer systems
- Photo albums
- Biographical summaries in PDF format that include images and text
- Charts and tables that may be used in project reports
- Data tables in Excel or CSV format

All research data is managed in accordance with the Australian Code for the Responsible Conduct of Research (2007). Subject to the protocols negotiated with individual communities, specific data management strategies include:

- Secure storage of data, particularly of potentially sensitive oral history data
- Archiving of archaeological datasets on completion of the project
- Archiving of bespoke sections of the digital project archive with communities in forms that suit their needs and technical requirements

Excluding data subject to access restrictions, permanent storage for the archive will occur following completion of the project. Data will be accessible to anyone via the internet providing they have an

authorised user account, therefore selected content within the DMS can be made available to both community and project members.

4.4 Artefact analysis

Chapters 5 – 12 cover eight different categories of artefacts which include glass, ceramic, bone, metal, buttons, ammunition, miscellaneous and lithics. The methods used to analyse these categories are included in the following Sections 4.4.1 through to 4.4.8. The analysis chapters will initially cover overall site information, outlining quantity and distribution of each artefact type subsequent to analysing the trenches individually, thus allowing for more informed and productive outcomes.

4.4.1 Method glass analysis

Bottle bases and finishes were particularly useful for establishing dates, as this was where changes in technology often left its mark, and these are also the most robust portions to withstand breakage. The glass assemblage categories used in this analysis include portion/component, measurements, minimum number of vessels (MNV), estimated vessel equivalency (EVE), colour, object, tableware type, probable contents, mould type, date range, base attributes and closure/finish type, motifs, maker's marks and trademarks. Individual trenches were analysed if they contained 2% or more of the overall glass weight.

Portion/component – describes the bottle part to be identified which includes combinations such as finish, body and base, shoulder and neck etc. The subcategories also include 'complete bottle', and non-diagnostic fragments (some grouped) which are described as body sherds. The bottle component was essential for establishing minimum vessel counts

Minimum Number of Vessels (MNV) – is similar to the minimum number of individuals (MNI) used in faunal analysis. The Minimum Number of Vessels (MNV) describes the minimum number of original items that can account for the fragmentary specimens present in the assemblage (Voss & Allen 2010:1). The MNV for all trenches will be calculated by establishing the base and finish count in order to find the highest component amount. Complete bottles are added to this count. Vessel counts can be problematic, as multiple elements can represent single items, even when they are not found in the immediate vicinity (Prior 2014:107). However, the minimum number of vessels count is useful as the method is a conservative, under-estimate of the number of glass vessels present (Brooks 2005:23).

Estimated vessel equivalency (EVE) – An EVE is an estimate only, and where possible was carried out on grouped emerald or olive green wine/champagne glass for individual trenches (Prior 2014). For example, the weights (including grouped fragment weight) of emerald green or olive green glass were added together, then the overall total was divided by the average weight of an emerald or olive green wine/champagne bottle. The average weight of a wine/champagne bottle is approximately 833 g estimated from 7 complete wine/champagne bottles. An EVE of dark green/black glass was not carried out due to a lack of complete comparison bottles of a similar type. The olive green glass EVE is minus weights for Adolpho Wolf's Aromatic Schnapps bottles.

Colour – Glass colour was visually classified according to the colour chart shown in Appendix 5. Glass colour has some utility for classifying bottle dates and type but is not always related to the technology of glass object production (Lindsey 2015f). However, colour is still an important descriptive element and several related trends have some utility for classification, such as dark green/ black, emerald green and olive green shades used for alcohol bottles (Lindsey 2015f). Unidentifiable colour in this instance is usually a fragment that is entirely covered in an unidentified, immovable deposit. The blue section of the graph represents the sum of glass weight which includes single fragments and complete objects (diagnostic and non-diagnostic), and the red section is the sum of the grouped fragments (diagnostic and non-diagnostic)

Diagnostic/Non-diagnostic – glass can be diagnosed to several different levels, including object, contents and maker. A single fragment such as a small, flat, colourless piece of glass is usually non-diagnostic to an object level, thus not all single glass fragments are diagnostic. Conversely, some grouped body fragments such as flat, dark/green black coloured glass belonging gin bottles (some with chamfered sides), can be diagnosed to a bottle and content level. Other grouped body fragments such as curved emerald or olive green glass (some with faint horizontal rotational lines) which were found along with necks, bases and wine/champagne finishes are diagnostic to at least bottle level. Highly recognisable, fluted vinegar bottle body fragments can be diagnosed to bottle, content and maker levels, such as J.T Morton or Champions and Slee body fragments. Thus, even though grouped body fragments do not have a base, neck or finish, they are not necessarily non-diagnostic, and are labelled according to the appropriate level.

Object – fragment count of identified items such as bottles, flat glass (e.g. Window), knapped (flake or core), drinking glass and lamp glass.

Tableware type – describes glass production processes, for example cut, plain moulded or pressed.

Probable contents – identifies the bottles utility with subcategories including alcohol, condiments, castor oil, ink, medicine, ointment, perfume, vinegar, poison and unidentified.

Mould type – describes which mould was used for manufacture. Examples of categories include two-piece full length, three pieces, turn paste, dip mould or unidentifiable.

Mould seams – resultant lines on the bottle surface produced by the mould used for manufacture. The catalogue field requires the number of mould seams visible, which is dependent on the type of mould used for manufacture. As the majority of the bottles were highly fragmented, this field was limited in utility for this study.

Maker's mark and trademarks – These are usually in the form of embossed lettering or numbering under the base or down the length of the bottle and was descriptive in the catalogue.

Measurements (mm) – Subcategories were *length*, which was the axial length of the bottle or fragment from top/finish to bottom/base. *Width* was the axial width or distance taken from the lateral margins measured halfway along the length. *Thickness* was measured from the thickest part of the fragment.

Weight (g) - and includes single items, as well as grouped fragments.

Date range – the date range of occupation by the NMP at Boralga was from 1875 to c1894, whereupon it was subsequently used as a stock camp, therefore it is a given that all bottles most likely post-date 1875. Any bottles earlier than 1875 must have been previously acquired and brought into the camp. The dates outlined for the purposes of this study were taken from when the bottles were manufactured. Some items are post-dated only, and other time frames are more precise as they identify complete time periods, including the start and end of manufacture.

Base attributes – valuable for bottle identification and dating. These features were useful for establishing the MNV. Subcategories include diameter, thickness, kick-up depth, pontil marks and technological base marks. Where possible the base is identified as cup or post bottom, however the base mould seams were often erased with the advancement of turn paste moulds.

Finish attributes – valuable for bottle identification, dating and establishing the MNV. Subcategories include bore diameter, finish type, closure type, applied or tooled, and stretch marks on the neck.

Grouped fragments – usually non-diagnostic body sherds, however there were some exceptions when grouped body fragments were decorative and easily diagnosable. The total number of fragments were counted before the group weight, maximum and minimum lengths, widths and thicknesses were recorded.

Knapped glass – for the purposes of this study, was defined as industrial glass modified by Aboriginal peoples subsequent to post-European interaction. Dimensions and technological features e.g. point of force application (PFA), platform and termination were recorded in conjunction with descriptions of the original object component for MNV or dating purposes. The knapped glass at Boralga consisted of cores, flakes, and associated debitage usually manufactured from thick alcohol bottle bases. Glass flakes (see Figure 4.4) were identified according to the combined criteria for the identification for Aboriginal glass artefacts individually formulated by Allan and Jones (1980:231), Harrison (2000:44) Paterson (1999), Runnels (1976:29), Veth & O'Connor (2005:8) and Williamson (2002:86).

- Thicker parts of the bottle are more likely to be used (Allan & Jones 1980:231)
- Presence of a bulb of percussion on modified flakes (Allan & Jones 1980:231; Paterson 1999:18; Veth & O'Connor 2005:8)
- Location and context of the artefact. For example, a knapping area or floor with associated cores, flakes or debitage (Allan & Jones 1980:231; Paterson 1999:81)
- Flake scars will form clusters along the edge of the artefact (Runnels 1976:29)
- The scars will have modified the shape of the glass (Runnels 1976:29)
- Flakes that are often in the form of large, isolated flake scars on the margin of the glass piece (Williamson 2002:86)
- The flaking is usually on one surface of the glass (Williamson 2002:86)
- Semi-circular flake scars (Williamson 2002:86)
- Regular and continuous flake scars (Williamson 2002:86)
- The absence of other agencies that may produce flakes such as roadworks (Paterson 1999:81)

- Potential source of the glass bottles. Locating the glass source makes it possible to build a picture of post-contact land and resource strategies (Harrison 2000:44)

The definition of *glass debitage* (see Figure 4.2) was derived from stone comparisons, and is described as the discarded material produced during the manufacture of an artefact and consists of production debris such as small flakes and flaked pieces (Whittaker & Kaldahl 2001, cited in Andrefsky 2001:33). The *glass core* criterion (see Figure 4.3) is defined as 'the piece of glass from which flakes have been removed', derived from Burke & Smith's (2004:209) stone core description. Only descriptions of form and colour have been examined, because the analysis of flaked glass function is beyond the scope of this thesis.

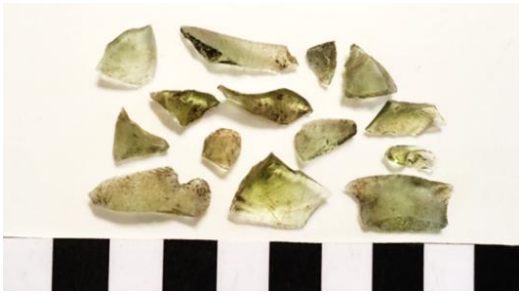


Figure 4. 2 Debitage from Trench 7 or trooper's huts area, Boralga (Photograph Bateman 2017)

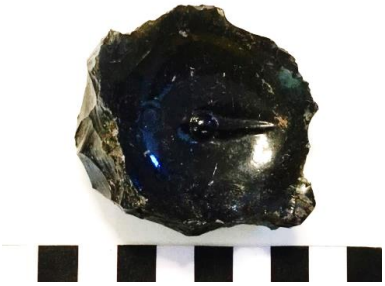


Figure 4. 3 Heavily worked glass core from Trench 7 or trooper's huts area, Boralga (Photograph Bateman 2017)

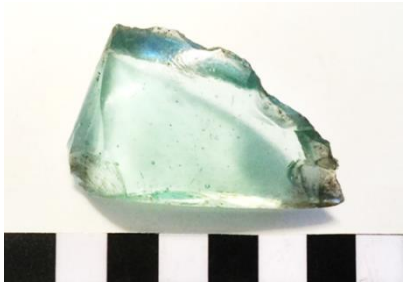


Figure 4. 4 Glass flake from Trench 7 or trooper's huts area, Boralga (Photograph Bateman 2017)

4.4.2 Method ceramic analysis

The ceramic assemblage categories used in this analysis include technological ware type, sub-type, portion/component, completeness, functional type, object, past colour, glaze type, decorative method, decorative colour, pattern name, date range, conjoins, measurements (rim/base diameters and arc length), grouped fragments and minimum number of vessels (MNV), motifs and trade-marks. Individual trenches were analysed if they contained 1% or more of the overall ceramic weight.

Technological ware type – gives the three main overall ceramic divisions to choose from; earthenware, porcelain and stoneware (outlined in the ceramic section 6.2)

Sub-type – Most of the ceramic identified at the site was porous refined earthenware, vitreous white granite, unglazed earthenware (mainly clay smoking pipes), soft-paste porcelain, and stoneware. The sub-type category divides the three overall ceramic divisions into six sub-types for earthenware and two sub-types for porcelain. Stoneware has no sub-types. Individual sherds and objects, as well as non-diagnostic grouped fragments counted individually were included in this category.

Portion/component - describes the object part to be identified which includes combinations such as handle and body, base/footing, body, base and rim etc. Any non-diagnostic fragments (some grouped) are described as body sherds. The portion/component category was important for establishing the MNV.

Completeness – lists three percentage ranges that describes how much of the original object is represented by a fragment: Complete (95-100%), Fragment (51-95%) and Fragment (0-50%)

Functional type – lists general categories for the objects primary intended function

- Teaware - includes anything related to the ritual of drinking tea, for example tea cups, teapots and saucers
- Drinking other than teaware - such as coffee cups
- Food/drink storage - encompasses utility vessels such as ginger jars or demijohns
- Household general – includes a range of objects related to general domestic and household use such as ink bottles and chamber pots

- Kitchenware – objects related to preparing meals and cooking activities such as mixing bowls and jugs
- Tableware - includes vessels used for service and consumption such as plates, soup bowls, egg cups, tureens and serving platters
- Personal/hygiene - objects that belong to an individual, or affects an individual's private life emotionally or physically such as ointment pots, tobacco pipes, chamber pots and children's toys
- Insulation - is included separately to cover telegraph station insulators

Object – more precise than functional type, this labels the item with its intended or primary use at manufacture, and includes specific items such as barrel jar, coffee cup, dinner plate, serving platter, chamber pot, saucer/nappie, tea cup and tureen. Items which cannot be narrowed down to the exact object type are generalised to bowl, cup, plate and dish.

Paste colour – describes the clay or fabric colour from which the item is made

Glaze type – includes six categories: clear (lead or other oxide) which is a transparent, glassy glaze found mostly on Chinese and European earthenwares, none (unglazed), Rockingham (dark brown), salt glaze, single colour slip (any colour) and tin (white)

Decorative method – This category includes various decorating techniques such as handpainting, moulded relief or embossing, transfer print and salt glaze (see paper form of catalogue in Appendix 7 for complete list).

Decorative colour – is the paint, ink or dye colour used for handpainting, stamping, transfer printing, sprigging or adding a slip to object

Identifiable motifs – describes the design that is visible on the individual sherd, such as a leaf, flower, animal or boat etc. The MNV was not carried out on motifs because not all patterned items were rim or base fragments which were counted via arc lengths, and small partial patterns were too difficult to link with associated fragments.

Pattern name – known name of hand painted or transfer print design

Makers marks/Trademarks – Usually found underneath the object, this is the hall mark on an item denoting the person or firm responsible for its production. Several makers' marks were found on various objects at Boralga, but only one could be identified according to (Godden 1991).

Date range - the date range of occupation by the NMP at Boralga was from 1875 to c1894, therefore any ceramic items dated earlier than 1875 must have been previously acquired and brought into the camp. As very few of the ceramic designs could be identified to a pattern name, the dates outlined were from the time that the general objects, technological types or decorative techniques were produced. Some items are post-dated only, and other time frames span the beginning and end of manufacture (outlined in ceramic section 6.3)

Conjoins – a summary of context, object, ware type and associated artefact numbers that make up a single conjoined item can be found in Appendix 9. The method for establishing the MNV for conjoined objects is included in the following sections.

Measurements – subcategories are:

- Length - which was the axial length of the object or fragment from rim to base (mm)
- Width - was the axial width or distance taken from the lateral margins measured halfway along the length (mm)
- Thickness – was measured from the thickest part of the fragment, which may be a rim or base (mm)
- Weight - records the weight of a single item as well as unidentified grouped fragments (g). Due to the varying densities of the different fabrics, ceramic weights are not indicative of the MNV or sherd counts
- Base diameter and rim diameter - uses a rim/base diameter chart for measuring nineteenth century ceramics (mm). These diameters can be converted to standard imperial sizes to identify major categories of vessels. Because diameters were not well standardised in the nineteenth century, several objects marginally exceeded the standard rim size categories, and others were just under, therefore the items were rounded to the nearest vessel size.
- Arc length - The same chart was used to establish arc length, an important element for establishing the MNV

The following sizes and categories were used in relation to rim diameter ranges:

- Cup: 3-4” or ~76-102 mm
- Saucer/nappie: 5 – 6” or ~127-152 mm
- Bread and butter plate: 5¾ - 6½” or ~150-165 mm
- Dinner or table plate: 7½-12” or ~ 190-305 mm

Grouped fragments – usually non-diagnostic body sherds, therefore sherds with identifiable forms such as rims or bases were not grouped. The total number of fragments were counted before the group weight, maximum and minimum lengths, widths and thicknesses were recorded

Minimum Number of Vessels (MNV) – This is similar to the minimum number of individuals (MNI) used in faunal analysis. The Minimum Number of Vessels (MNV) describes the minimum number of original items that can account for the fragmentary specimens present in the assemblage (Voss & Allen 2010:1). This can be estimated quantitatively using the rim/base diameter chart, or qualitatively, using a variety of complementary indicators, such as decoration, paste type and form. Both methods were used in the analysis, with quantitative analysis being particularly useful for oblong objects such as tureens where accurate arc lengths could not be established. Initially the assemblage was sorted into technological ware types, then object type and size (e. g. all dinner plates of similar diameter). Lastly, all of the rim (or base) arc length percentages were added for the same sized objects. The total arc lengths for dinner plates for example, was then divided by 100, to represent a single whole vessel. For the purposes of this study, the term ‘vessel’ includes all functional objects such as egg cups, plates, saucers, ointment pots, dinner plates, wash basins and tureens.

4.4.3 Method fauna analysis

Categories include class, taxon, length, weight, body part, element, part speciment, side, age, modification, butchery location, meat cut, count and NISP. The bone was analysed and identified with the aid of the USQ comparative collection and faunal texts including ‘Animal bones in Australian archaeology: a field guide to common native and introduced species’, by Melanie Fillios and Natalie Blake (2006). Shovel test pits (STP) were dug following metal detector indications. A small quantity of bone was found in one STP.

Class – sub-categories include aves (birds), osteichthyes (bony fish), mammalia, reptilia, and unidentified.

Taxon – sub-categories include cow, kangaroo, wallaby, pig, possum, rat, snake, fish, bird, and unidentified. In many instances kangaroo bone could not be distinguished from wallaby bone due to the fragmented state of the assemblage and were recorded as kangaroo/wallaby in the catalogue and defined as a macropod in the description.

Length – measurement was taken from the longest axial dimension, or in the case of broken long bones, what would have been proximal to distal (mm).

Weight – may be the weight of a single item or grouped fragments (g).

Count – was the number of complete bones and individual fragments. Grouped fragments were recorded under one artefact number and were counted as one. Due to the fragmented state of the assemblage, weight was a more accurate measurement of quantity than count.

Element – sub-categories include femur, fibular, humerus, mandible, metacarpals, metatarsals, pelvis, radius etc. The full list of elements can be seen in Appendix 10

Side – is left, medial, right, and unidentified. Due to the fragmented state of the assemblage this category was rarely utilised

Age – elements were assessed for age markers according to the state of epiphyseal long bone fusion. Sub-categories include fused, unfused and worn. Also tooth wear was used as an indicator.

Modification – modification records the presence or absence of burning, with the degree of calcining outlined in the description. Other sub-categories include butchered, carved, cut, ground, none and other

Butchery location – sub-categories include anterior, dorsal, lateral, medial etc. The full list of the butchery locations can be seen in Appendix 10, Table 10.2

NISP – all faunal material was quantified using the number of identified specimens (NISP) according to Lyman (1994). The NISP overestimates the actual individual species at the site, as it counts each bone and fragment (or fragment group) as one unit.

MNI – all faunal material was also quantified using the minimum number of individuals (MNI) according to Lyman (1994). The MNI underestimates the total number of species, and the

underestimate increases with the severity of fragmentation. Left and rights were not helpful in this instance as fragmentation rendered this diagnostic feature problematic to apply.

4.4.4 Method metal analysis

The metal assemblage categories used in this analysis include object, object modification, metal type, completeness, dimensions, weight and date range.

Objects – various sub-categories include: *clothing fasteners,* such as buckles, rivets, hooks and eyes, and shoe grommets (buttons were analysed in a separate chapter); *sewing paraphernalia*, such as thimbles and pins; *construction fasteners,* such as nails, screws, bolts, tacks, spikes, wire and brackets; *building/furniture hardware*, such as upholstery/furniture tack/rivets, furniture knob/plate/hinge/locks; *cutlery*, such as a knife and fork; *accessories and containers,* such as wax vestas boxes and food can/tins, lamp/components, cooking pot/pan components (e.g. billy hooks or handles); *document fasteners*, such as a bulldog clip; *saddlery or horse harness parts*, such as horseshoes, bridles, Hames collar rings, buckles, horseshoe nails and stirrup/saddle components; and *children's toys*, such as a pop-gun.

Metal type – sub-categories include brass, brass/copper alloy, cast iron, copper, forged or wrought iron and other iron (flat iron or wire). The full list can be viewed in Appendix 16, Field 6.

Completeness - lists three percentage ranges that describes how much of the original object is represented by a fragment; Complete (95-100%), Fragment (51-95%) and Fragment (0-50%)

Measurements (mm) – Subcategories were *length*, which was the axial length of the object. *Width* was the axial width or distance taken from the lateral margins measured halfway along the length. *Thickness* was measured from the thickest part of the object or fragment.

Weight (g) - includes single items, as well as grouped metal fragments

Maker's marks or trademarks - mark on an item denoting the person or firm responsible for its production. Very few maker's marks were identified due to the corroded state of the metal assemblage

Date range – difficult to establish due to the corroded state of the assemblage, however some time frames could be established by identifying the patent

Fasteners – The assemblage was broadly classified into two categories, *structural fasteners* such as nails and screws for general use, as well as for building frames and fencing, or *non-structural fasteners* such as nails, rivets, tacks, and screws used for furniture construction, cabinet making, horseshoes, clothing (boots) and leather items. The assemblage was also classified based on size class, metal type, fastener type, head shape and manufacture method.

Fasteners MNI – determined from identifiable components such as nail heads (including head and shaft), points (including point and shaft) and complete nails. Shanks alone were excluded from the MNI count but included in weight totals. The minimum number of identifiable components was calculated per trench (some trenches had more points and others more heads) and were added to the complete nails for an overall MNI.

Size class – Nail (>10 mm – 99 mm length), spike (≥100 & 10 mm width) and tack (<10 mm length)

Nail features – such as burrs, pinching under the head and shear striations were rarely identified due to the corroded state of the nail assemblage, however diagonal and perpendicular brackets under nail heads (typically found on structural fasteners such as Varman's type 2 nails) could sometimes be identified.

Buckles – sub-categories include frame type, frame shape, pin, tongue, decoration type, decoration type and decorative motives

4.4.5 Method button analysis

The button assemblage categories used in this analysis include material type, attachment method, ligne size, manufacture method, construction, shank type, sew through type, number of eyes, motifs, makers marks/trademarks and date range.

Material type – button material types include metal, ceramic, glass and shell

Attachment method – sew through or shanked

Ligne size - was classified according to the button ligne size chart in Appendix 17. Sizes on the chart range from the smallest: Ligne 14 or 9mm through to Ligne 70 or 44.5 mm

Manufacture method – sub-categories include cast, cut, moulded, stamped and other

Construction- sub-categories include one piece, two piece or composite

Shank type – only two button shank types were identified at Boralga which were, 'loop' and 'Sanders'

Sew through type – the only sew through types identified at Boralga were 'linen' (eyeletted) and 'standard'

Number of eyes – number of holes visible on the button for the thread to pass through

Motifs - describes the decorative design that is visible on the surface of the button.

Makers mark/trademark – the slogan or backstamp, located underneath or on the face of the button such as 'FINE TREBLE GILT'

Date – usually identified by the button type and makers mark/trade mark

4.4.6 Method ammunition analysis

The ammunition assemblage categories used in this analysis include object, material, measurements, weight, crown/headstamps, date range, MNI, projectile and cartridge details and features.

Object – sub-categories determine whether the item is projectile component (ammunition), gun component (weaponry), percussion cap or a range of gun accessories which are outlined on the paper version in Appendix 19

Material – sub-categories include brass, copper, iron and lead

Measurements (mm) – Subcategories were *length*, which was the axial length of the object. *Width* was usually the width of the cartridge disc. *Thickness* was measured from the thickest part of the fragment which was also often the cartridge disc.

Weight (g) - includes single items, as well as grouped ammunition fragments

Crown/headstamps - Usually found on the base disc of a cartridge case, with letters often encircling the primer

Date range – can usually be determined by the head stamp on the cartridge base disc

MNI – due to the fragmented state of the cartridge cases, only cartridge base discs or primers were counted for the MNI. Conical lead projectiles were discounted as they may belong to the already counted cartridge cases

Projectile details – sub-categories include, type, deformation, rifling grooves, mould seams (sprue marks) and number of grooves

Cartridge details – sub-categories include, base (flat or hollow), body (bottle neck or straight walled)

4.4.7 Method miscellaneous object analysis

A range of eclectic items recovered from the site did not fall into a specified category, and thus were recorded under 'miscellaneous', which included sub-categories suitable for cataloging general items such as object, material, measurements and weight.

Object – The items are divided into functional categories such as stationary, recreation, tools, personal, kitchen, food, accessories, hygiene and camp quarters

Material – sub-categories include bone, cement, cut crystal, wood, metal and faeces

Measurements (mm) – Subcategories were *length*, which was the axial length of the object. *Width* was the axial width or distance taken from the lateral margins measured halfway along the length. *Thickness* was measured from the thickest part of the object.

Weight (g)- records the weight of a single item as well as grouped fragments

MNI – all identifiable miscellaneous objects were quantified using the minimum number of individuals (MNI) which describes the minimum number of original items that can account for the fragmentary specimens present in the assemblage (Voss & Allen 2010:1)

4.4.8 Method lithic analysis

Numerous attributes can be documented when conducting a technological analysis on lithics, many of which are beyond the scope of this thesis. General attributes addressed in this thesis are artefact type (flake, flaked piece and core), material type, colour, state, platform and termination.

Artefact type - subcategories include flake, flaked piece, core, ground, hammerstone and manuport

Material type – the only material type identified at Boralga were various forms of quartz, chert, sandstone. Several materials were unidentified.

Colour – was chosen from a range of sub-categories which can be viewed in Appendix 22, Field 8

State – either broken or complete. If broken, the sub-categories include longitudinally broken flake (LBF) and transversely broken flake (TBF), and whether break is medial, distal or proximal

Platform type – sub-categories include focalised, gull-winged, wide and incomplete

Termination type – sub-categories include feather, hinged, plunging and stepped

Retouch – sub-categories include location and type

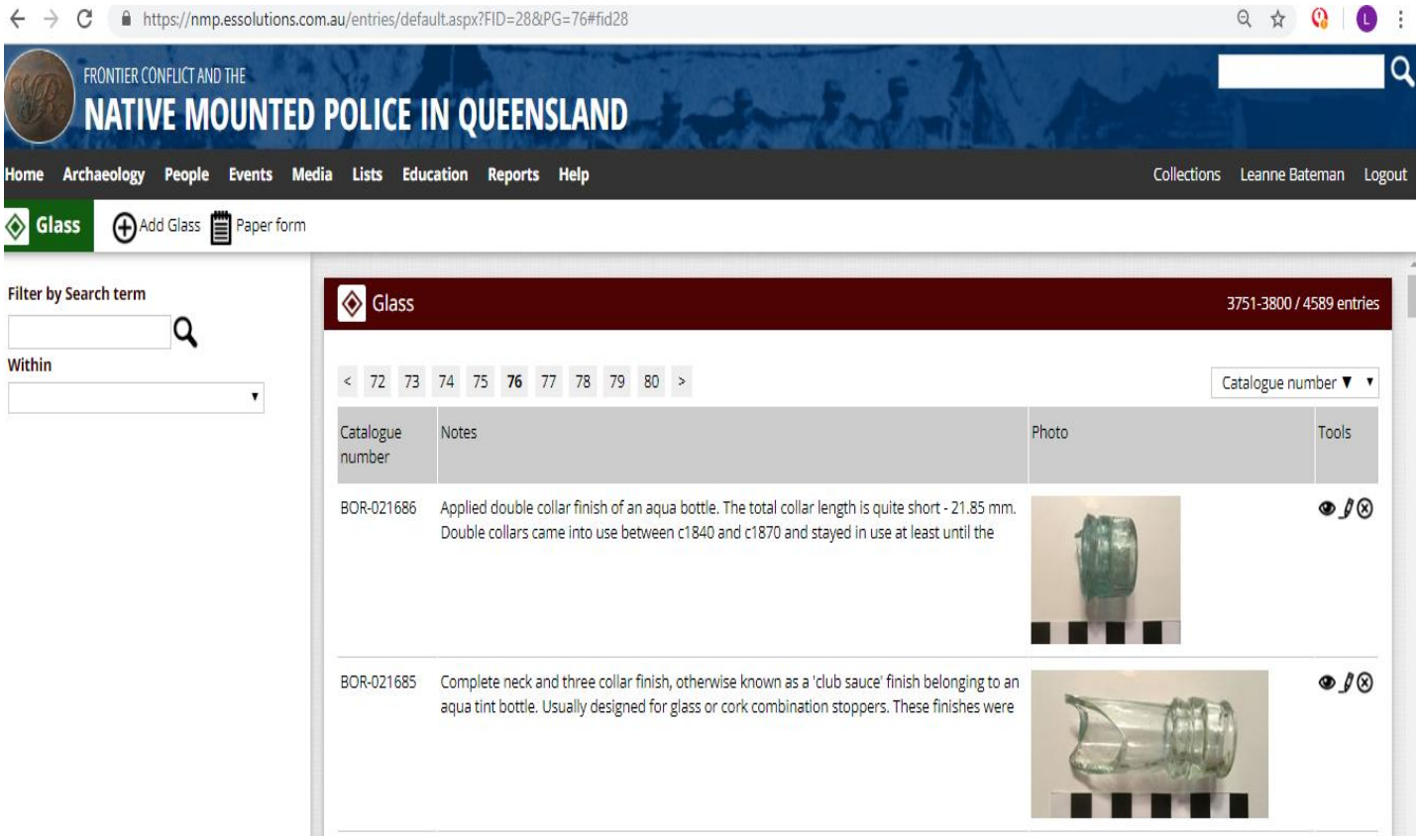


Figure 4. 5 Example of NMP cataloging page showing bottle finishes
(Photograph Bateman 2019)

Chapter 5 – Glass

5.1 Introduction

Several refuse areas were identified at the Boralga NMP camp, with glass being one of the most common items on the ground surface and subsurface layers. The majority of glass consisted of bottle sherds, with 19 bottles recorded as complete (see Figure 5.1). However, more complete glassware may have existed prior to bottle enthusiasts collecting items from the area. The large quantity of fragmented glass made typology difficult for much of the assemblage, considering the numerous combinations of attributes needed for accurate bottle identification (Harris 2010:2). According to Boow (1991:1), the majority of early Australian glassware, and a significant amount of successive glassware, was undecorated and unembossed. Therefore, the method of manufacture and historical context was often necessary to identify and establish the date of an item. Fortunately for this study, embossed lettering and moulded designs became increasingly popular from 1830-1840 onwards (Boow 1991:1). That meant that even the smallest of fragments recovered from Boralga often displayed decorative designs, letters and motifs which provided improved evidence for the date of manufacture and probable contents of the glassware (Figure 5.2).

Figure 5. 1 Complete J.T. Morton vinegar bottle (undated) from Trench 4 (Photograph Bateman 2017)

Figure 5. 2 Three body fragments with embossed lettering from Trench 1.'Scotts Emulsion' cod liver oil bottle, dated 1870s onwards (Photograph Bateman 2016)

Numerous knapped glass artefacts were also identified at the site (see Figures 5.3 & 5.4). Aboriginal glass artefacts are considered almost ubiquitous throughout the Australian landscape and as such, have formed an important focus within Australian contact archaeology (Veth & O'Connor 2005:2). According to Reynolds (2006:54), glass was often utilised by Aboriginal people, and describes the material as being a very important addition to the traditional tool kit, as it contained important utilitarian properties. The researcher claims that after much experimentation with the medium, thick bottle glass was either chipped for flakes or sharpened to make solid spear heads (Reynolds 2006:54-55).

Glass has similar fracture mechanics to stone, as it is an amorphous solid that has natural, predictable fracturing properties such as elasticity, brittleness and homogeneity analogous to obsidian (Holdaway & Stern, 2004:25). However, differences regarding bottle and stone morphology should be considered, as bottles have both curved and flat pieces with hollow interiors that can affect knapping techniques (Harrison 1996:2000). Traditional knapping methods, similar to stone tool manufacture, were used to produce glass flakes at Boralga. It is difficult to establish under what circumstances the Aboriginal troopers and women at Boralga acquired the various glass bottles, which harks back to Williamson's dilemma in terms of who 'used, modified, discarded and reused' the items (Williamson 2002). It is unknown as to whether the troopers consumed the contents of the bottles then knapped the glass or transferred the empty bottles from other areas of the camp for knapping purposes only.

Figure 5. 3 Knapped glass flake from Trench 7 or trooper's huts area, Boralga NMP camp (Photograph Bateman 2017)

Figure 5. 4 Knapped glass flake from Trench 7 or trooper's huts area, Boralga NMP camp (Photograph Bateman 2017)

5.2 Glass chronology and functionality

Modern blown glass technology dates back to the third century B.C. and has remained largely unchanged over many centuries. However, the third quarter of the nineteenth century through to the first quarter of the twentieth century, marked a period of rampant transformation within the bottle making industry (Barnett 1926:70-89). Until that time, bottle manufacture entailed a glass blower dipping a blow pipe into a pot of liquified glass, which was turned around to collect a batch, and then blown to give a preliminary shape called a parison (Jones 1971:62). Early free-blown bottles were manufactured without the support of a containment mould, and were instead formed by skillful glass blowers who manipulated the glass with the use of hand tools, a flat table called a marver, and a hollowed out block (Jones 1971:62). The majority of bottles imported into Australia were manufactured in Britain. Many glass fragments from Boralga display distinctive machine-made mould marks produced from around the 1890s, these were subsequently followed by hand-made crown finishes dating between 1892-c1915 (Boow 1991, cited in Nayton 1992:77) Free blown utilitarian bottles were rarely produced by American bottle manufacturing companies after the 1860s, and were gradually replaced with hinged metal moulds (Toulouse 1969; Lindsey 2015a; Figure 5.5). Areas of advancement appeared with shoulder and full height moulds, new empontilling methods, colour and finishing techniques (Harris 2010:2).

Figure 5. 5 Mouth-blown shop crew from West Virginia working at the mould in 1908 (Lindsey 2015a)

5.3 Overall glass analyses, Boralga NMP site

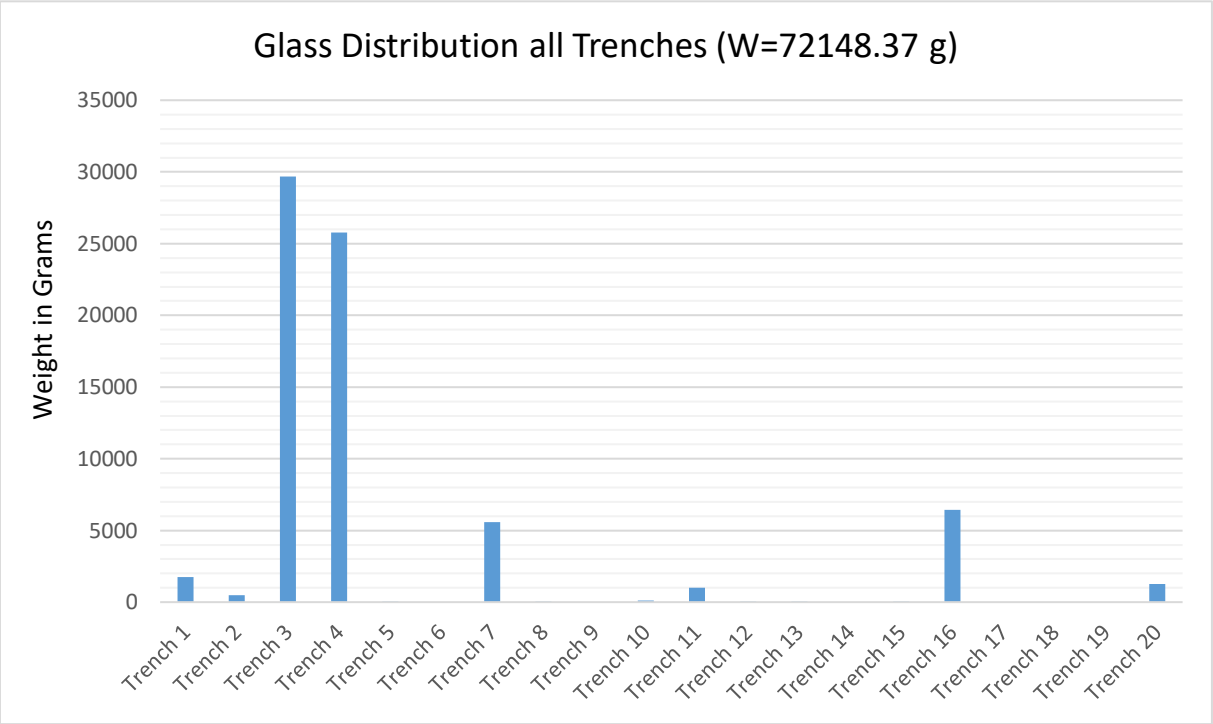


Figure 5. 6 Overall distribution of glass between trenches

5.3.1 Overall distribution of glass between trenches

Figure 5.6 includes weights for both individual items as well as grouped glass categories. Of the 72148.37 g of glass recovered, 23374 g (32%) were grouped fragments. Excluded from the graph are surface finds not associated with a trench, and shovel test pits (w=2609.1 g). Trench 3 dominated the assemblage with the maximum quantity of glass (w=29690.14 g, 41%). Trench 3 was a refuse area on the western side of the site. Second in abundance was Trench 4, also a refuse area (w=25774.13 g, 36%). Next was Trench 16 (w=6434.8 g, 9%), which contained a domestic deposit, followed by Trench 7 (w=5588.92, 8%) which was associated with the troopers' huts area. The remaining trenches each contained less than 5% of the overall assemblage and are listed in order of abundance; Trench 1 (w=1750.81 g, 2%), Trench 20 (w=1276.6 g, 2%), Trench 11 (w=1021.8 g, 1%), Trench 2 (w=473.6 g,<1%), Trench 10 (w=97.6 g, <1%), Trench 12 (w=26 g, <1%), Trench 8 (w=8.7 g, <1%), Trench 5, looted (w=4 g, <1%), Trench 15 (w=1.7 g, <1%) and Trench 13 (w=0.2 g, <1%). The following trenches contained no glass; Trenches 6, 9, 17, 18 and 19. As expected, the refuse areas contained the highest quantity of glass.

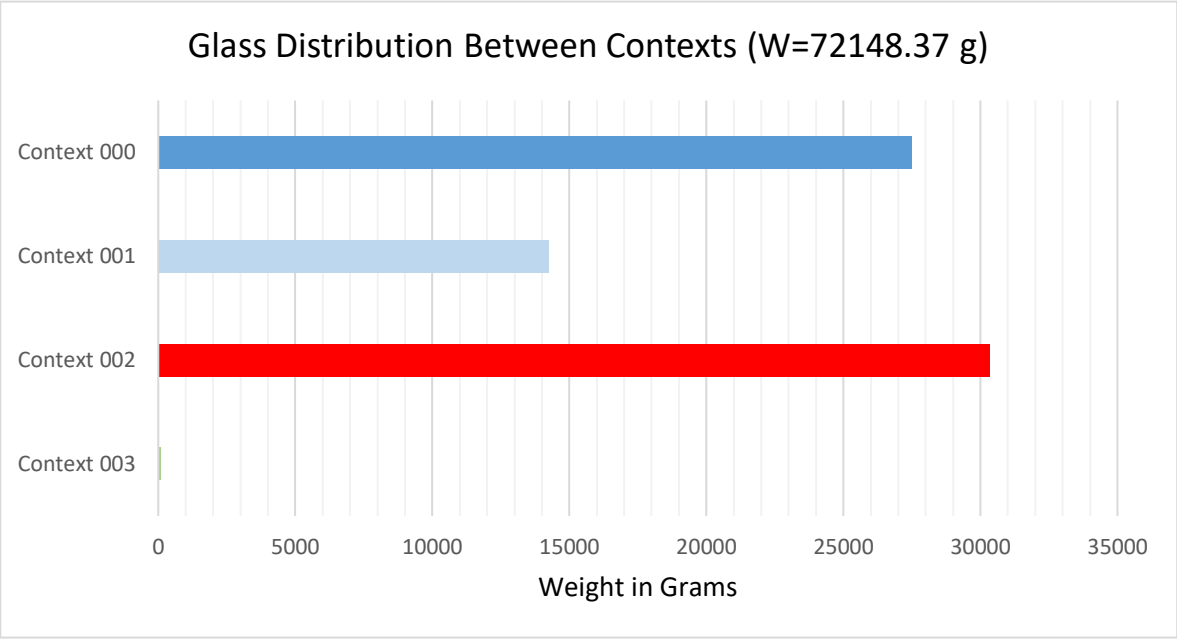


Figure 5. 7 Distribution of glass between contexts, all trenches

5.3.2 Overall distribution of glass between contexts

Figure 5.7 shows that Context 000 or surface finds, had the second highest quantity of glass at the site (w=27489.97 g, 38%), which decreased by almost half at Context 001 (w=14232.8 g, 20%). Context 002 had the maximum quantity of glass (w=30326.8 g, 42%), which significantly decreased at Context 003 (w=98.8 g, <1%). Figure 5.6 shows the high-density layer of artefacts derived from Context 002, which demonstrates the major occupation phase belonging to the NMP camp.

Figure 5. 8 Fragment count of glass objects, all trenches

5.3.3 Glass objects

Of the identifiable glass objects and fragments (n=1217) shown in Figure 5.8, bottles were by far the most abundant item at the site, which numbered 987 or 81% (this total increased to 4264 when grouped body fragments diagnostic to bottle level were included and counted individually). This total included all bottle categories, such as sauce, medicine, vinegar and perfume, with the majority represented by alcohol bottle glass (see Figure 5.10). Second in number to bottles was knapped glass, which included debitage (counted individually), flakes and cores (n=149, 12%). The relatively high quantity of knapped glass demonstrates that it was not an arbitrary pastime, but a ubiquitous activity at the site. The remaining objects each comprised less than 5% of the overall assemblage and are listed in order of abundance: other (n=35, 3%); tableware (n=21, 2%); kerosene lamp glass (n=9, <1%), and the least common object, drinking glass (n=2, <1%). The MNV is covered in section 5.3.12.

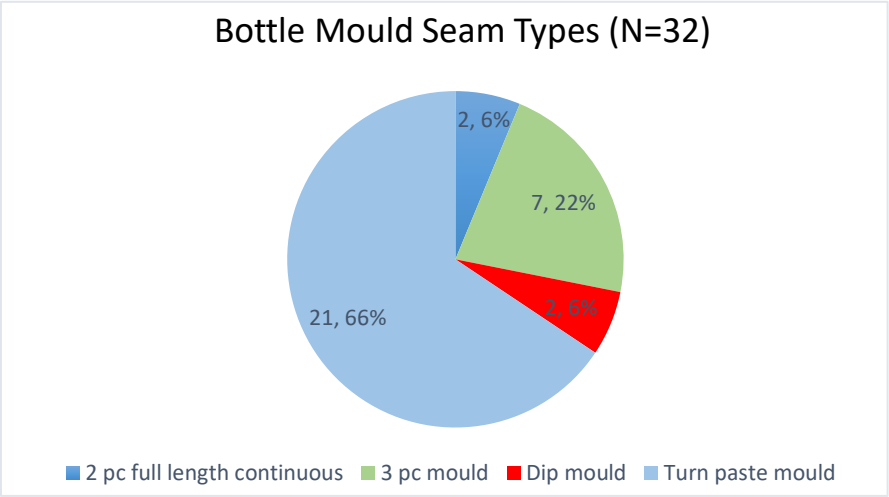


Figure 5. 9 Portion of identifiable bottle mould seam types, all trenches

5.3.4 Identifiable bottle mould seam types at Boralga

Figure 5.9 demonstrates that the number of identifiable mould seam types were limited due to the highly fragmented nature of the bottles at Boralga (n=32). The turn paste moulds, with no visible mould seams, were most common and were usually represented by wine or champagne bottles. Second in abundance were three-piece moulds which included the 'Lea & Perrins' Worcestershire sauce bottles. Two-piece full-length continuous moulds were identified on 'torpedo' bottles. Dip moulds were also rare, represented by unidentified bottles which were equivalent in number to full-length continuous moulds.

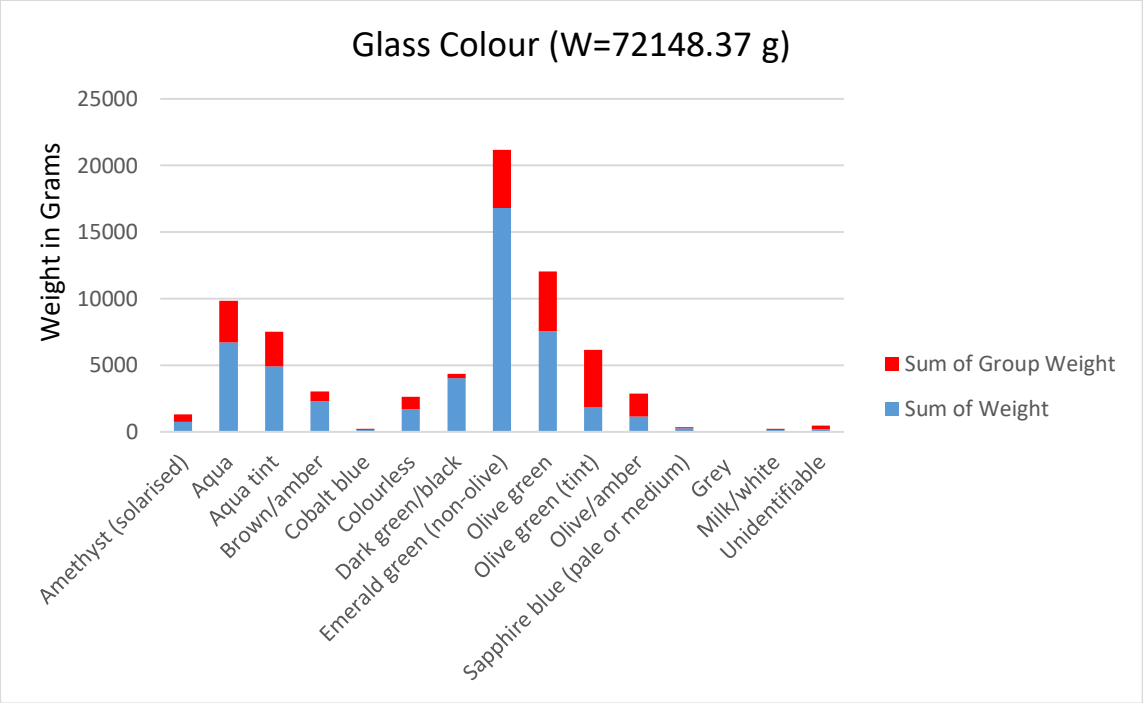


Figure 5. 10 Quantity of glass colour, all trenches

5.3.5 Glass colour

Figure 5.10 shows that the most abundant glass colour at the site was emerald green (w=21159.33 g), which encompassed 29% of the overall assemblage and largely consisted of wine or champagne bottles. The second most prevalent colour was olive green (w=12028 g, 17%), also highly represented by wine or champagne bottles. Third was aqua glass (w=9837.3 g), making up 14% of the overall assemblage, followed by aqua tint (w=7517.5, 10%), often used for sauce and salad oil/vinegar bottles. Olive green-tint glass (w=6150.87 g) comprised 9% of the assemblage, followed by dark green-black glass, mostly used for square case gin bottles (w=4354.42 g, 6%). The remaining glass colours each comprised less than 5% of the overall assemblage and are listed in order of abundance: brown/amber (w=3033.37, 4%), usually for beer bottles; olive/amber (w=2855.7 g, 4%); colourless (w=2632.2 g, 4%); amethyst or solarised (w=1305.3 g, 2%); unidentifiable (w=486.88 g, <1%); sapphire blue (w=335.5 g, <1%); milk/white (w=220.6 g, <1%); cobalt blue (w=215.3 g, <1%); and grey (w=16.1 g, <1%), which was the least common colour. The two most abundant colours were most often used for alcohol bottles.

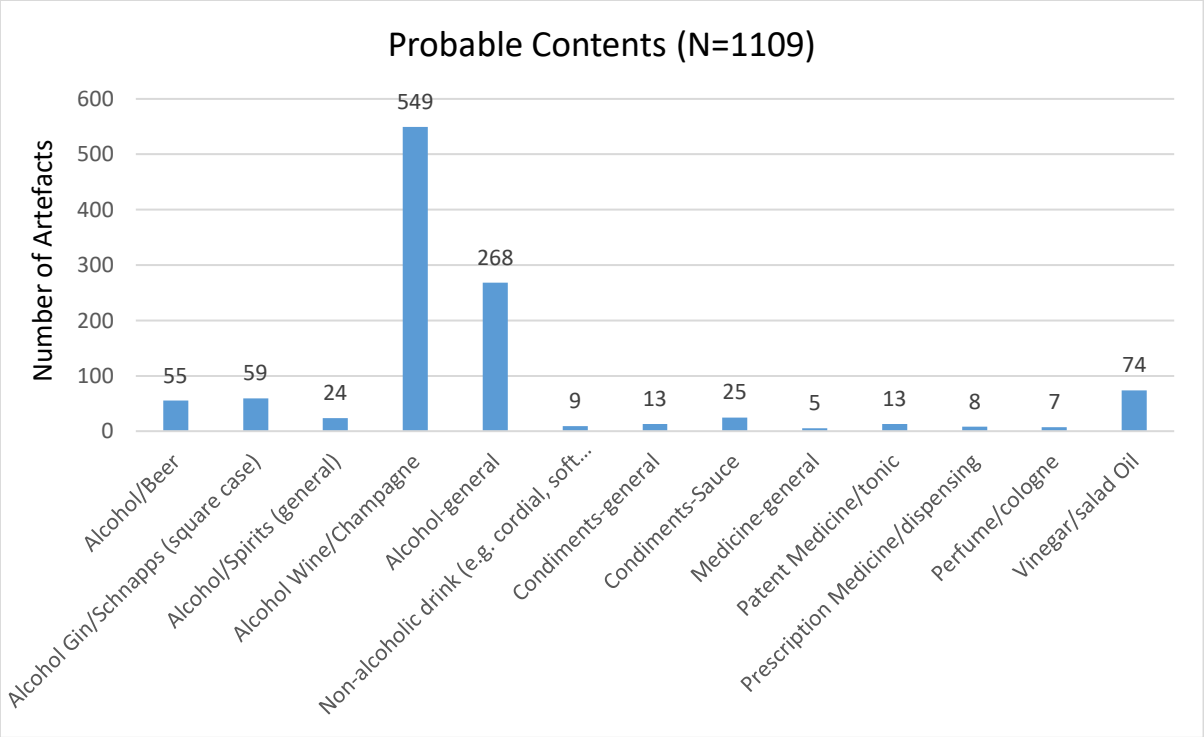


Figure 5. 11 Probable contents of bottles, all trenches

5.3.6 Probable contents of identifiable bottles

Fragments that could be identified for probable contents numbered 1109 overall (Figure 5.11). The total number of glass items at Boralga was 9584 (this includes single items and grouped fragments individually counted). Of those, 8475 items were unidentified or unidentifiable for probable contents, which is mainly due to the fragmented nature of the glass. As expected, wine or champagne significantly dominated the overall assemblage, with the maximum number of fragments (n=549, 50%). Second was general alcohol (n=268, 24%), followed by vinegar/salad oil (n=74, 7%), square case gin and schnapps (n=59, 5%), then beer (n=52, 5%). The remaining 'probable contents' each comprised less than 5% of the assemblage and are listed in order of abundance: condiments-sauce (n=25, 2%); general spirits (n=24, 2%); patent medicine/tonic (n=13, 1%); condiments-general (n=13, 1%); non-alcoholic drinks (n=9, <1%); prescription medicine/dispensing (n=8, <1%) and perfume/cologne (n=7, <1%). Medicine-general had the minimum with five items (<1%).

5.3.7 Probable contents and makers

Table 5. 1 Makers, dates and probable contents of identifiable bottles from Boralga

Maker	Date	References	Probable Contents
William F. Hamilton (torpedo bottles)	Post 1809	Riley 1958	Soda water
Charles A Vogeler Company	Post 1824	https://www.peachridgeglass.com/2014/01/a-vogeler-company-baltimore-md-march-1881-scientific-american-illustrations/	'St Jakobs Oel' cure all
Lea and Perrin's	Post 1837	Lindsey 2015e	Worcestershire sauce
Adolpho Wolf's Aromatic Schnapps	1850s-1880s	Lindsey 2015e	Schnapps
Frederick Stearns & Co	Post 1855	Odell 2007	Perfume
Scott's Emulsion	Post 1870s	Smithsonian National Museum of American History https://americanhistory.si.edu/blog/2009/10/cod-liver-oil-and-pink-peignoirs.html	Codd liver oil
Maconochie Brothers	Post 1873	Newton 2008	General condiments
John Lamont	1874-1890	Queensland Museum 2011	Aerated water
Wasboe's Norwegian Cod Liver Oil	c1880	https://www.worthpoint.com/worthopedia/1880s-wasboes-norwegian-cod-liver-oil-bottle-9	Codd liver oil
Perry Davis	1866-1870	https://www.vtmedicines.com/bottle192.htm	Pain killer
Van Hoboken & Co	1880-1900	Lindsey 2015e	Gin
Champions & Slee	1870-1930	Dale 2019	Vinegar
J.T Morton	Undated	Garland 2015	Vinegar

5.3.8 Probable contents between contexts

Table 5. 2 Frequency of probable contents between contexts, all trenches

Contents	Maker	Context 000	Context 001	Context 002	Context 003	Count of fragments
Beer	Unidentified	11 (20%)	1 (2%)	38 (69%)	5 (9%)	**55**
Gin/Schnapps	Van Hoboken & Co	0	15 (25%)	0	0	15 (25%)
	Adolpho Wolf's Aromatic Schnapps	1 (2%)	10 (17%)	3 (5%)	1 (2%)	15 (25%)
	Unidentified	10 (17%)	15 (25%)	4 (7%)	0	29 (49%)
						59
General Spirits	Unidentified	7 (29%)	8 (33%)	9 (38%)	0	**24**
Wine/champagne	Unidentified	65 (12%)	131 (24%)	353 (64%)	0	**549**
General Alcohol	Unidentified	0	152 (57%)	116 (43%)	0	**268**
Non-alcoholic Drink	John Lamont Aerated Water	3 (33%)	0	0	0	3 (33%)
	William F. Hamilton (torpedo) Soda Water	0	0	2 (22%)	0	2 (22%)
	Unidentified	0	1 (11%)	3 (33%)	0	4 (44%)
						9
General Condiments	Maconochie Brothers	0	0	5 (38%)	0	5 (38%)
	Unidentified	0	0	8 (62%)	0	8 (62%)
						13
Sauce	Lea & Perrin's Worcestershire sauce	6 (24%)	3 (12%)	16 (64%)	0	**25**
General Medicine	Unidentified	0	0	5	0	**5**

Patent Medicine/Tonic	'St Jakobs Oel' Charles A Vogeler Company	0	0	1 (8%)	0	1 (8%)
	Scott's Emulsion cod liver oil	0	0	3 (23%)	0	3 (23%)
	Wasboe's Norwegian Cod Liver Oil	0	0	3 (23%)	0	3 (23%)
	Sparking Pontiled Perry Davis Vegetable Pain Killer	0	0	3 (23%)	0	3 (23%)
	Unidentified			3 (23%)		3 (23%)
						13
Prescription/Dispensing Medicine	Unidentified	0	2 (25%)	6 (75%)	0	**8**
Perfume	Frederick Stearns & Co.	0	3 (43%)	0	0	3 (43%)
	Unidentified	0	1 (14%)	3 (43%)	0	4 (57%)
						7
Vinegar	Champion's & Slee	7 (9%)	13 (18%)	23 (31%)	0	43 (58%)
	J.T. Morton	1 (2%)	9 (12%)	21 (28%)	0	31 (42%)
						74
						Overall Total 1109

5.3.9 Overall glass dates for Boralga NMP camp

Table 5. 3 Dates and count of identifiable glass items at Boralga

(N=206)	
Date range	**Count**
1800-1900s	2
c1800-1920	9
c1820-1880	1
c1840s-1900s	26
1840-1920	5
1850s-1880s	8
1850-1890s	1
c1850s-1900s	14
c1850-1920s	26
c1860-1890	1
c1860-c1900s	1
1866-1870	1*
c1870-1890	9
1870-1900	8
c1870-c1920	21
1870-1930	33
c1880	3
1880-1900	11
c1880s-1903	1
1880s-1910s	1
1880-1915	1
1880s-1930s	10
c1885-c1920s	1
c1890s-1900	1
Post 1809	2
Post 1824	1
Post 1855	1
Post 1860	1
Post 1870	1
Post 1877	1
Post 1884	4
Total	**206**

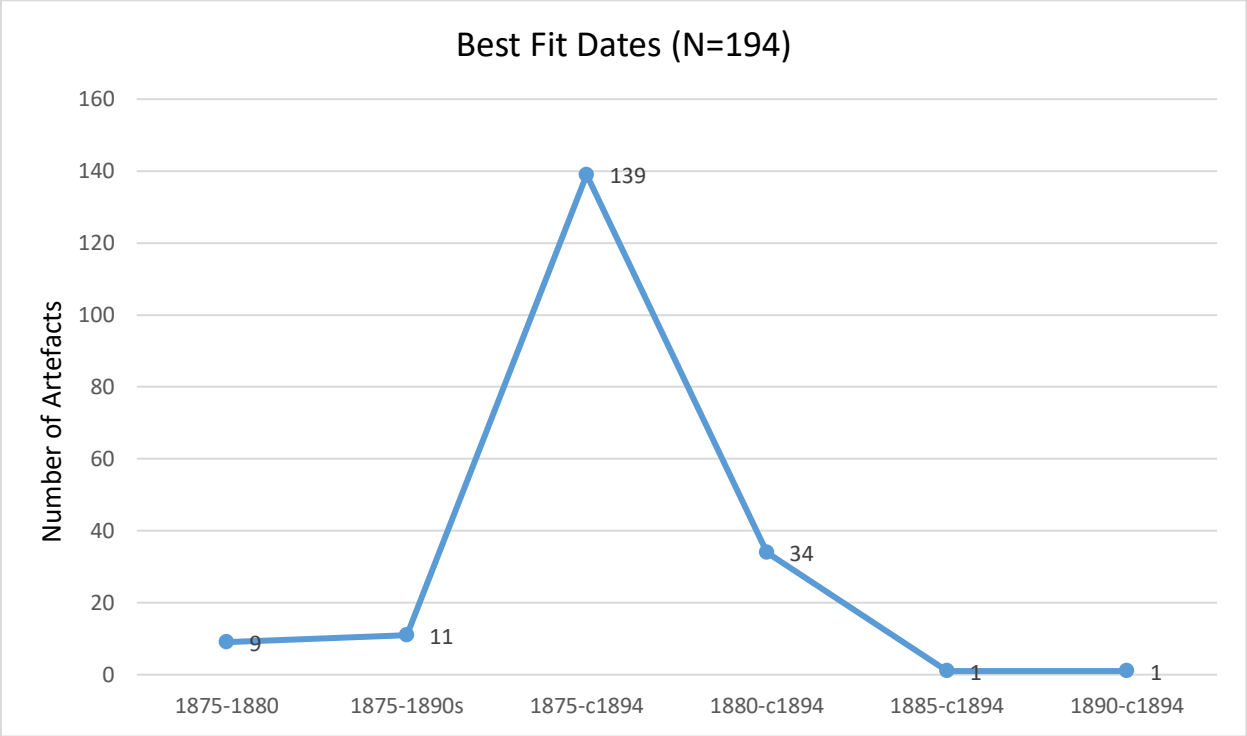


Figure 5. 12 Count of items - best fit dates between 1875-c1894, all trenches

5.3.10 Best fit dates for glass between 1875-c1894

Of the 206 objects and fragments listed in Table 5.3, 194 items appear in the best fit graph (Figure 5.12). Not included in the graph is a bottle fragment dated earlier than the Boralga occupation date range of 1875-c1894, which is marked on table 5.3 with a red asterisk. Also excluded from the graph are the post-dates listed in the table from 1809 through to 1884, which are open ended (12 items). The time ranges used were based on manufacture dates of items at the site, and as a result various time spans differ in length, with the widest time span being the exact date range of occupation, which is 19 years. The date range between 1890-c1894 encompassed one item and spans only four years. The apparent trend of increase then decrease is partly due to narrower manufacture time frames either side of occupation. As expected, the exact date range of occupation encompassed the majority of glass items (n=139, 72%). Items that appeared between 1875-1880 (n=9, 5%) and 1875-1890 (n=11, 6%) totalled 11%. Dates between 1880-c1894 (n=34) were the second most popular date range at 17%. The date range between 1885-c1894 (n=1, <1%) and between 1890-c1894 (n=1, <1%) both had the minimum number of items.

5.3.11 General date ranges for glass items at Boralga, in order of abundance

The date range between 1870-1930 dominated the assemblage for glass items with 33 entries (this increases to 54 when turn paste moulds are included), which is partly due to the highly recognisable 'Champions and Slee' vinegar bottle commonly found at the site (Figure 5.13). This bottle is highly ornate in design so that it can be placed directly onto the dinner table. The bottle is aqua tint in colour and features fluted shoulders, multiple facets and a dodecahedron shaped base, making even the smallest body fragment identifiable (Farrell 2015). Also, falling within this date range are turn paste moulds which occurred between c1870-c1920, and would apply to the majority of wine or champagne bottles found at the site, however only sherds big enough to be identified as having erased mould seams could be included in the table, and therefore represent only 21 items (Figure 5.14). Turn paste moulds can sometimes be recognised by faint horizontal rotational lines on the glass surface (Jones and Sullivan 1989:31; Boow 1991:8).

Figure 5. 13 Conjoined finish, neck and shoulder fragments of an ornate 'Champions & Slee' vinegar bottle from Trench 4, dated between 1870-1930 (Photograph Bateman 2017)

Figure 5. 14 'Turn paste' mould dated between c1870-c1920. Complete wine or champagne bottle from Trench 4 (Photograph Bateman 2016)

The next two date ranges contained equivalent numbers at 26 items each. The first date range is c1840s-1900s, which was when the applied ‘double collar’ finish became widespread (Figure 5.15). The ‘double collar’ finish usually had a longer upper collar than the lower portion, with the depth of both collars gradually increasing to 25 mm by c1860 (Boow 1991:66-68). Only 9 out of the 26 ‘double collars’ found at the site were intact enough to be identified as dating from c1860 or later.

Figure 5. 15 ‘Double collar’ applied finish from an alcohol bottle dated between c1840s-1900s. From Trench 7 (Photograph Bateman 2017)

The date range between c1850-1920s also totalled 26 items. This is partly due to ‘single collar ring’ and ‘oil’ finishes (Figure 5.16), as well as ‘brandy’ finishes (1860) which commenced slightly later (Lindsey 2015d). The prevalent ‘Lea & Perrins’ Worcestershire sauce bottles were also manufactured during this time, which were aqua tint in colour (Figure 5.17). Other than the highly diagnostic ‘club sauce’ applied finish, these bottles were relatively plain in appearance. However, the trademark ‘Lea & Perrins’ was embossed along the length, often assisting identification. Twelve ‘Lea & Perrins’ ground glass stoppers (Figure 5.18) also added to the total number of items (Lunn 1891). Almost paralleling this time frame were ‘blob top’ finishes (Figure 5.19) that were applied to soda water, mineral bottles and some alcohol bottles, which date between the 1840s-1920, and numbered five in table 5.3 (Lindsey 2015d).

Figure 5. 16 ‘Brandy’ or ‘collar with ring’ finish dated between 1860-1920s from Trench 16 (Photograph Bateman 2018)

Figure 5. 17 ‘Lea & Perrins’ Worcestershire sauce bottle dated between c1850s-1920s. Surface find at Trench 4 (Photograph Bateman 2016)

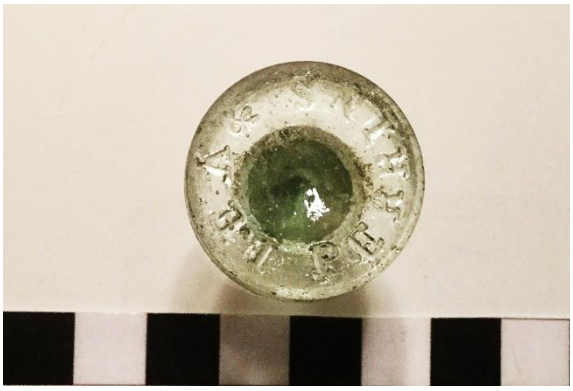


Figure 5. 18 ‘Lea & Perrins’ Worcestershire sauce ground glass stopper dated between c1850s-1920s, from Trench 4 (Photograph Bateman 2016)

Figure 5. 19 ‘Blob top’ finish of an unidentified bottle dated between 1840s-1920 from Trench 16. Glass is covered in a hard, undiagnosed deposit (Photograph Bateman 2018)

The date range between the 1850s-1900s was when the ‘square patent’ finishes on extract, patent and propriety medicine bottles, were most common, which were manufactured from the1850s until well after the turn of the century (Lindsey 2015d). These numbered 14 items (Figure 5.20).

Figure 5. 20 Square patent finish, neck and partial shoulder fragment of a medicine bottle dated between 1850s-1900s, from Trench 7 (Photograph Bateman 2017)

The date range between 1880-1900 totalled 11 items, partly due to the prevalence of the olive amber coloured AVan Hoboken & Co./Rotterdam gin bottles (Figure 5.21). These were large case gin bottles produced in the late nineteenth century (Lindsey 2015e). The bottles had a two-piece ‘cup bottom’ mould, a crudely applied ‘blob top’ finish and highly diagnostic ‘blob seal’ on the shoulder (AVH, see Figure 5.22), and should not to be confused with the A Houtman & Co Schnapps bottle blob seal (AH) which is similar in appearance (Barker *et al*, 2018).

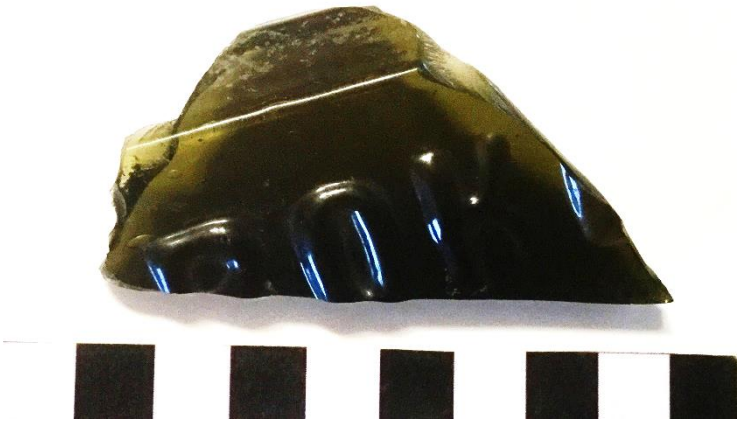


Figure 5. 21 A body fragment from an A Van Hoboken & Co./Rotterdam gin bottle (embossed letters BOK) dated between 1880-1900, from Trench 11 (Photograph Bateman 2017)

Figure 5. 22 ‘Blob Seal’ (AVH) located on the shoulder of an AVan Hoboken & Co./Rotterdam gin bottle dated between 1880-1900, from Trench 11 (Photograph Bateman 2017)

1880s-1930s had 10 items and was the date range that included the applied single collar finish for wine and champagne bottles (Figure 5.23). During this time manufacturers adopted an angled or bevelled top surface around the rim, which was typical of mouth blown bottles of this period (Lindsey 2015d). Only single collar finishes that where intact enough to identify this feature were included in this date range.

Figure 5. 23 Applied single collar finish and neck fragment of a wine or champagne bottle from Trench 7, with bevelled top surface around the rim, typical of mouth blown bottles from the 1880s-1930s (Photograph Bateman 2017)

Equivalent with nine items each was the extensive date range c1800-1900s. This time frame encompassed the period of the ‘flared’ or ‘prescription’ finish (Lindsey 2015d, Figure 5.24). Also totalling nine items was the date range c1870-1890, which included the rather crudely made dark green black ‘square case gin’ bottles (Figure 5.25) that featured chamfered corners and sides (Lindsey 2015e).

Figure 5. 24 ‘Flared’ or ‘prescription lip’ finish, neck and partial shoulder fragment from a small medicine bottle dated between c1800-1900s. From Trench 16 (Photograph Bateman 2018)

Figure 5. 25 Dark green-black, crudely made ‘square case gin’ bottle body and base with chamfered corners and sides, from Trench 1. Dated c1870-1890 (Photograph Bateman 2016)

Two date ranges were equivalent at eight items each. The first was between the 1850s-1880s, and was mostly represented by Adolpho Wolf's Aromatic Schnapps bottles (Figure 5.26), which were easily identified by their large embossed lettering, olive green colour and flat sides (Lindsey 2015e). An additional eight items fell within the date range of 1870-1900, which was when post-bottom moulds became common for bottle bases (Jones and Sullivan 1975:28). The post-bottom base shown in Figure 5.27 is from a complete 'St Jakobs oel' bottle made by the Charles A Vogeler Company from Baltimore USA (originally German), manufactured post 1824 (Meyer 2014). The bottle is long and narrow and has two distinct mould seams that extend past the neck. The 'double ring' or 'double collar' dates between 1840-1920s (Lindsey 2015d). The company manufactured drugs and chemicals and it is believed that this product was a cure all that contained eucalyptus oil (Worthpoint 2018).

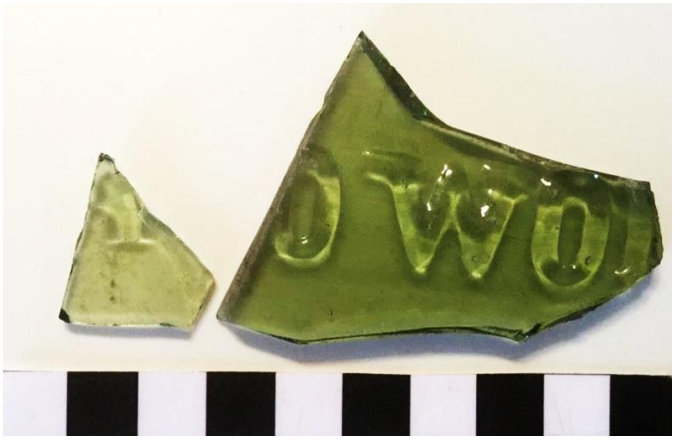


Figure 5. 26 Two grouped body fragments of an Adolpho Wolf's Aromatic Schnapps bottle dated 1850s-1880s (embossed letters 'O WOL'). From Trench 11 (Photograph Bateman 2017)

Figure 5. 27 Example of 'post bottom' base which dates between 1870-1900. Complete 'St Jakobs oel' bottle from Trench 16, made by the Charles A Vogeler Company from Baltimore USA, dated post 1824. (Photograph Bateman 2018)

Many of the items in Table 5.3 were fragments only (conjoins were counted as one item), therefore dates were identified using bases, finishes, mould seams or embossing. An issue that complicates bottle dates from Australian historic sites is that the ranges are often expansive, making precise use dates difficult to establish. An added complicating factor is the practice of reusing or keeping bottles, which can sometimes distort time frames (Nayton 1992:78). One aqua tint, rectangular shaped bottle pre-dated Boralga occupation, which was a three part conjoin and dated between 1866-1870. The embossed lettering indicated that it was a 'Sparking Pontiled Perry Davis Vegetable Pain Killer' bottle. This contained mainly opiates and ethyl alcohol which was designed for pain relief rather than curing a disorder. The concoction was created by Perry Davis in 1840 and patented in 1845. The product was manufactured in Fort Trumbull Glass Works, New London, Connecticut between 1866 – 1870 (https://www.vtmedicines.com/bottle192.htm). As it is a medicinal product, the bottle may have been bought before occupation at Boralga and then brought to the site.

5.3.12 Object component and NMV

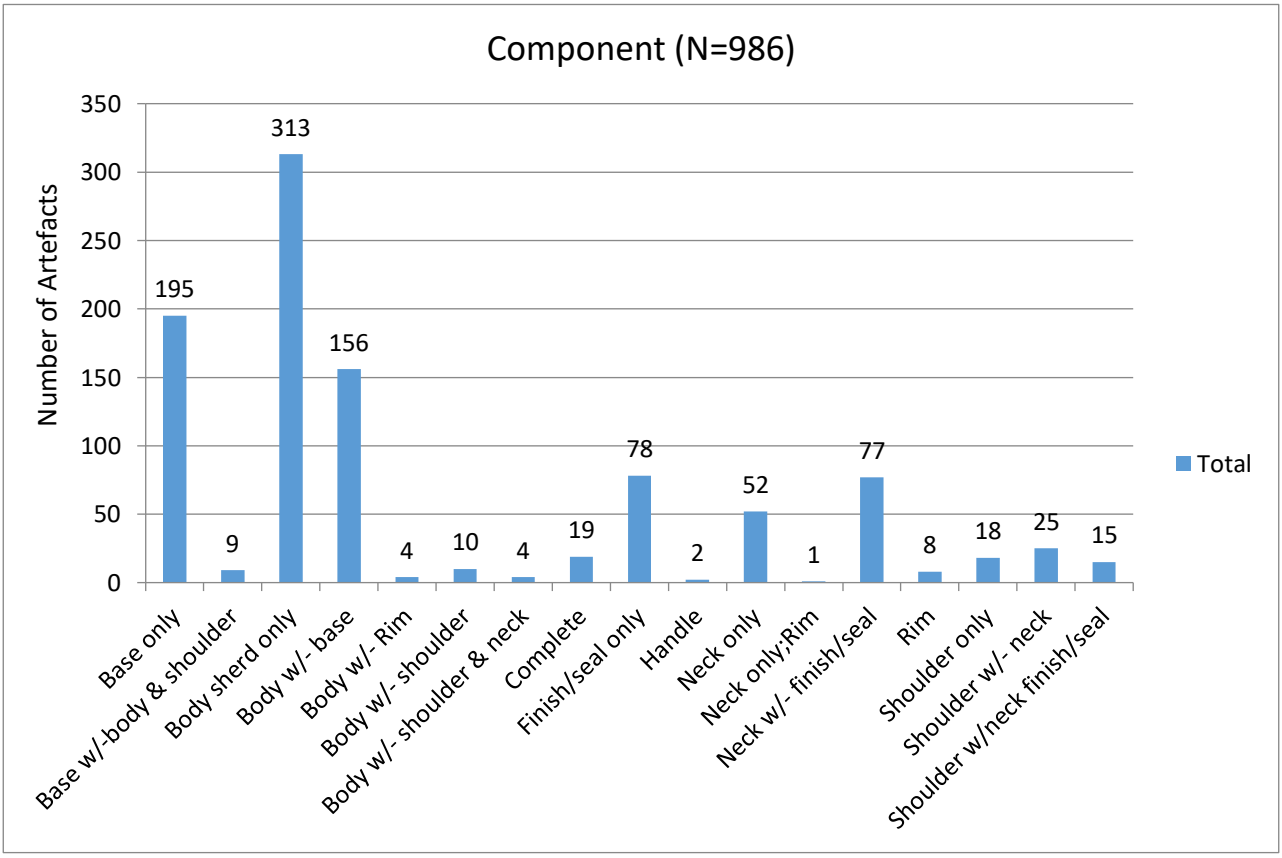


Figure 5. 28 Object component, all trenches

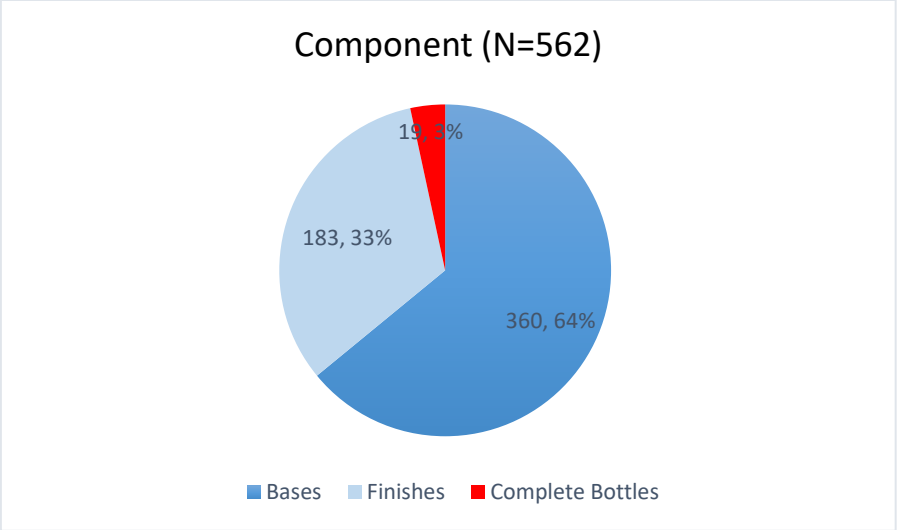


Figure 5. 29 Bottle components, all trenches

Grouped body fragments (n=8422 counted individually) were not included in Figure 5.28, as they are not useful in this instance for the MNV. Individual body sherds dominated the assemblage with a maximum of 313 fragments (32%). The high number of grouped fragments and individual body fragments demonstrate the highly fragmented state of the assemblage. Bases were second in frequency to body sherds (n=195, 20%), followed by body with base fragments (n=156, 16%). Almost equivalent in number were finish/seals (n=78, 8%), and necks with a finish/seal (n=77, 8%). Neck portions totalled 52 (5%). The remaining components each comprised less than 5% of the assemblage and are listed in order of abundance: shoulder with neck (n=25, 3%); complete (n=19, <2%); shoulder (n=18, <2%); shoulder with neck and finish/seal (n=15, <2%); body with shoulder (n=10, 1%); base body and shoulder (n=9, <1%); rim (n=8, <1%); body with rim (n=4, <1%); body with shoulder and neck (n=4, <1%); handle (n=2, <1%); and neck and rim (n=1, <1%). By adding the portions that included a base and finish component, it could be established that the majority of components contained bases (n=360). The finishes numbered 183, and complete bottles were 19 (Figure 5.29). Therefore, the overall MNV was 379 bottles.

5.3.13 Knapped glass

Debitage was separated into colour categories and mostly recorded as grouped fragments which were entered as one item (see Figure 5.31). The individual debitage count totalled 105 fragments. Within the overall assemblage at Boralga, the mean number of pieces in a debitage group was six, with the maximum number being 17, and the minimum being two. Dominating the assemblage for knapped glass objects was debitage (n=105 or 18 groups), followed by flakes (n=31), then cores (n=13), as shown in Figure 5.30. A breakdown of knapped glass distribution and frequency will be established in the following individual trench sections.

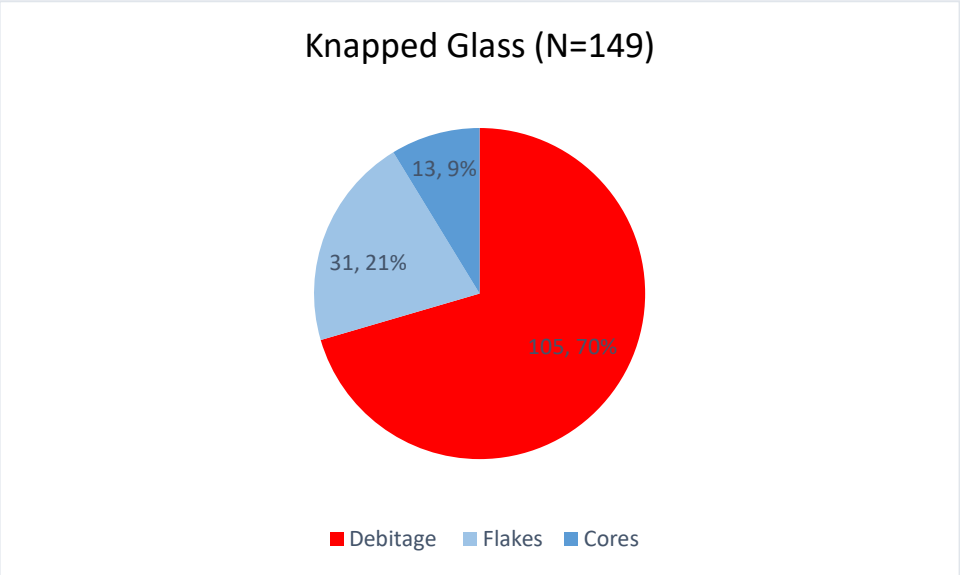


Figure 5. 30 Proportion of knapped cores, flakes and debitage, all trenches

Figure 5. 31 Debitage from Trench 7, or the trooper's huts area
(Photograph Bateman 2017)

5.4 Glass analyses, individual trenches

The following sections analyse six of the 20 trenches at Boralga in more detail, as trenches 1, 3, 4, 7, 16 and 20 each contained 2% or more of the overall glass weight (see Figure 5.6).

5.5 Trench 1

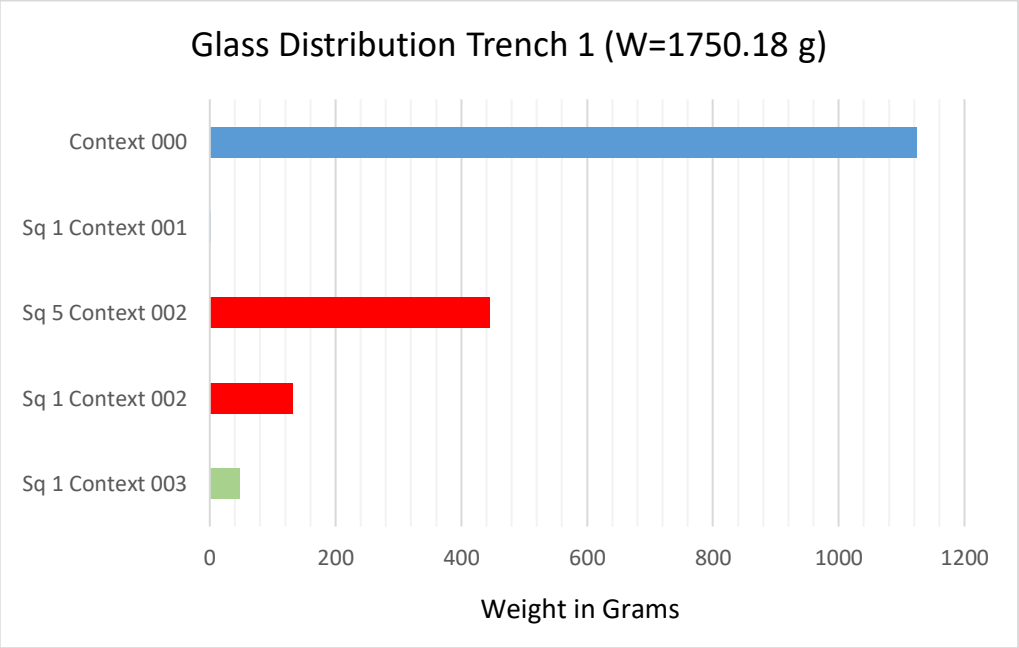


Figure 5. 32 Distribution of glass between contexts, Trench 1

5.5.1 Distribution of glass between contexts

Figure 5.32 shows that the surface finds at Trench 1 (Context 000) represented the maximum quantity of glass (w=1124.48 g, 80%), far exceeding the underlying Context 001 (w=0.5 g, <1%), which had the minimum quantity. Square 5, Context 002 was second in abundance (w=321.2g, 22%,), followed by and Square 1, Context 002 (w=4.9 g, <1%). Square 1, Context 003 (w=25.7 g) was low in glass artefact density representing only 2% of the assemblage. Overall, the artefacts at Trench 1 were relatively low in density, and the majority were located on the current ground surface. The pulse at Context 002 demonstrates the major occupation horizon belonging to the NMP camp.

5.5.2 Glass objects

The objects derived from Trench 1 consisted of fifteen bottle items (this total increased to 60 when grouped body fragments diagnostic to bottle level were included and counted individually). Objects included one complete perfume bottle (Figure 5.33), and one almost complete wine or champagne bottle (Figure 5.34). The MNV is covered in section 5.5.6.

Figure 5. 33 Complete perfume bottle with square patent finish, c1850s-1900s from Trench 1, Square 5, Context 002 (Photograph Bateman 2016)

Figure 5. 34 Wine or champagne bottle with missing finish from Trench 1, Context 000 (Photograph Bateman 2016)

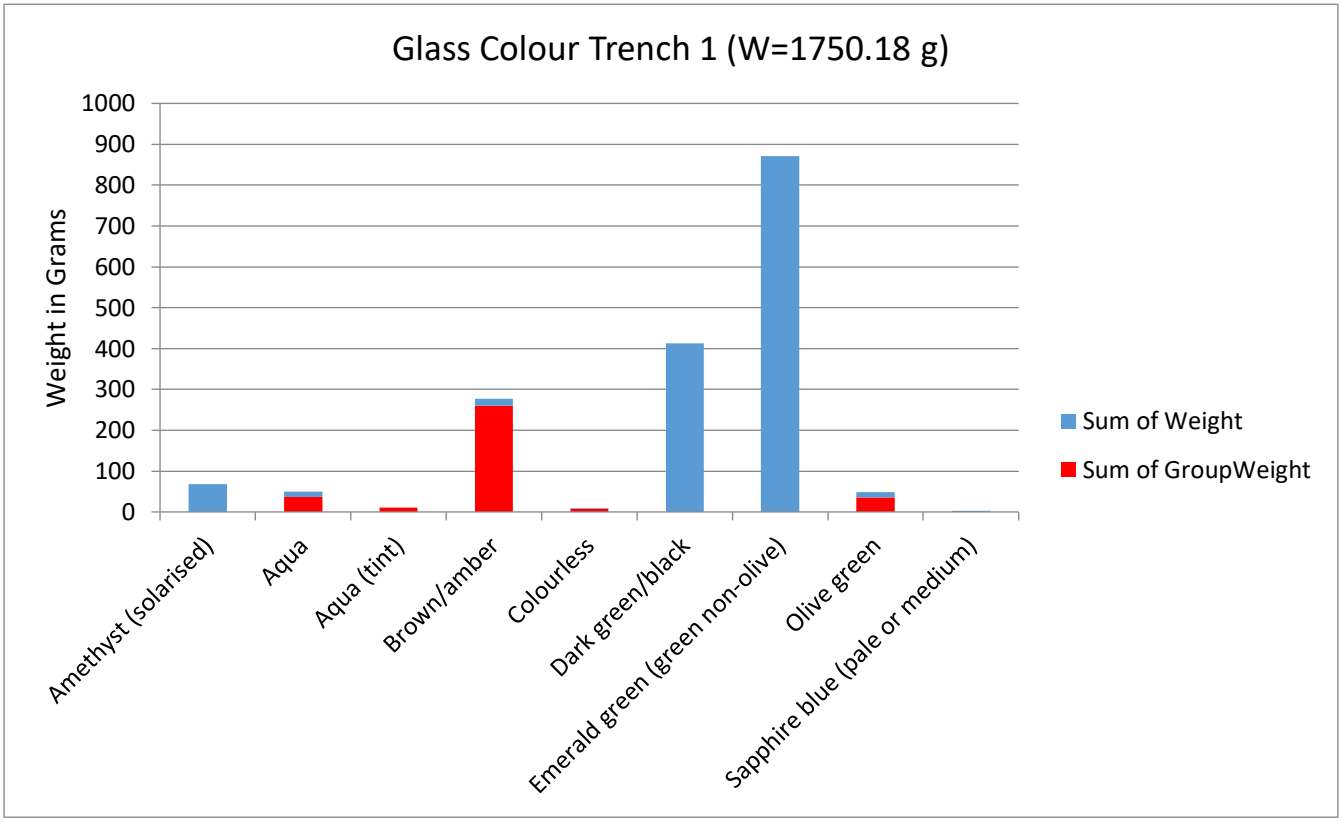


Figure 5. 35 Quantity of glass colour, Trench 1

5.5.3 Glass colour

Figure 5.35 shows that emerald green glass dominated Trench 1, and represented almost half of the assemblage (w=870.58 g, 50%). Second was dark green/black (w=412.8 g, 24%), which equated to almost half of the emerald green glass. This was followed by brown/amber glass (w=276.8 g, 16%). Amethyst was next with 67.9 g (4%), which comprised the perfume bottle. Aqua glass weighed 50.4 g, representing only 3%. Olive green was almost equivalent to aqua at 48.9 g, or just under 3%. The remaining colours represented less than 1%: aqua tint (w=11 g, <1%); colourless (9.3 g, <1%); and sapphire blue (2.5 g, <1%). In this instance, the three most abundant glass colours were most often used for alcohol bottles. The total weight of grouped body fragments was 351.8 g, which is approximately half the weight of one wine bottle, therefore the quantity was not enough to carry out an EVE for any recognisable bottle type.

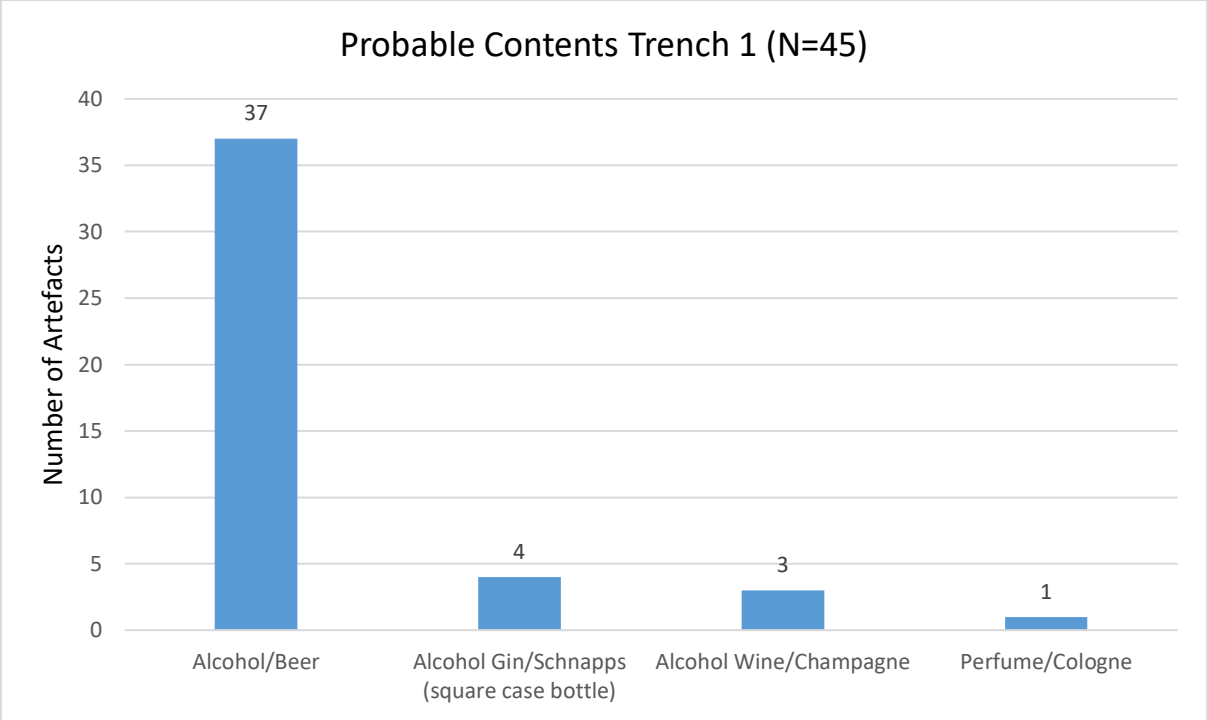


Figure 5. 36 Fragments count of probable contents, Trench 1

5.5.4 Probable contents of identifiable bottles

Forty-five items from Trench 1 could be identified for probable contents (grouped fragments individually counted). An aqua coloured three collar finish could not be identified for contents (see Figure 5.39). Figure 5.36 shows that the maximum number was beer (n=37, 82%), followed by gin/schnapps with four items (Figure 5.37), which represented 9%, then wine or champagne (n=3, 7%). Perfume/cologne had the fewest (n=1, 2%). Forty-four out of the 45 contents were forms of alcohol.

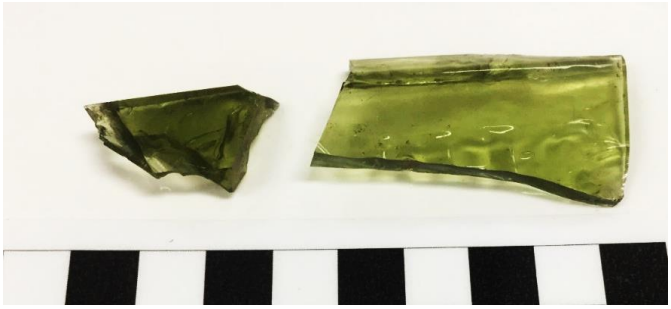


Figure 5. 37 Two body fragments of an Adolpho Wolf's Aromatic Schnapps bottle dated 1850s-1880s, from Trench 1, Square 5, Context 002 (Photograph Bateman 2017)

5.5.5 Probable contents between contexts

Table 5. 4 Frequency of probable contents between contexts, Trench 1

Contents	Maker	Context 000	Context 001	Context 002	Context 003	Total fragment count
Beer	Unidentified	0	0	32 (86%)	5 (14%)	**37**
Gin/Schnapps	Adolpho Wolf's Aromatic Schnapps	0	0	2 (50%)	1 (25%)	3 (75%)
	Unidentified	1 (25%)	0	0	0	1 (25%)
					Total	**4**
Wine/champagne	Unidentified	1 (33%)	0	2 (67%)	0	**3**
Perfume	Unidentified	0	0	1 (100%)	0	**1**
						Overall total 45

5.5.6 Object component and MNV

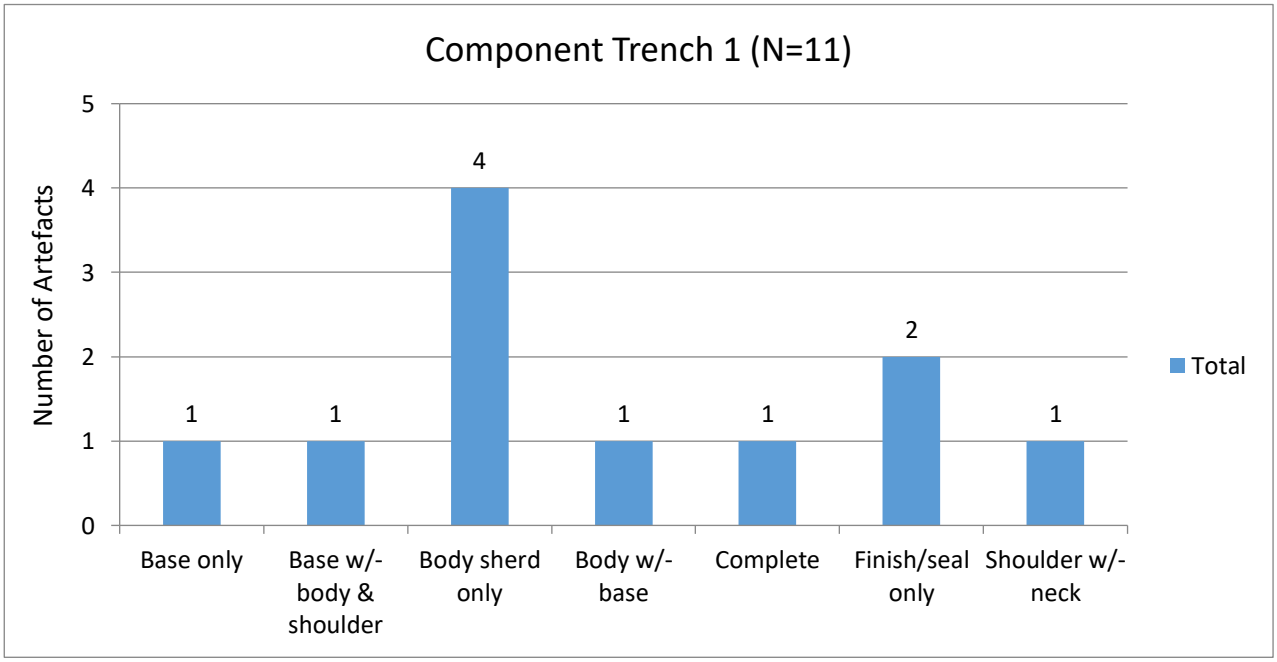


Figure 5. 38 Object component, Trench 1

Figure 5. 39 Portion of an aqua coloured 'three collar finish' or 'club sauce finish' (used for sauce, alcohol and medicine) from Trench 1, Square 5, Context 002 (Photograph Bateman 2016)

Grouped body fragments (n=96) were not included in Figure 5.38, as they are not useful for the MNV. Individual body sherds dominated the assemblage with a maximum of four fragments (36%). Second to body sherds, were finishes/seals (n=2, 18%). The remaining five components numbered the least at one item each (equivalent to 9% per item): base; base with body; base with body and shoulder; neck with shoulder and complete. By adding the portions that included a base and finish component, it could be established that the majority of components had a base portion (n=3). The finishes numbered two, and only one complete bottle was recovered from Trench 1 (Figure 5.40). Therefore, including the complete bottle, the MNV was three bottles.

No knapped glass was derived from Trench 1.

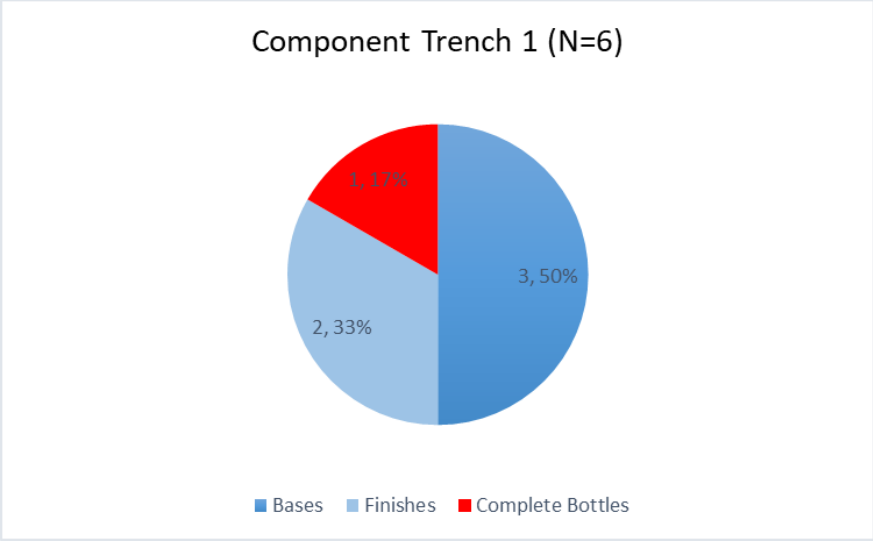


Figure 5. 40 Bottle component, Trench 1

5.6 Trench 3

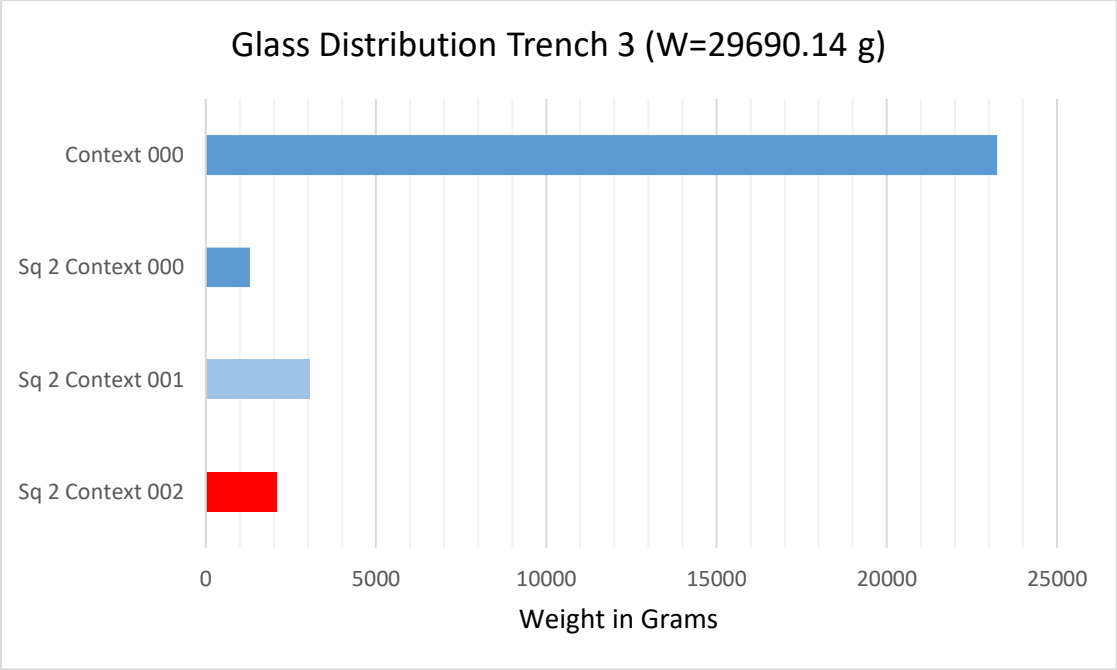


Figure 5. 41 Distribution of glass between contexts, Trench 3

5.6.1 Distribution of glass between contexts

Trench 3 was located over a large primary refuse area, and only Square 2 was excavated. Context 000 dominated (w=24535.5 g, 83%), which was made up of broken material most likely left behind by bottle collectors, and is reflected in the results. Context 001 was second highest in abundance with 3060.5 g, representing 10% of the assemblage. The third highest quantity of glass was derived from Context 002, with 2094.14 g, or 7% (Figure 5.41).

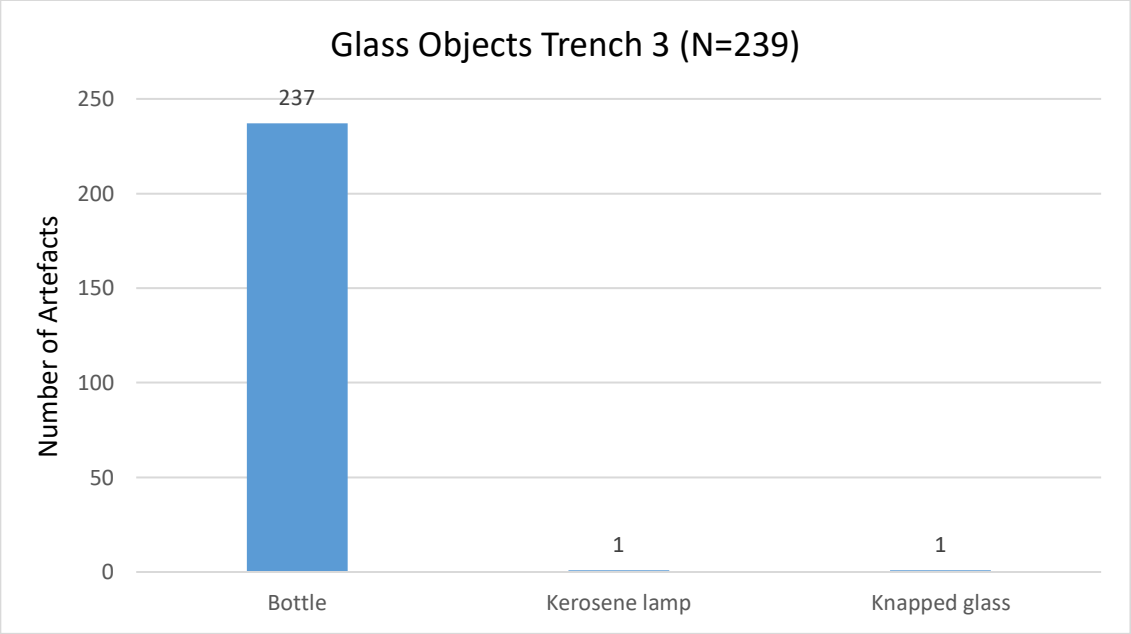


Figure 5. 42 Fragment count of glass objects, Trench 3

5.6.2 Glass objects

Figure 5.42 demonstrates that, of the 239 glass objects derived from Trench 3, bottle sherds were by far the most abundant numbering 237, representing 99% (this total increased to 1474 when grouped body fragments diagnostic to bottle level were included and counted individually). The remaining two objects each comprised less than 1% of the overall assemblage with one item each, kerosene lamp glass and a knapped glass flake (Figure 5.43). The MNV is covered in section 5.6.6.

Figure 5. 43 Knapped glass flake from Trench 3, Square 2, Context 002 (Photograph Bateman 2016)

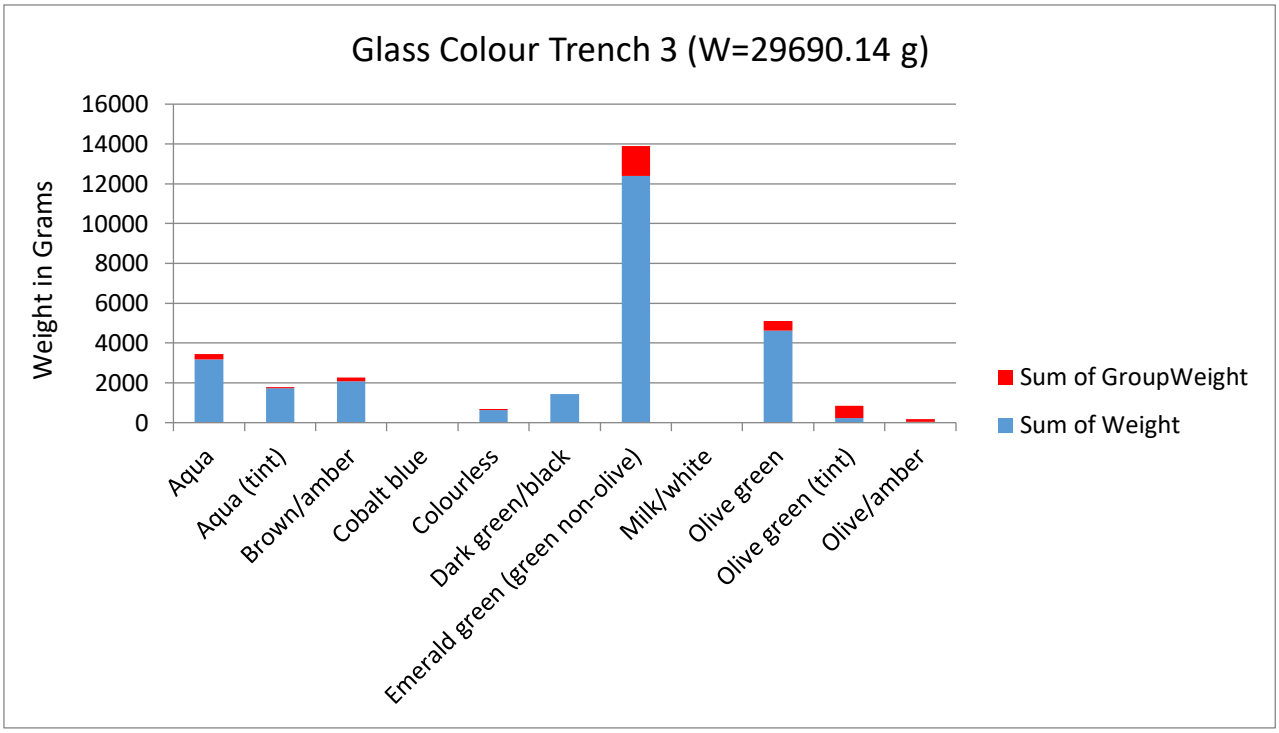


Figure 5. 44 Quantity of glass colour, Trench 3

5.6.3 Glass colour

Figure 5.44 shows that emerald green was the most frequent glass colour (w=13907.6 g) and was equivalent to 47% of the assemblage at Trench 3. Second in abundance was olive green (w=5102.5 g, 17%), followed by aqua (w=3455.5 g, 12%). Amber glass weighed 2273.27 g, representing 8%, with aqua tint (w=1789.4 g, 6%) next in abundance. Dark green black had no grouped fragments and represented 1447 g or 5% of the overall total. Olive green tint had 855.57 g (3%) followed by colourless glass (w=683 g, 2%). Olive-amber had 175.9 g (<1%), and milk-white glass had the minimum quantity with only 0.4 g, (<1% of the assemblage). The two most abundant glass colours were most often used for alcohol bottles. The average weight of an emerald green or olive green wine or champagne bottle is 833 g. The EVE for emerald green wine or champagne glass is approximately 16 bottles, and olive green is approximately six bottles.

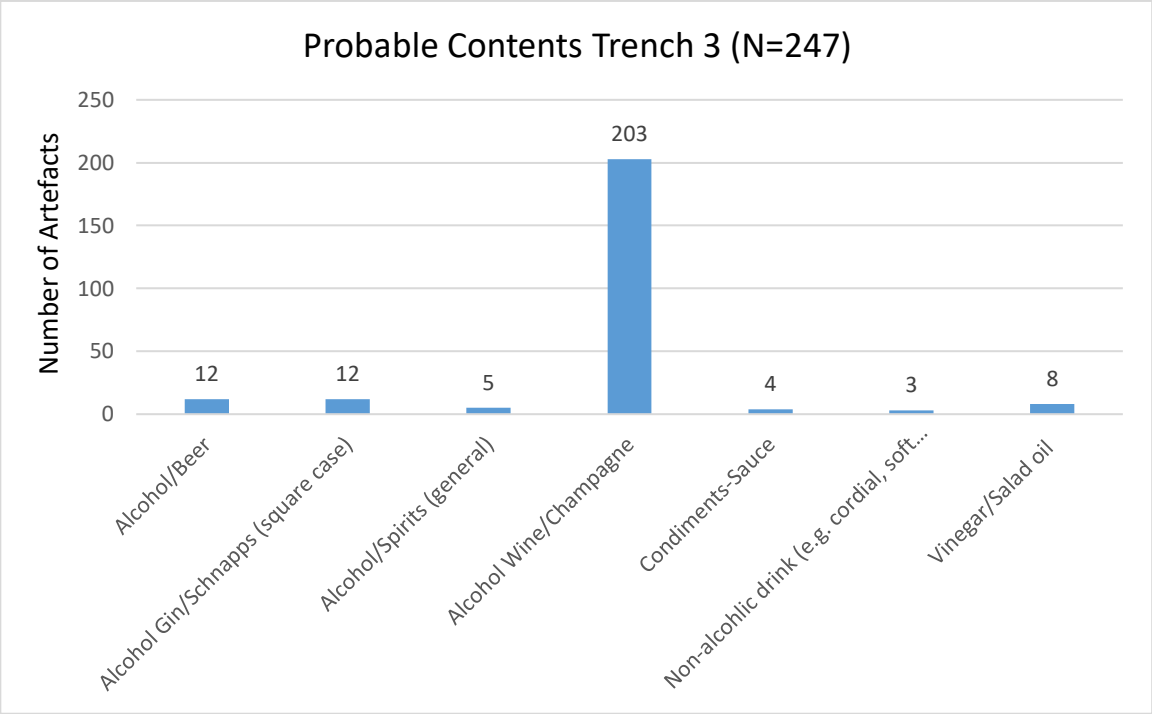


Figure 5. 45 Fragment count of probable contents, Trench 3

5.6.4 Probable contents of identifiable bottles

Figure 5.45 demonstrates that 247 glass items were identified for probable contents. The Trench 3 assemblage was dominated by wine or champagne (n=203, 83%), followed by gin/schnapps and beer, which were equivalent in number (n=12, 5% each). Next was vinegar/salad oil (n=8, 3%), alcohol/spirits general (n=5, 2%), then condiments-sauce (n=4, 2%). Non-alcoholic drinks had the minimum (n=3, 1%; Figure 5.46).

Figure 5. 46 Aqua 'John Lamont' bottle body and base for aerated water which dates between 1874-1890, from Trench 3, Context 000 (Photograph Bateman 2016).

5.6.5 Probable contents between contexts

Table 5. 5 Frequency of probable contents between contexts, Trench 3

Contents	Maker	Context 000	Context 001	Context 002	Context 003	Total fragment count
Beer	Unidentified	11 (92%)	1 (8%)	0	0	**12**
Gin/Schnapps	Van Hoboken & Co	0	1 (8%)	0	0	1 (8%)
	Adolpho Wolf's Aromatic Schnapps	1 (8%)	4 (34%)	0	0	5 (42%)
	Unidentified	2 (17%)	3 (25%)	1 (8%)	0	6 (50%)
					Total	**12**
General Spirits	Unidentified	5 (100%)	0	0	0	**5**
Wine/champagne	Unidentified	58 (29%)	63 (31%)	82 (40%)	0	**203**
Sauce	Lea & Perrin's Worcestershire	3 (75%)	1 (25%)	0	0	**4**
Non-alcoholic Drink	John Lamont Aerated Water	3 (100%)	0	0	0	**3**
Vinegar	Champions & Slee	7 (88%)	0	0	0	7 (88%)
	J.T. Morton	1 (12%)	0	0	0	1 (12%)
					Total	**8**
						Overall total 247

5.6.6 Object component and MNV

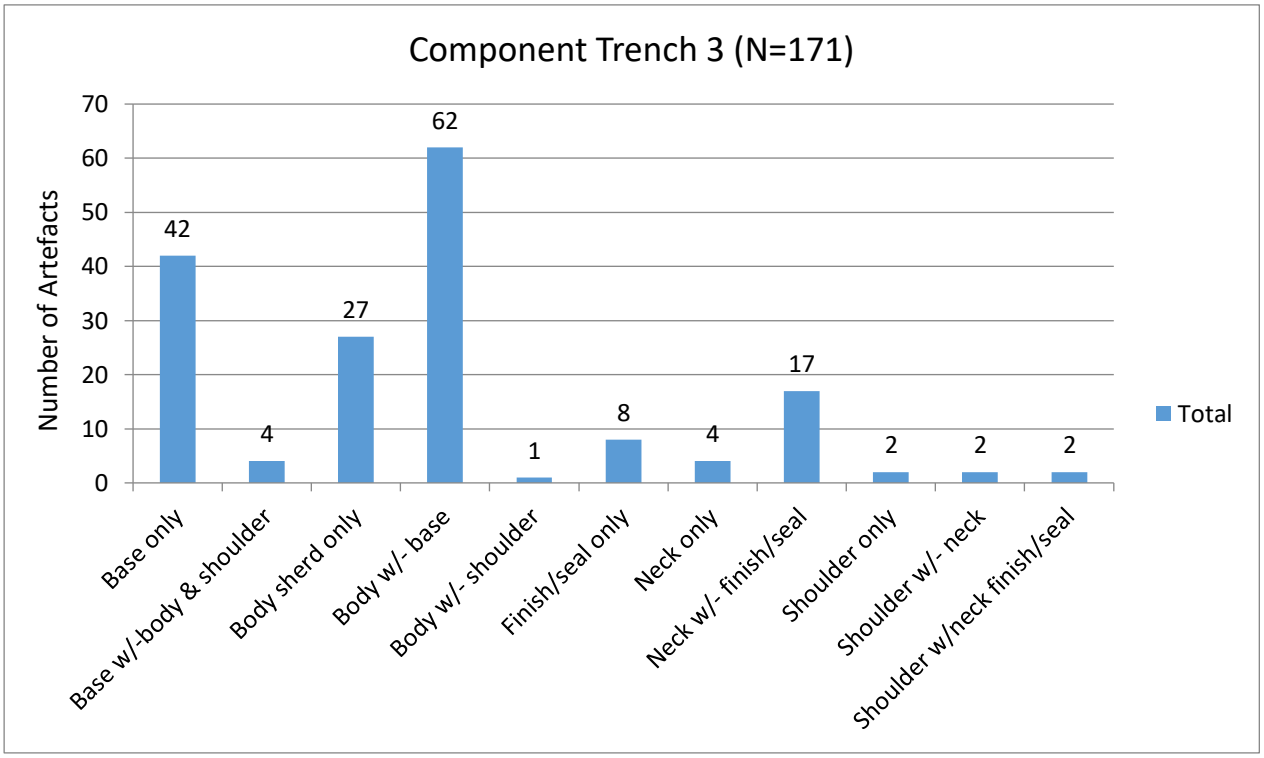


Figure 5. 47 Object component, Trench 3

Figure 5. 48 Base portion of an alcohol bottle Context 000, Trench 3 (Photograph Bateman 2016)

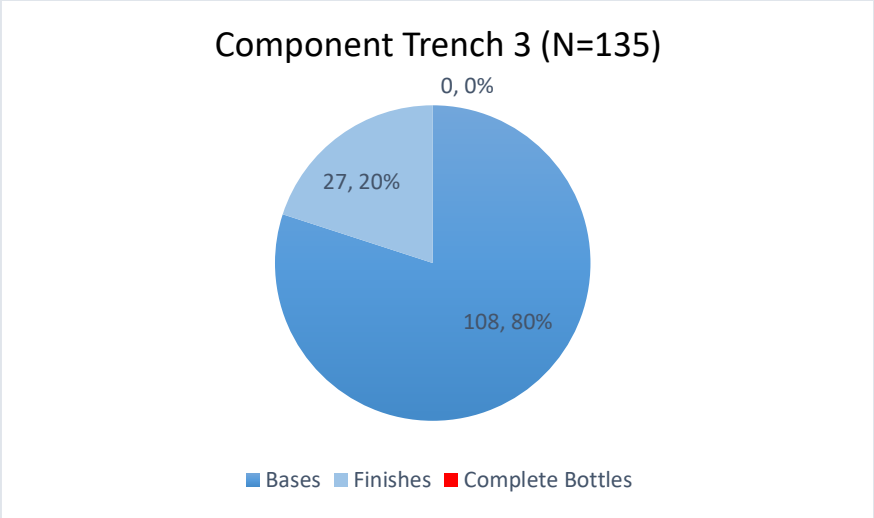


Figure 5. 49 Bottle component of bottle, Trench 3

Grouped body fragments (n=1508) were not included in Figure 5.47 as they are not useful for the MNV. The most numerous component was body with bases (n=62, 36%). Second was bases only (n=42, 25%), followed by body sherds (n=27, 16). Necks with finish/seals (n=17, 10%) were more plentiful then finish/seals (n=8, 5%). Bases with body and shoulder (n=4, 2%; see Figure 5.50) and necks (n=4, 2%) were equivalent. Totalling two each were shoulders (n=2, 1%), shoulders with neck (n=2, 1%) and shoulders with neck and finish/seal (n=2, 1%). Only one fragment was a body with shoulder (<1%). As demonstrated in Figure 5.49, the majority of components had a base portion (n=108). Finishes numbered 27, and no complete bottles were recovered from the Trench 3 assemblage (although some were almost complete). Therefore, the MNV was 108 bottles.

Figure 5. 50 Body, base and shoulder fragment of an olive green wine or champagne bottle. Trench 3, Context 000 (Photograph Bateman 2016)

5.7 Trench 4

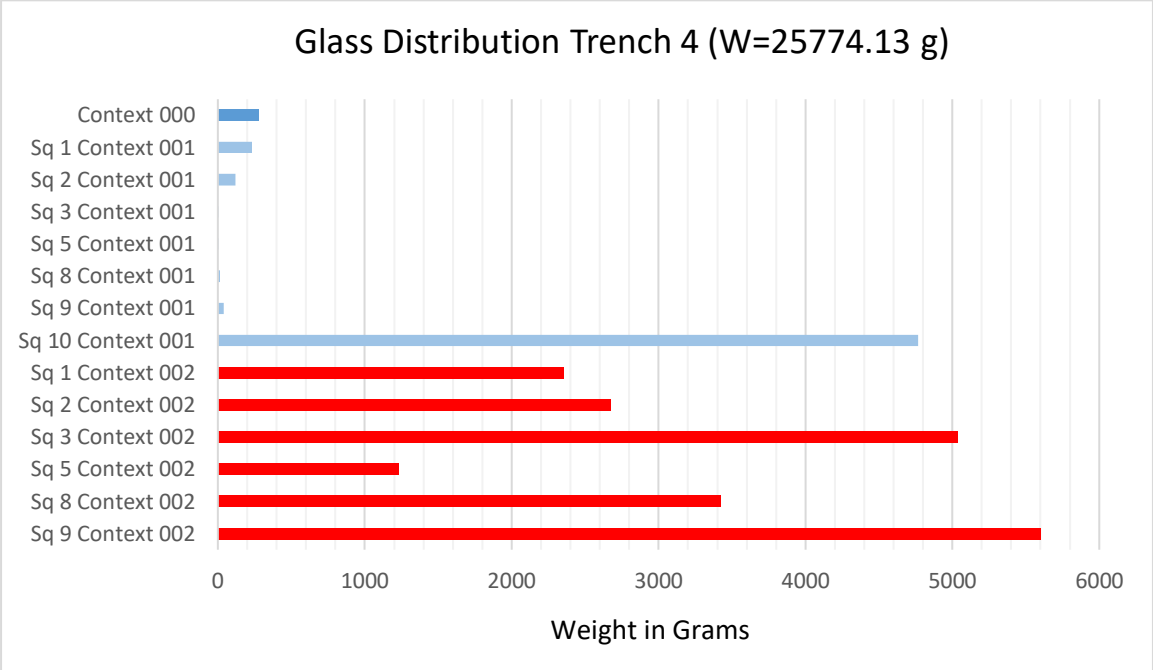


Figure 5. 51 Distribution of glass between contexts, Trench 4

5.7.1 Distribution of glass between contexts

Trench 4 was a primary refuse area. Figure 5.51 shows that in contrast to previous trenches, Context 000 did not contain the maximum quantity of glass, instead it represented only 280.9 g or 1% of the assemblage. An increased quantity of glass was derived from Context 001 (w=5178.86 g, 20%), but Context 002 dominated the assemblage (w=20314.37 g, 79%), with high density finds across all squares except 10. Square 9, Context 002 contained the maximum quantity of glass between squares, with 5603.43 g (22%), and Square 3, Context 001 contained the minimum, with 2.8 g (<1%). The higher pulses in Context 002 demonstrate the major occupation horizon believed to belong to the NMP camp.

Figure 5. 52 Glass stopper for a wide bore bottle or jar found in Trench 4, Square 9, Context 002 (Photograph Bateman 2016)

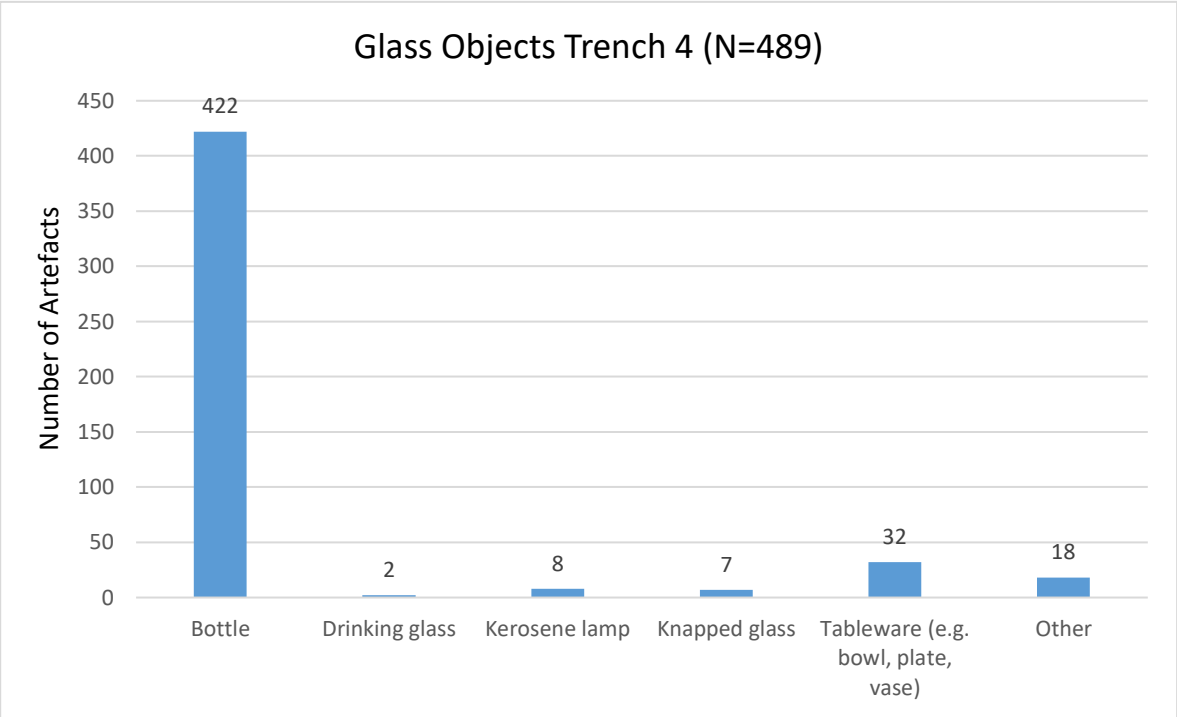


Figure 5. 53 Fragment count of glass objects, Trench 4

5.7.2 Glass objects

Figure 5.53 shows that of the glass objects derived from Trench 4, bottle fragments were by far the most abundant numbering 422 or 86% (this total increased to 1254 when grouped body fragments diagnostic to bottle level were included and counted individually). Second to bottles were tableware items which comprised 32 or 7% (this number increased to 44 when grouped body fragments belonging to tableware items were included and counted individually). The category of 'other' was next (n=18, 4%), followed by kerosene lamp glass (n=8, 2%). Seven entries (1%) were represented by knapped glass, which included debitage (counted individually), flakes and cores. The least frequent object type was drinking glass (n=2, <1%). The MNV is covered in section 5.7.7.

Figure 5. 54 Double collar finish and bulbous neck from an alcohol bottle. Trench 4, Square 9, Context 002 (Photograph Bateman 2016)

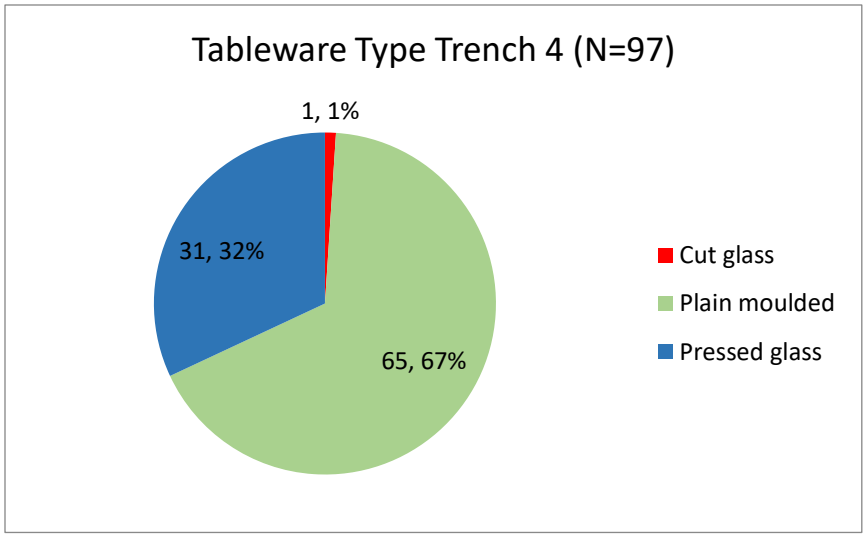


Figure 5. 55 Tableware type, Trench 4

5.7.3 Tableware type

Figure 5.55 demonstrates the percentage of glass tableware types, and shows the proportion of various glass production processes found at Trench 4, including cut, pressed and plain moulded. Most of the glass items or fragments were identified as plain moulded (Figure 5.59). Pressed glass was also relatively common (Figures 5.56 & 5.58). Only one fragment represented the cut glass category (Figure 5.57). The tableware types at Trench 4 represent a more varied assemblage and higher class of glass.

Figure 5. 56 Pressed glass body fragments of an unidentified object with a pattern of finely stippled dots and lines. Trench 4, Square 8, Context 002 (Photograph Bateman 2016)

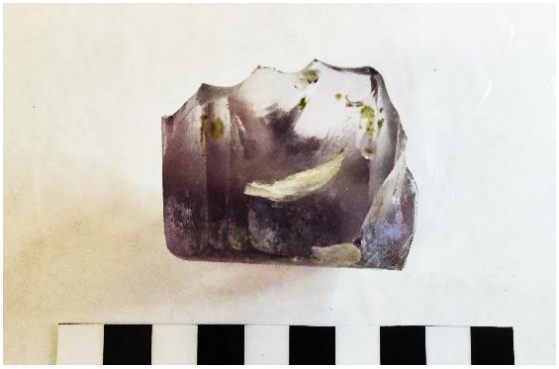


Figure 5. 57 Cut glass body and base portion of a bottle, with two decorative grooves cut along the length (also knapped glass core). Trench 4, Square 10, Context 001 (Photograph Bateman 2016)

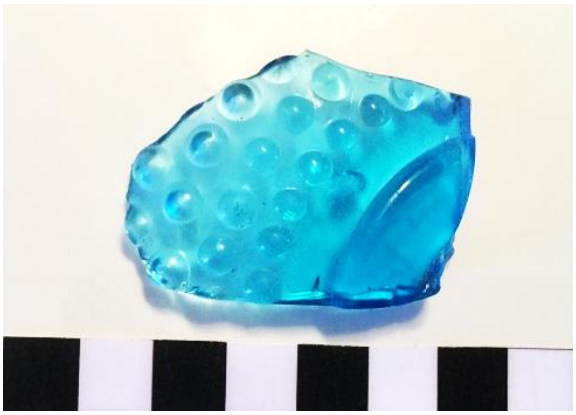


Figure 5. 58 Base and body sherd of a pressed glass tableware object in 'hobnail' style from Trench 4, Square 3, Context 002. An associated handle also from Trench 4, would suggest it is a pitcher fragment (Photograph Bateman 2016)

Figure 5. 59 Base and body fragment of a plain moulded Lea & Perrins Worsestershire sauce bottle manufacured by Aire and Calder. Trench 4, Square 2, Context 001 (Photograph Bateman 2016)

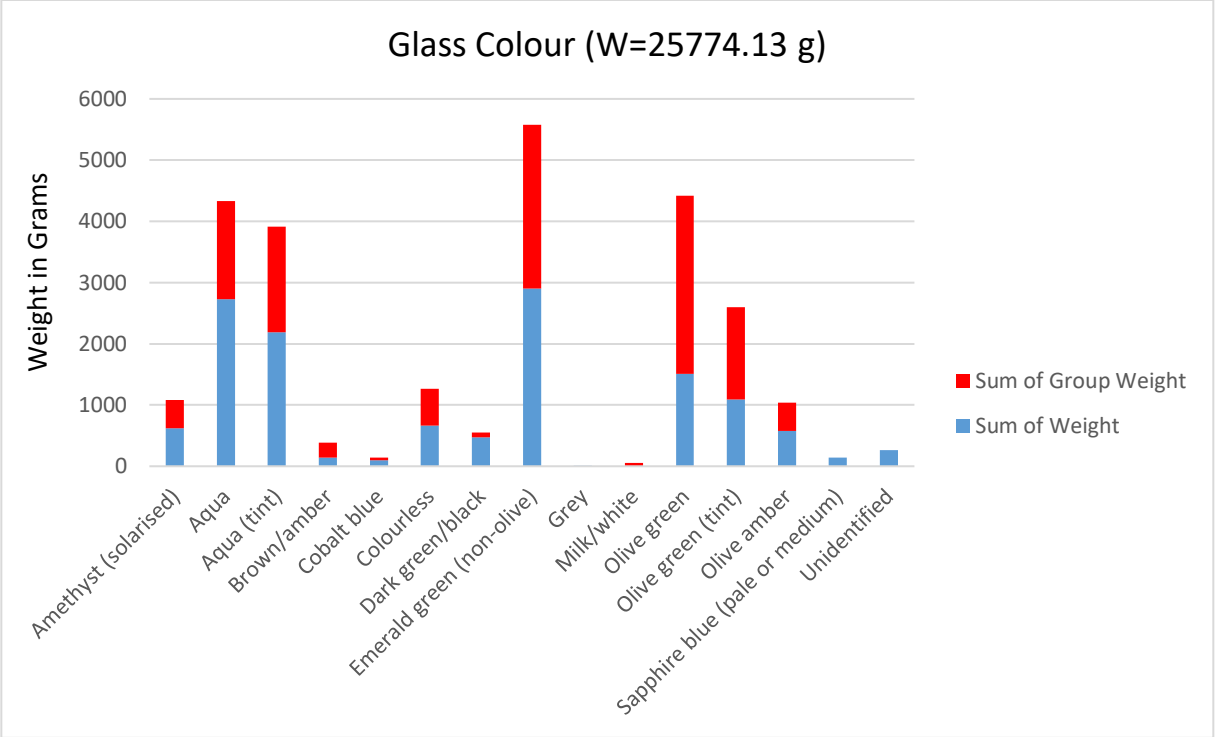


Figure 5. 60 Quantity of glass colour, Trench 4

5.7.4 Glass colour

Figure 5.60 shows that the most frequent glass colour was emerald green (w=5575.83 g), which was equivalent to 22% of the assemblage at Trench 4. Second in abundance was olive green (w=4422.24 g, 17 %), followed by aqua (w=4333.4 g, 17%), then aqua tint (w=3909.6 g, 15%). Next was olive green tint (w=2601.7, 10%), then colourless (w=1262.6 g, 5%). The remaining glass colours each comprised less than 5% of the overall assemblage and are listed in order of abundance: amethyst (w=1078.7 g, 4%); olive amber (w=1042.9 g, 4%); dark green/black (w=549.2 g, 2%); brown/amber (w=387.9 g, 2%); unidentified (w=261.46 g, 1%); sapphire blue (w=145.2 g, <1%); cobalt blue (w=143.7 g, <1%); and milk white (w=58.5 g, <1%). Grey was the rarest colour (w=2.2 g, <1%). The two most abundant glass colours were dark green shades which were most often used for alcohol bottles. The average weight of an emerald or olive green wine or champagne bottle is 833 g. The EVE for emerald green wine or champagne glass is approximately seven bottles, and olive green is approximately six bottles.

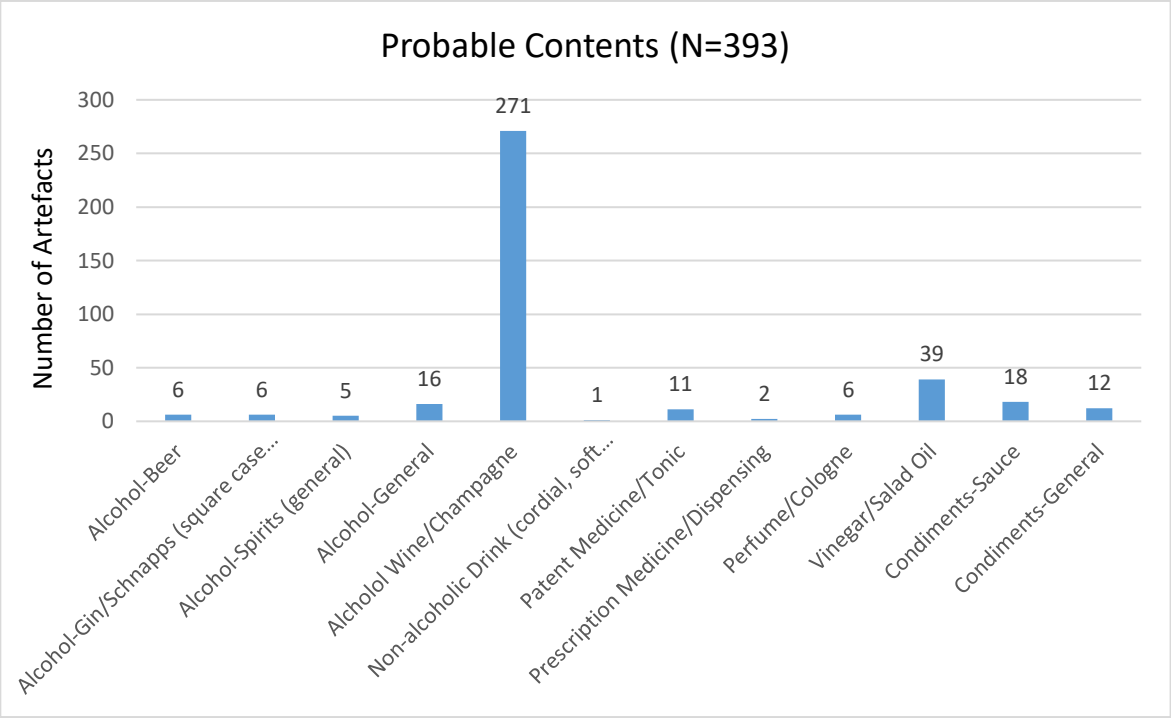


Figure 5. 61 Fragment count of probable contents, Trench 4

5.7.5 Probable contents of identifiable bottles

Bottles with identifiable probable contents at Trench 4 numbered 96 (Figure 5.61). Vinegar/salad oil dominated the overall assemblage with the maximum number of fragments (n=32, 33%) and second was alcohol-wine/champagne (n=27, 28%). Third in abundance were condiments and sauce (n=13, 14%). Four categories had four items each: alcohol-gin/schnapps, condiments general, patent medicine and perfume/cologne (n=4, 4% each). The remaining probable contents also comprised less than 5% of the assemblage and are listed in order of abundance: Alcohol/beer and alcohol general both had 3 items (n=3, 3%); non-alcoholic drinks such as cordial, soft drinks and aerated water (n=1, 1%); and prescription medicine (n=1, 1%). The high quantity of 'vinegar/salad oil' items is in contrast to all other trenches, which demonstrated alcohol as being the most common probable contents. The results for Trench 4 show that five more vinegar/salad oil bottle fragments were positively identified than wine or champagne bottle fragments. The colour results for Trench 4 shows the majority by weight to be emerald green glass (see Figure 5.60), which is incongruent with the highest 'probable contents' count in this instance, revealed to be vinegar/salad oil bottles (usually aqua in colour). This anomaly is due to the highly fragmented state of the assemblage and occurred because the aqua glass was more fragmented than the emerald green glass, but weighed less.

5.7.6 Probable contents between contexts

Table 5. 6 Frequency of probable contents between contexts, Trench 4

Contents	Maker	Context 000	Context 001	Context 002	Context 003	Total fragment count
Beer	Unidentified	0	0	6 (100%)	0	**6**
Gin/Schnapps	Adolpho Wolf's Aromatic Schnapps	0	0	1 (17%)	0	1 (17%)
	Unidentified	0	3 (50%)	2 (33%)	0	5 (83%)
		0	0	0	0	**6**
General Spirits	Unidentified	0	0	5 (100%)	0	**5**
General Alcohol	Unidentified	0	0	16 (100%)	0	**16**
Wine/champagne	Unidentified	0	15 (6%)	256 (94%)	0	**271**
Non-alcoholic Drink	Unidentified	0	0	1 (100%)	0	**1**
General Condiments	Maconochie Brothers	0	0	5 (42%)	0	5 (42%)
	Unidentified	0	0	7 (58%)	0	7 (58%)
					Total	**12**
Sauce	Lea & Perrins Worcestershire	1 (6%)	2 (11%)	15 (83%)	0	**18**
Patent Medicine/Tonic	Scott's Emulsion cod liver oil	0	0	3 (27%)	0	3 (27%)
	Wasboe's Norwegian Cod Liver Oil	0	0	3 (27%)	0	3 (27%)
	Sparking Pontiled Perry Davis Vegetable Pain Killer	0	0	3 (27%)	0	3 (27%)
	Unidentified			2 (19%)		2 (19%)

					Total	**11**
Prescription Medicine/Dispensing	Unidentified	0	2 (100%)	0	0	**2**
Perfume	Frederick Stearns & Co.	0	3	0	0	3
	Unidentified	0	1	2	0	3
						6
Vinegar	Champions & Slee	0	13 (33%)	23 (59%)	0	36 (92%)
	J.T. Morton	0	1 (3%)	2 (5%)	0	3 (8%)
					Total	**39**
						Overall Total 393

Figure 5. 62 Body fragments of a 'Macanochie' condiment bottle from Trench 4, Context 002 (Photograph Bateman 2017)

5.7.7 Object component and MNV

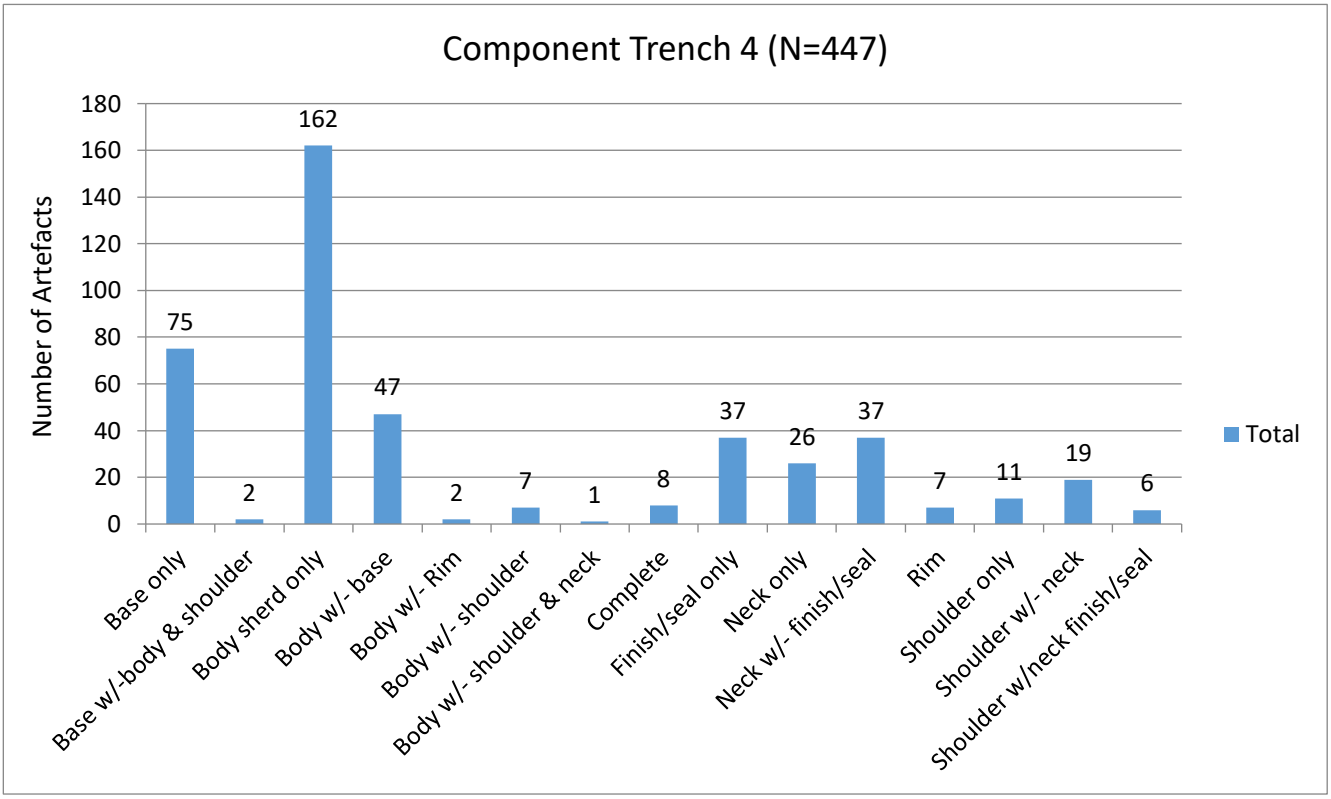


Figure 5. 63 Object component, Trench 4

Grouped body fragments (n=4024) were not included in Figure 5.63, as they are not useful for the MNV. Individual body sherds dominated the assemblage with a maximum of 162 fragments (36%). Second to body sherds, were bases only (n=75, 17%), and then bodies with a base (n=47, 11%). Finishes only, and necks with a finish/seal both numbered 37 each (8%), and necks only numbered 26 (6%). The remaining nine components equated to less than 5% each: shoulders with a neck (n=19, 4%); shoulder only (n=11, over 2%); complete (n=8, 2%); bodies with shoulder (n=7, 2%); rims 7 (2%); shoulders with neck and finish (n=6, 1%); bases with body and shoulder (n=2, <1%); and bodies with rim (n=2, <1%). Lastly, were body fragments with shoulder and neck (n=1, <1%). The majority of components had a base portion (n=124). The finishes and rims numbered 89, and there were eight complete bottles (Figure 5.64). Therefore, the MNV was 132 bottles.

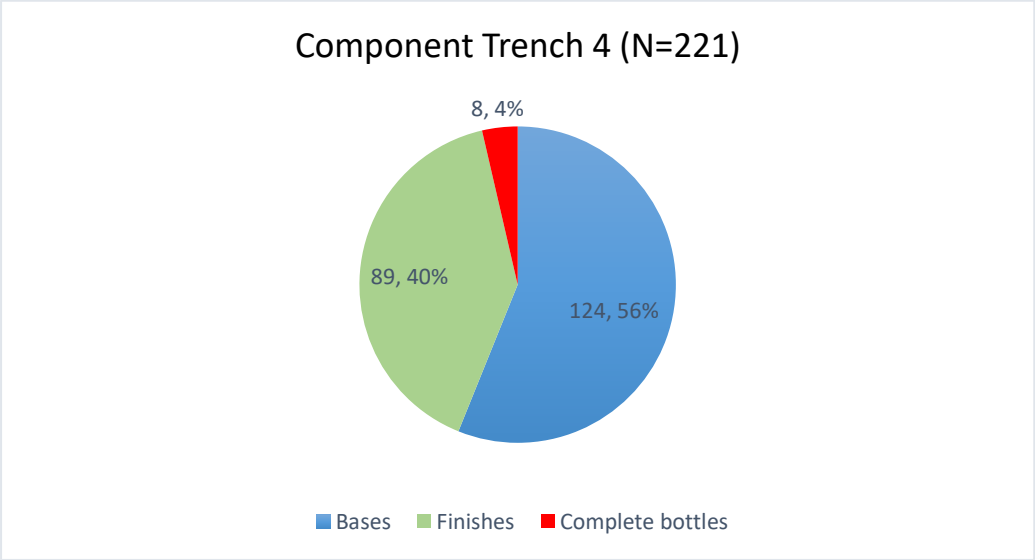


Figure 5. 64 Component of bottle – bases, finishes and complete, Trench 4

5.7.8 Knapped glass

Overall Trench 4 contained seven knapped glass items, with flakes being most abundant (n=5, 72%). Debitage and cores represented one item each, which made up the remaining 28% of the assemblage or 14% per item (Figure 5.65).

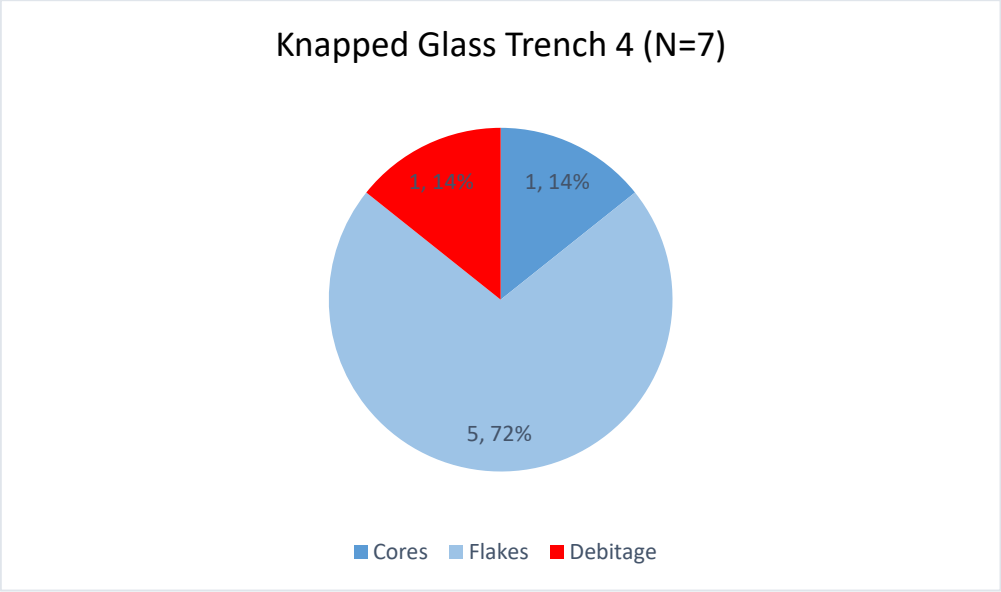


Figure 5. 65 Proportion of knapped cores, flakes and debitage, Trench 4

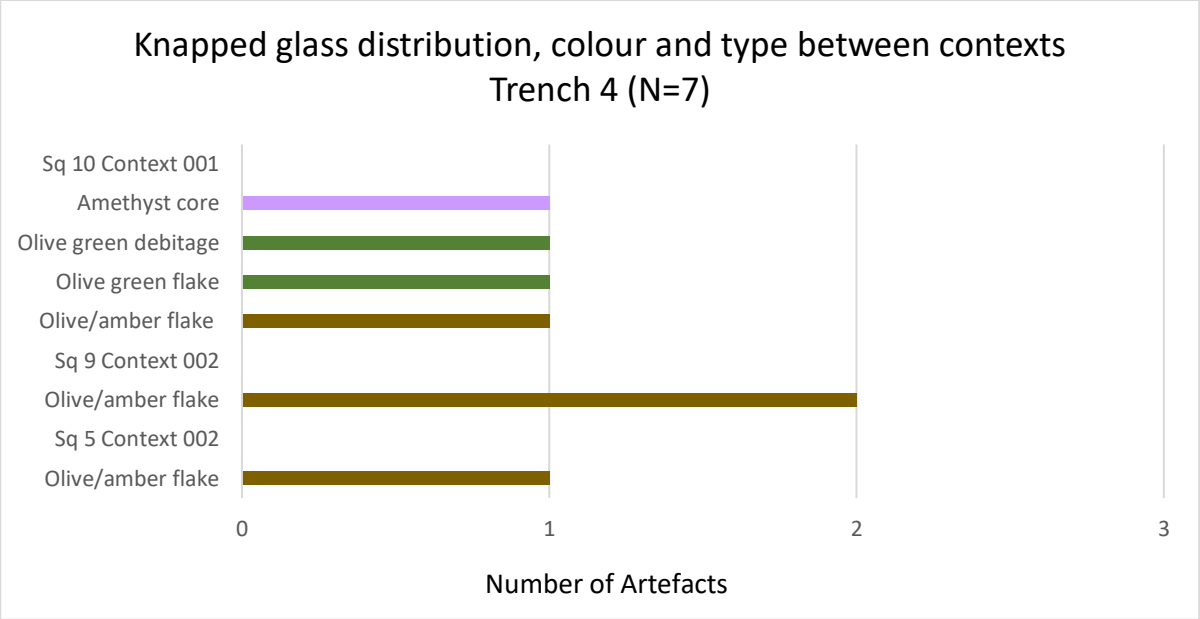


Figure 5. 66 Knapped glass distribution showing colour and type between contexts, Trench 4

5.7.9 Knapped glass distribution between contexts – colour and type

Figure 5.66 shows that from the seven knapped glass items derived from Trench 4, flakes produced from olive/amber glass were most common (n=4, 57%). A single flake and one debitage fragment were knapped from olive green glass and one core was amethyst, which is equivalent to 14% each. The amethyst core was knapped from a thick, narrow, cut glass bottle base (see Figure 5.57). The majority of knapped glass was derived from Context 001 (n=4, 57%). Context 002 contained three olive/amber flakes, making up the remaining 43%. The graph demonstrates a knapping preference for olive shades (Figure 5.67 & 5.68) associated with alcohol bottle glass, which usually have thick bases. Trench 4 contained 12520.23 g of unflaked glass, including grouped body fragments. The proportion of flaked glass (w=32 g) compared to unflaked was low, representing <1% of the assemblage.

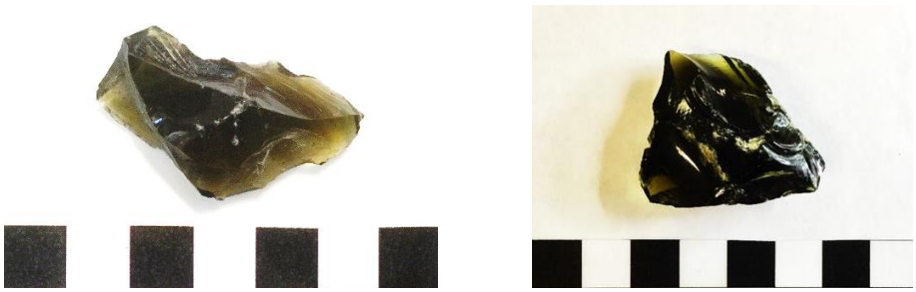


Figure 5. 67 Olive amber knapped glass flake from Trench 4, Square 9, Context 002 and Figure 5. 68 Olive green knapped glass flake from Trench 4, Square 10, Context 001 (Photograph Bateman 2016)

5.8 Trench 7

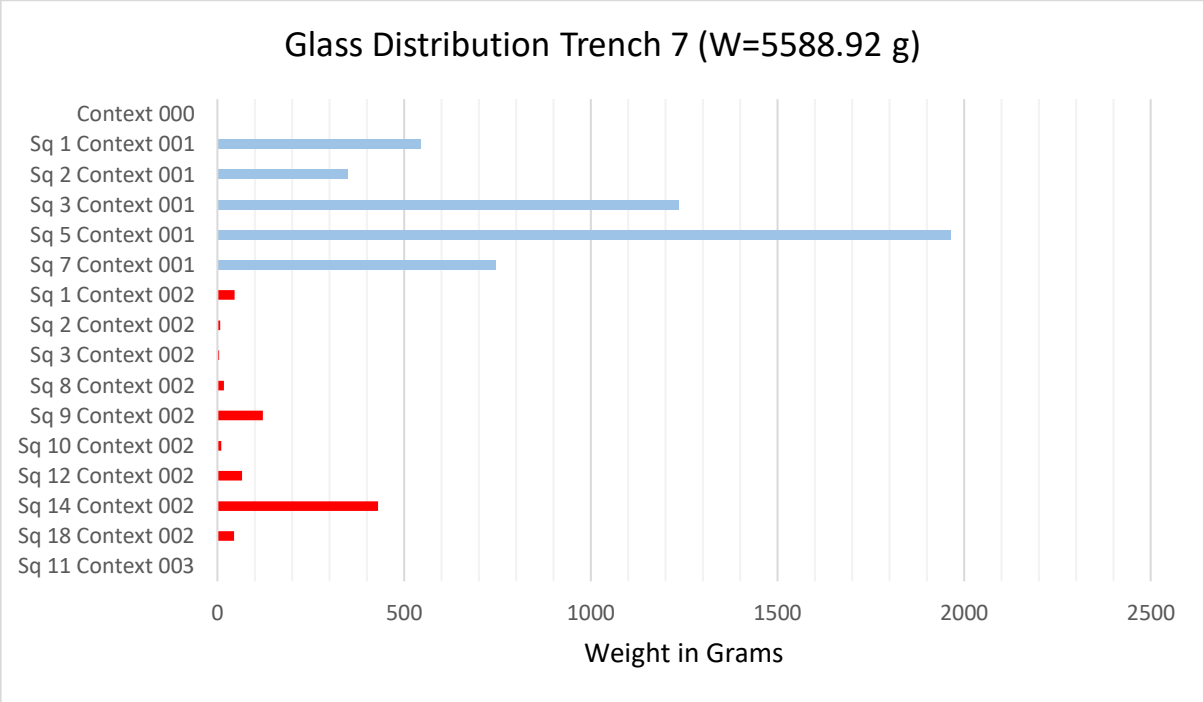


Figure 5. 69 Distribution of glass between contexts, Trench 7

5.8.1 Distribution of glass between contexts

Figure 5.69 shows that no glass was derived from Context 000. Context 001 contained the majority (w=4840.8, 87%). The glass derived from Context 002 decreased significantly to 748.12 g, which only represented 13% of the assemblage at Trench 7. Square 5, Context 001 contained the maximum quantity of glass between squares with 1964.9 g. Square 3, Context 002 comprised the fewest with only 5.2 g. No glass was derived from Context 003. This distribution is in contrast to all other trenches in that there is a decrease instead of an increase in glass artefact density from Context 001 to the NMP horizon at Context 002 (except for Trench 3, Context 001 which decreased at Context 002).

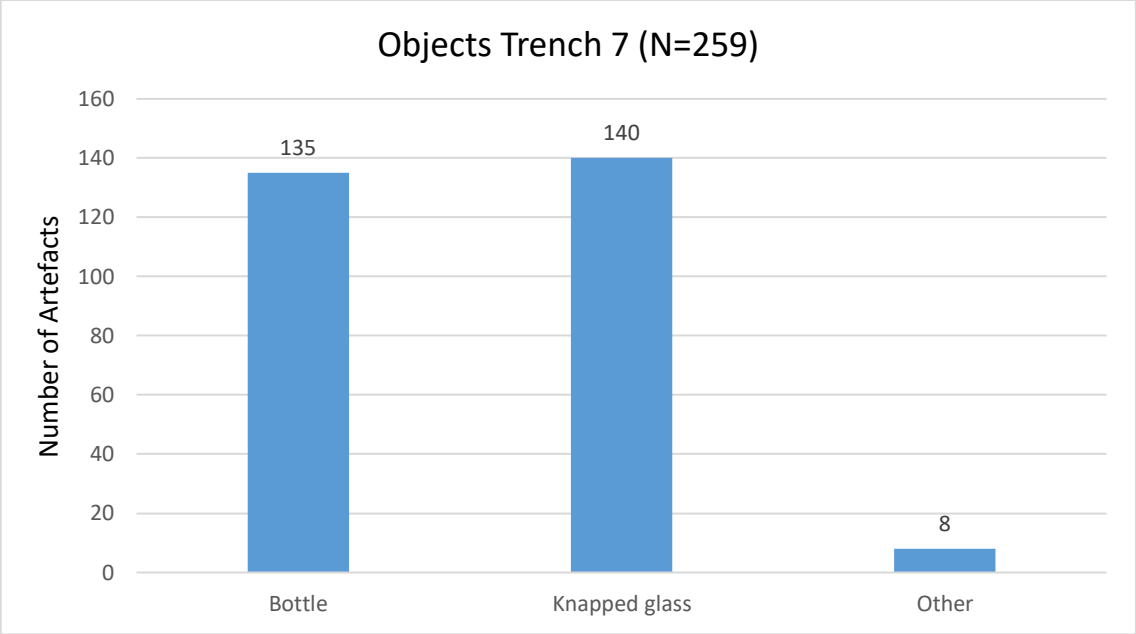


Figure 5. 70 Fragment count of glass objects, Trench 7

5.8.2 Glass objects

Figure 5.70 shows that of the identified glass items derived from Trench 7, knapped glass, which included flakes, cores and debitage (counted individually), represented the maximum (n=140, 54%). Second in frequency was bottle fragments which numbered 135 items or 52% (this total increased to 410 when grouped body fragments diagnostic to bottle level were included and counted individually). 'Other' had the fewest items with eight entries (3%). The objects represented by 'other' were two ovoid shaped, honey coloured beads (Figure 5.71), five seed beads and one marble (Figure 5.72). The MNV is covered in section 5.8.6.

Figure 5. 71 Glass bead from Trench 7, Square 10, Context 002 (Photograph Bateman 2018)

Figure 5. 72 Glass marble from Trench 7, Square 8, Context 002 (Photograph Bateman 2018)

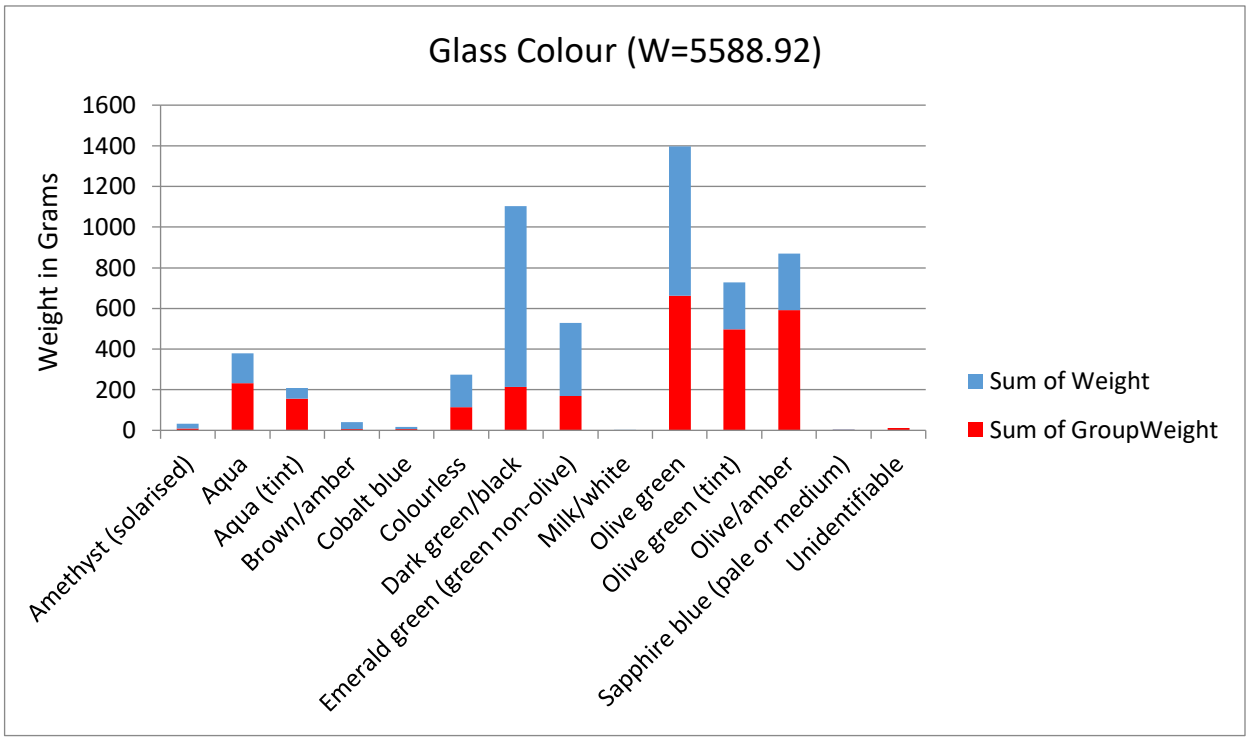


Figure 5. 73 Quantity of glass colour, Trench 7

5.8.3 Glass colour

Figure 5.73 shows that the most frequently occurring glass colour was olive green (w=1396.6 g), which was equivalent to 25% of the overall assemblage at Trench 7. Second in abundance was dark green/black (w=1103.32 g, 20%), followed by olive/amber (w=859.9 g, 16%), then olive green tint (w=726.9 g, 13%). Next was emerald green (w=529.6 g, 9%), aqua (w=378.9 g, 7%), colourless (w=273.5 g, 5%), then aqua tint (w=207 g, 4%). The remaining glass colours each comprised less than 1% of the overall assemblage and are listed in order of abundance: almost equivalent were brown/amber (w=39.6 g, <1%) and amethyst (w=32.4 g, <1%), these were followed by unidentifiable (w=23.1 g, <1%), cobalt blue (w=15.7 g, <1%) and sapphire blue (w=2.3 g, <1%). The rarest colour was milk/white glass, with 0.1 g (<1%). The average weight of an emerald green or olive green wine or champagne bottle is 833 g. The EVE for emerald green wine or champagne glass is one bottle, and olive green numbered two bottles.

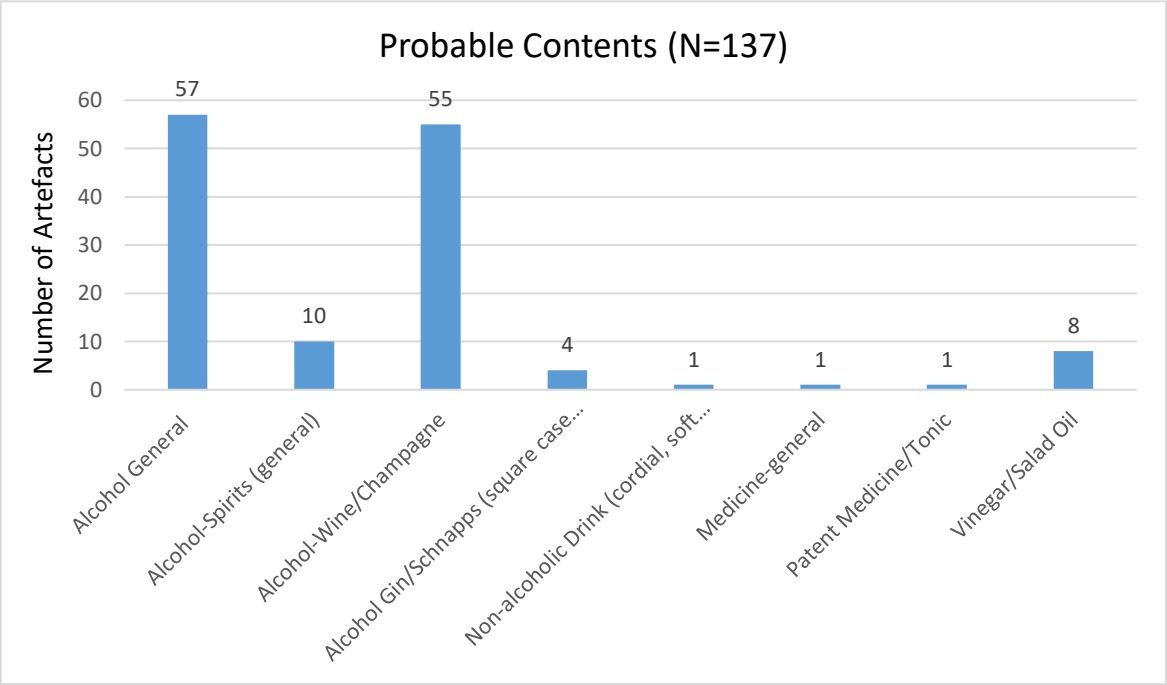


Figure 5. 74 Fragment count of probable contents, Trench 7

5.8.4 Probable contents of identifiable bottles

Probable contents could be identified for 137 items (Figure 5.74). General alcohol dominated the overall assemblage, with 57 fragments (42%). Second was wine or champagne (n=55, 40%), followed by general spirits (n=10, 7%), vinegar (n=8, 6%), then gin/schnapps fragments (n=4, 3%). Medicine-general (see Figure 5.75), non-alcoholic drink and patent medicine/tonic had the minimum number of items with one each, equivalent to (<1% each). The MNV is covered in section 5.8.6.

Figure 5. 75 Chinese medicine bottle from Trench 7, Square 10, Context 002 (Photograph Bateman 2018)

5.8.5 Probable contents between contexts

Table 5. 7 Frequency of probable contents between contexts, Trench 7

Contents	Maker	Context 000	Context 001	Context 002	Context 003	Total fragment count
General Spirits	Unidentified	0	7 (70%)	3 (30%)	0	**10**
General Alcohol	Unidentified	0	46 (81%)	11 (19%)	0	**57**
Wine/champagne	Unidentified	0	52 (95%)	3 (5%)	0	**55**
Gin/Schnapps	Adolpho Wolf's Aromatic Schnapps	0	4 (100%)	0	0	**4**
Non-alcoholic Drink	Unidentified	0	1 (100%)	0	0	**1**
Vinegar	J.T. Morton	0	8 (100%)	0	0	**8**
General Medicine	Unidentified	0	0	1 (100%)	0	**1**
Patent Medicine	Unidentified	0	0	1 (100%)	0	**1**
						Overall total 137

5.8.6 Object component and MNV

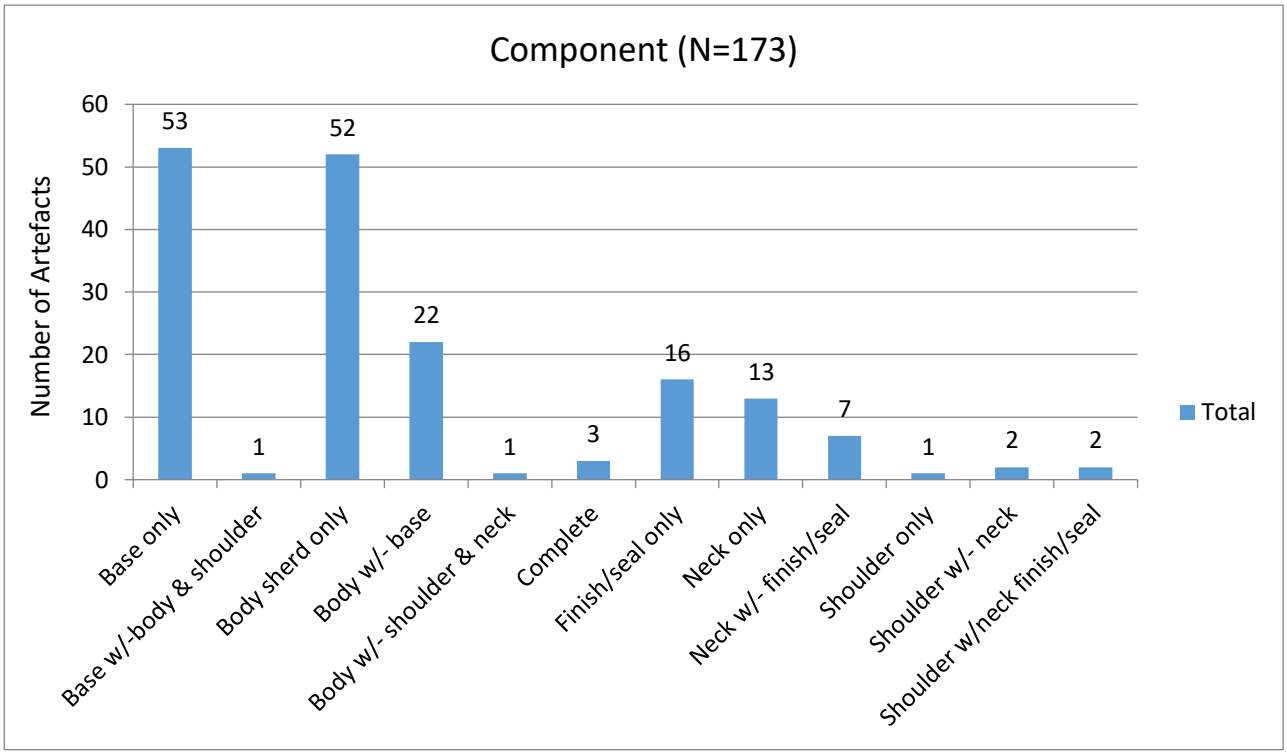


Figure 5. 76 Object component, Trench 7

Grouped body fragments (n=987) are not included in Figure 5.76, as they are not useful for calculating the MNV. 'Complete' items also include other objects such as beads, therefore items that are not bottles were also excluded from the MNV. Bases dominated the assemblage with 53 fragments (31%). Second to bases were body sherds (n=52, 31%) and then bodies with a base (n=22, 13%). Finish/seals numbered 16 (9%), followed by necks only (n=13, 8%). The remaining components made up less than 5% off the assemblage at Trench 7 and are listed in order of abundance: necks with a finish/seal (n=7, 4%); complete objects (n=3, 2%); shoulder with neck (n=2, 1%), shoulders with neck/finish/seal (n=2, 1%); bases with body and shoulder (n=1, <1%); bodies with shoulder and neck (n=1, <1%) and lastly, shoulders only (n=1, <1%). The majority of components had a base portion (n=76), and the finishes numbered 25 (Figure 5.77). Some complete 'objects', were not vessels, therefore were excluded from the MNV. Only one small 'bottle' could be counted as a complete vessel. The MNV was calculated to be 77 bottles.

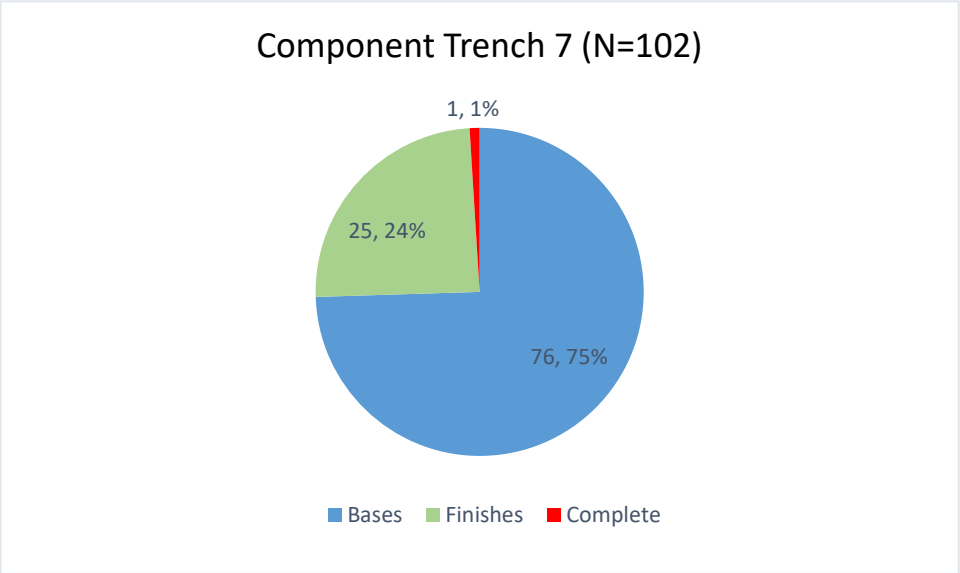


Figure 5. 77 Bottle component, Trench 7

5.8.7 Knapped glass

Dominating the assemblage for knapped glass artefacts was debitage (counted individually) then flakes. Cores were relatively rare (Figure 5.78). Context 002 contained the majority of knapped glass artefacts (n=80), whereas Context 001 had less with 60 pieces (see Figure 5.79).

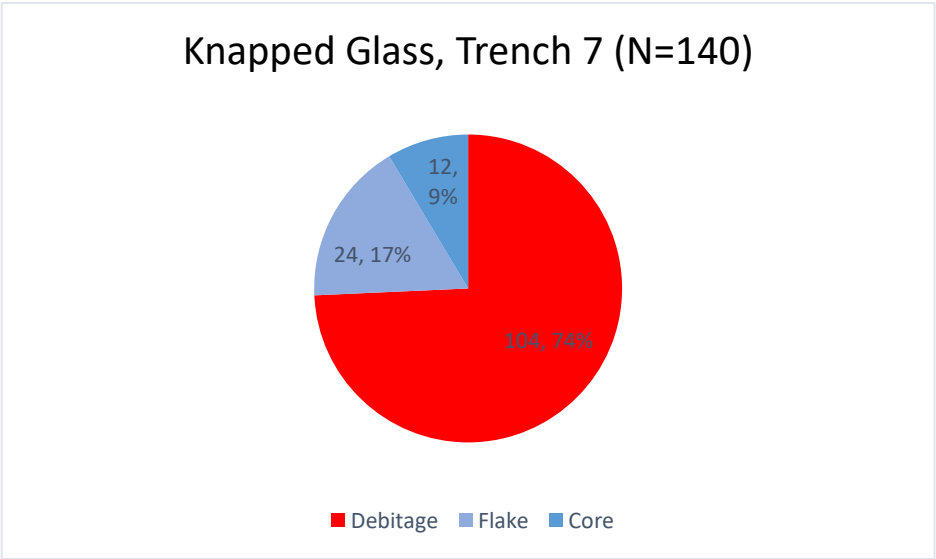


Figure 5. 78 Proportion of knapped cores, flakes and debitage, Trench 7

5.8.8 Knapped glass distribution between contexts – colour and type

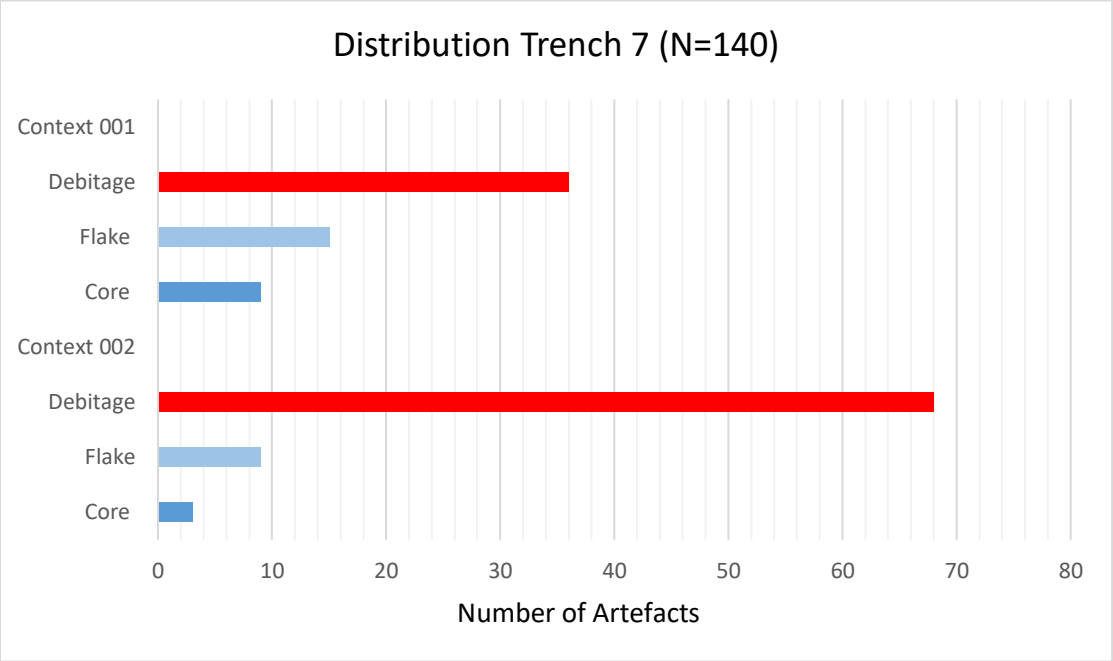


Figure 5. 79 Distribution of knapped glass between contexts, Trench 7

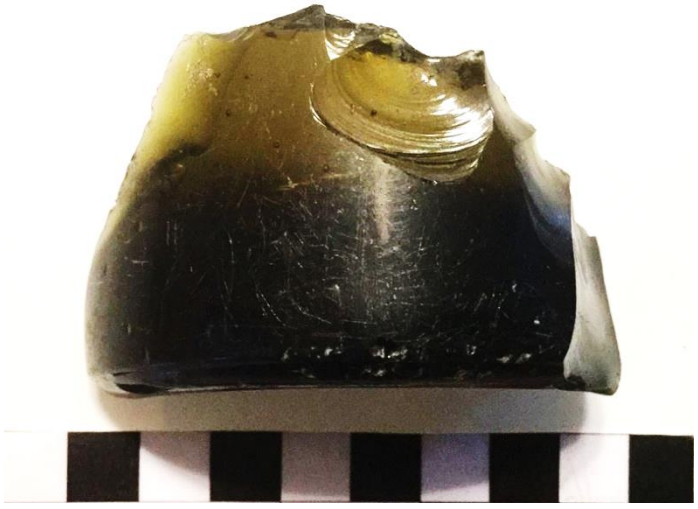


Figure 5. 80 Olive amber knapped glass core from Trench 7, Square 3, Context 001 (Photograph Bateman 2017)

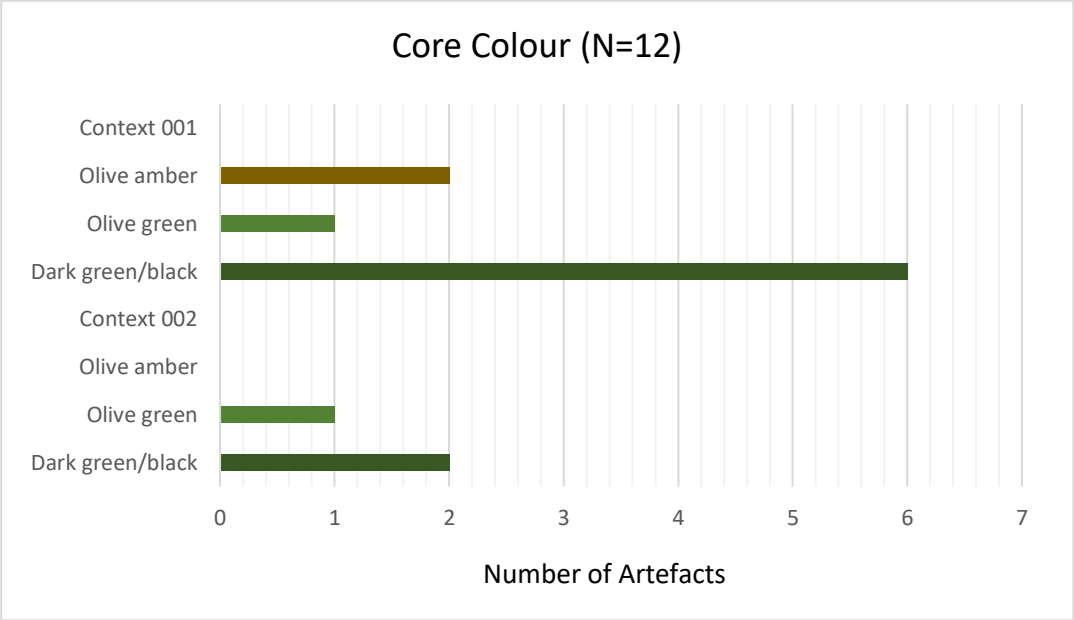


Figure 5. 81 Distribution of core colour between contexts, Trench 7

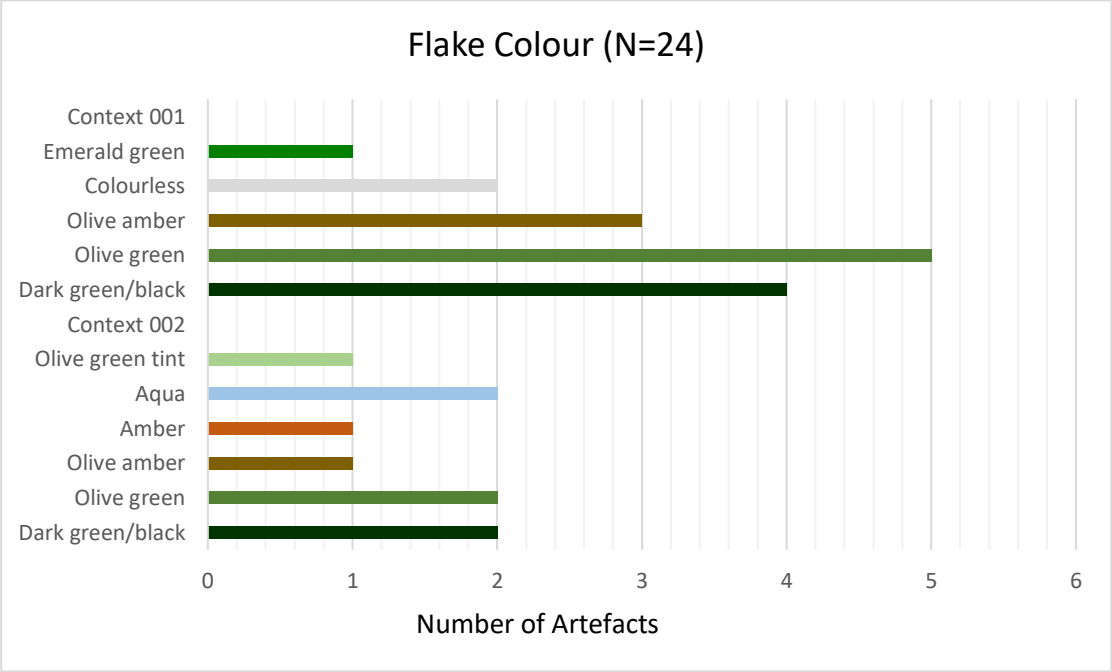


Figure 5. 82 Distribution of flake colour between contexts, Trench 7

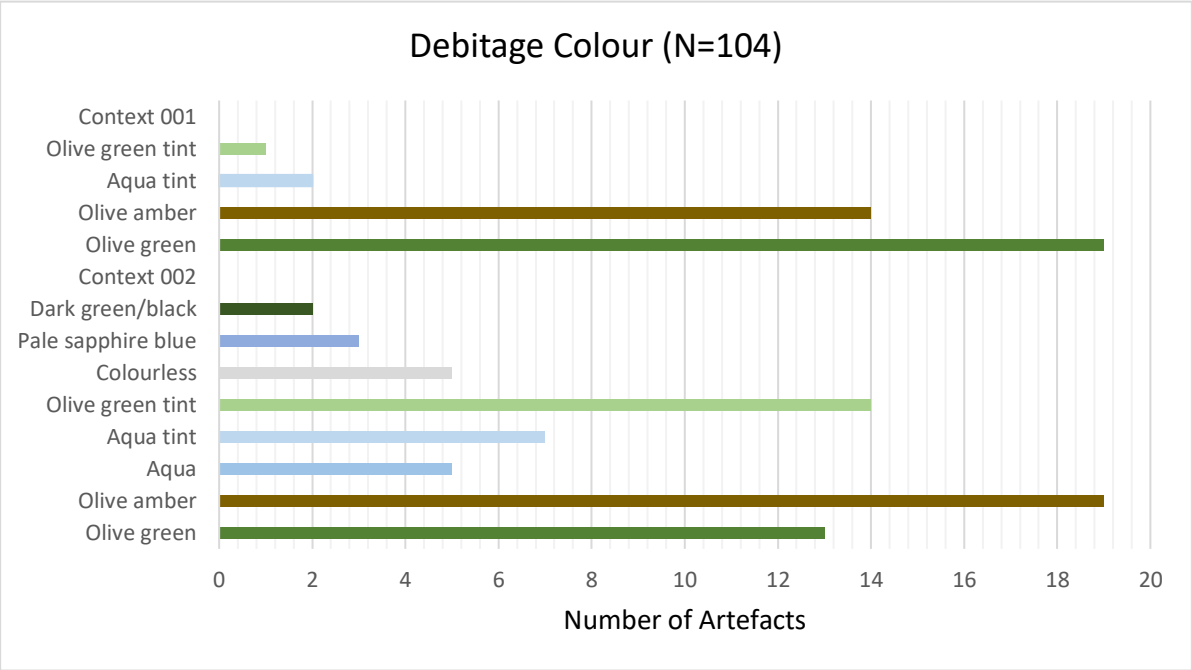


Figure 5. 83 Distribution of debitage colour between contexts, Trench 7

Figure 5.79 shows the overall distribution of knapped glass between contexts at Trench 7 (debitage individually counted). Of the 140 knapped glass items, debitage produced from olive amber glass was most abundant (n=33, 24%). This was followed by olive green debitage (n=32, 23%), olive green tint debitage (n=15, 11%), then aqua tint debitage (n=9, 6%). Eight cores were manufactured from dark green/black glass (6%), which were followed in number by olive green flakes (n=7, 5%), then six dark green/black flakes (4%). Colourless debitage and aqua debitage had five fragments each (4%), olive amber flakes numbered four (3%), and sapphire blue had three debitage fragments (2%). The following knapped glass categories represented two items each (1%): dark green/black debitage, aqua flakes, colourless flakes, olive green cores and olive amber cores. The remaining items only represented one item each: an amber flake, olive green tint flake and an emerald green flake. Figures 5.82 and 5.83 (flakes and debitage) demonstrate a knapping preference for olive green shades associated with alcohol bottle glass, which usually have thick bases. Cores (Figure 5.81) were mostly made from dark green/black glass usually associated case gin bottles, which also have thick bases. No lighter coloured aqua, aqua tint or colourless glass cores were present, possibly due to the thinner bases associated with bottles in these colours. The proportion of flaked glass (w=782.42 g) compared to unflaked glass (4805.5 g), was 16%. When compared to Trench 4 which accounted for <1%, it could be argued that Trench 7 was a locus for knapping activities.

5.9 Trench 16

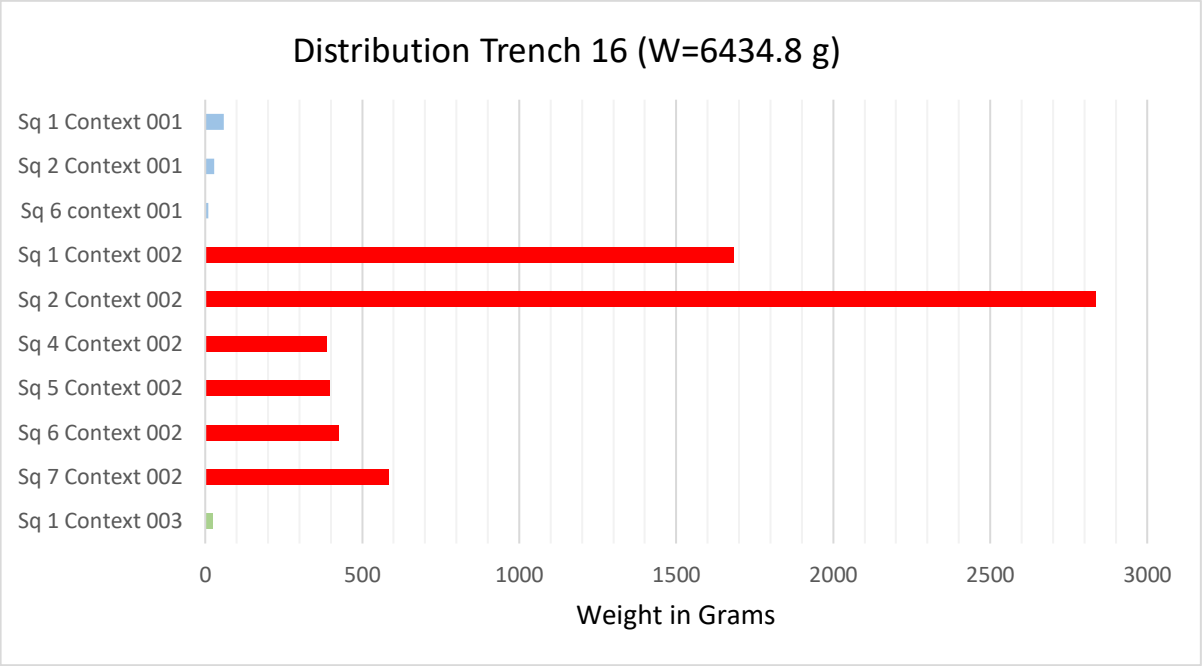


Figure 5. 84 Distribution of glass between contexts, Trench 16

5.9.1 Distribution of glass between contexts

Figure 5.84 shows that Context 001 contained 97.5 g of glass, representing only 1% of the assemblage at Trench 16. The maximum quantity of glass was derived from Context 002 (w=6337.3 g, 98%). Artefact densities at Context 003 vastly decreased and comprised the minimum (w=23.5 g, <1%), all of which were contained within Square 1. Square 2, Context 002 had the largest amount of glass between squares with 2837.4 g, representing 44% of the overall assemblage. The minimum quantity between squares was Square 6, Context 001 (9.7 g, <1%). Again, the increased pulses in Context 002 demonstrate the major occupation horizon belonging to the NMP camp.

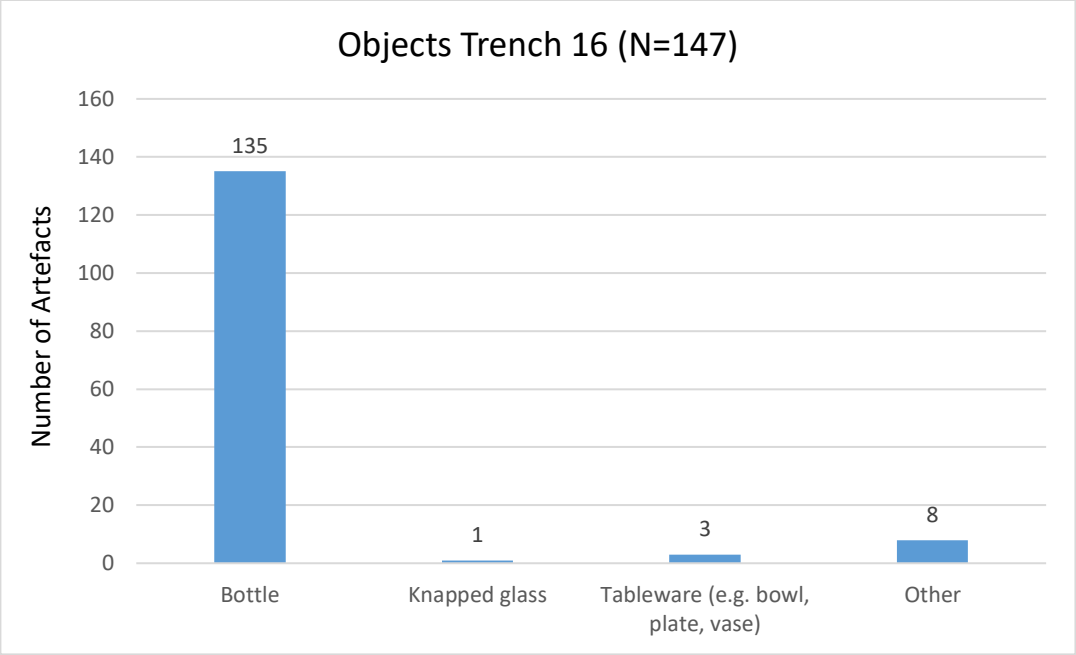


Figure 5. 85 Fragment count of glass objects, Trench 16

5.9.2 Glass objects

Figure 5.85 demonstrates that of the 147 identifiable glass items, bottle fragments were most common at Trench 16, and numbered 135 or 92% (this total increased to 310 when grouped body fragments diagnostic to bottle level were counted individually). Second in number was 'other' (n=8, 5%), then tableware (n=3, 2%). The minimum was represented by knapped glass (n=1, <1%; Figure 5.86). The objects represented by 'other' in this instance were glass stoppers and a marble (Figure 5.87).

Figure 5. 86 Knapped, olive green tint coloured glass flake from Trench 16, Square 1, Context 002 (Photograph Bateman 2018)

Figure 5. 87 Glass marble from Trench 16, Square 4, Context 002 (Photograph Bateman 2018)

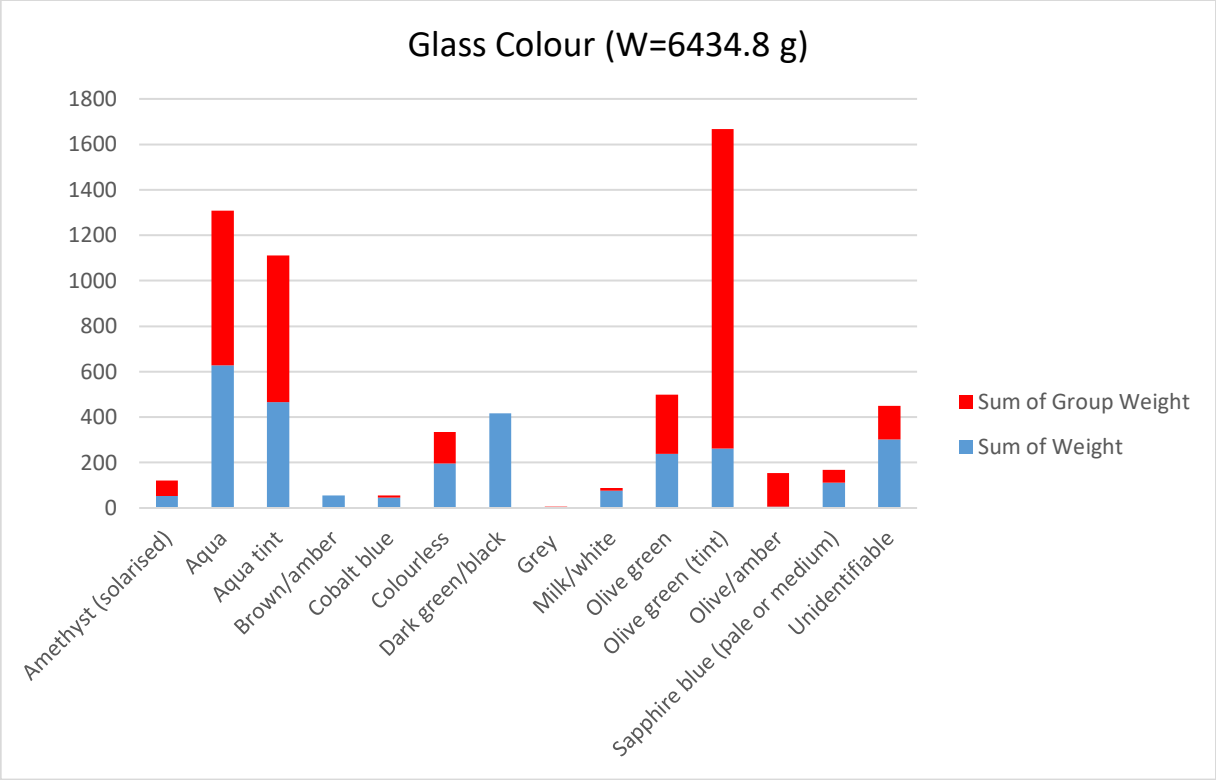


Figure 5. 88 Quantity of glass colour, Trench 16

5.9.3 Glass colour

Figure 5.88 shows that the most common glass colour was olive green tint (w=1668.2 g), which was equivalent to 26% of the overall assemblage at Trench 16. Second in abundance was aqua (w=1308.9 g, 20%), followed by aqua tint (w=1112 g, 17%), then olive green (w=497.8 g, 8%). Next was unidentifiable (w=448.8 g, 7%), then dark green/black (w=415.6 g, 6%), and colourless (w=335.5, 5%). The remaining glass colours consisted of less than 5% each and are listed in order of abundance: sapphire blue (w=167.2 g, 3%); olive/amber (w=153.5 g, 2%); amethyst (w=120.4 g, 2%); milk/white (w=88.8 g, 1%); brown/amber (w=55.4 g, <1%) and cobalt blue (w=55.7 g, <1%). Again, the rarest colour was grey (w=7 g, <1%). Not enough wine or champagne coloured glass was present to carry out an EVE.

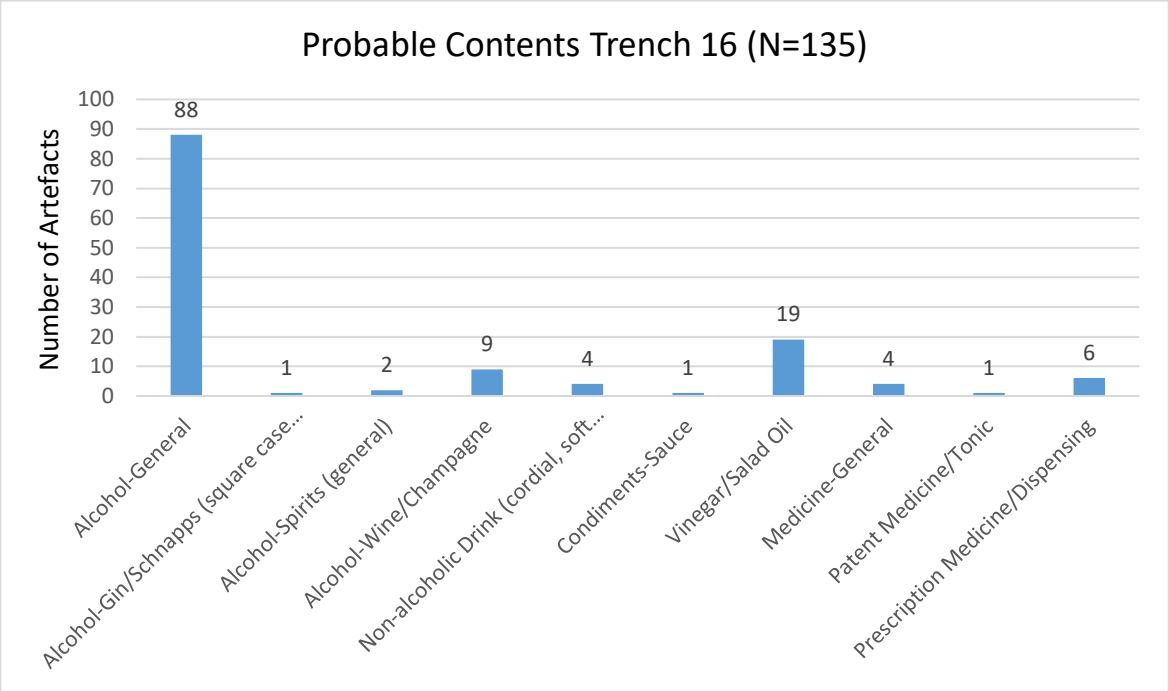


Figure 5. 89 Fragment count of probable contents, Trench 16

5.9.4 Probable contents of identifiable bottles

The probable contents of 135 items could be identified (Figure 5.89), with general alcohol fragments dominating (n=88, 65%) followed by vinegar (n=19, 14%), wine or champagne (n=9, 7%), then prescription/dispensing medicine (n=6, 4%). The next two items were equivalent in number: medicine general (n=4, 3%); and non-alcoholic drink (n=4, 3%). Alcohol/spirits had two items (1%), with the remaining probable contents totalling one item each: alcohol gin/schnapps, sauce, patent medicine/tonic, each representing <1% of the assemblage. When combined, the three different types of medicine bottles (general, patent and prescription) equated to 8% of the assemblage (see Figure 5.90).

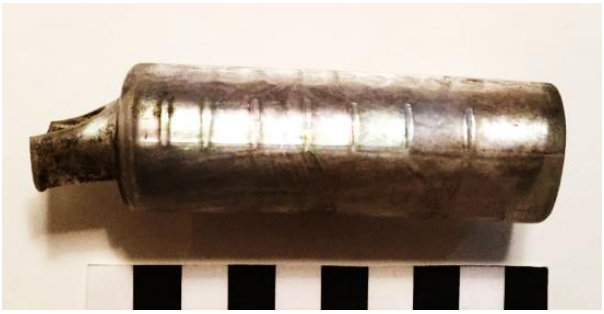


Figure 5. 90 Medicine bottle from Trench 16, Square 2, Context 002
(Photograph Bateman 2018)

5.9.5 Probable contents between contexts

Table 5. 8 Frequency of probable contents between contexts, Trench 16

Contents	Maker	Context 000	Context 001	Context 002	Context 003	Total fragment count
General Alcohol	Unidentified	0	0	88 (100%)	0	**88**
General Spirits	Unidentified	0	1 (50%)	1 (50%)	0	**2**
Gin/Schnapps	Adolpho Wolf's Aromatic Schnapps	0	0	1 (100%)	0	**1**
Wine/champagne	Unidentified	0	0	9 (100%)	0	**9**
Non-alcoholic Drink	W. F. Hamilton (torpedo)	0	0	2 (50%)	0	2 (50%)
	Unidentified	0	0	2 (50%)	0	2 (50%)
					Total	**4**
General Medicine	Unidentified	0	0	4 (100%)	0	**4**
Prescription/Dispensing Medicine	Unidentified	0	0	6 (100%)	0	**6**
Patent Medicine/Tonic	'St Jakobs Oel' Charles A Vogeler Company	0	0	1 (100%)	0	**1**
Vinegar	J.T. Morton	0	0	19 (100%)	0	**19**
Sauce	Lea & Perrins Worcestershire	0	0	1 (100%)	0	**1**
						Overall total 135

5.9.6 Object component and MNV

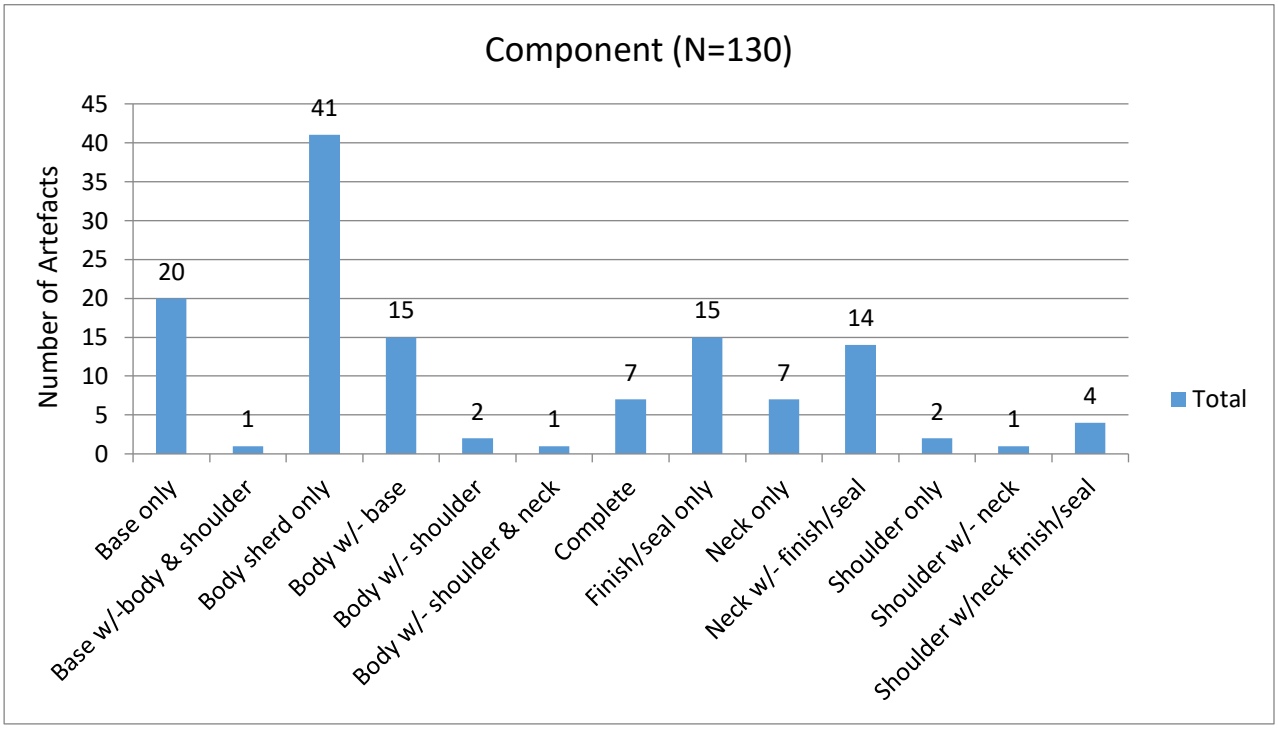


Figure 5. 91 Object component, Trench 16

Grouped body fragments (n=1400) were not included in Figure 5.91 as they are not useful for calculating the MNV. Complete items also includes other objects such as stoppers, therefore items that are not bottles were also excluded from the MNV. Body sherds dominated the assemblage, with 41 fragments (32%). Second was bases (n=20, 15%), then bodies with a base (n=15, 12%) and finish/seals (n=15, 12%). These were followed by necks with a finish/seal (n=14, 11%), then neck only (n=7, 5%) and complete items (n=7, 5%). The remaining components made up less than 5% off the assemblage at Trench 16 and are listed in order of abundance: shoulders with neck and finish (n=4, 3%); bodies with shoulder (n=2, 2%); and shoulders only (n=2, 2%). Bases with body and shoulder (n=1, <1%), bodies with shoulder and neck (n=1, <1%) and shoulders with neck (n=1, <1%) were all equivalent. The majority of components had a base portion (n=36), and there were 25 finishes altogether. Some complete 'objects', were not vessels, therefore were excluded from the MNV. Only three 'bottles' were counted as complete (Figure 5.92). Therefore, the MNV was 39 bottles.

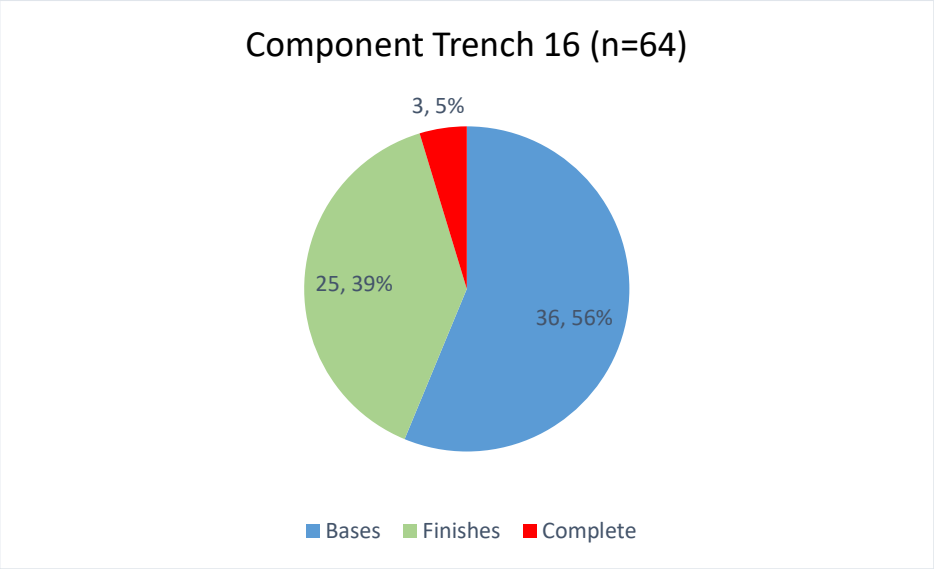


Figure 5. 92 Bottle component, Trench 16

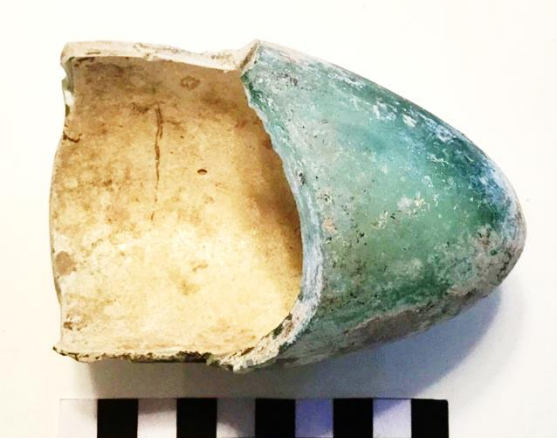


Figure 5. 93 One of two torpedo bottle bases from Trench 16, Square 7, Context 002 (Photograph Bateman 2018)

5.10 Trench 20

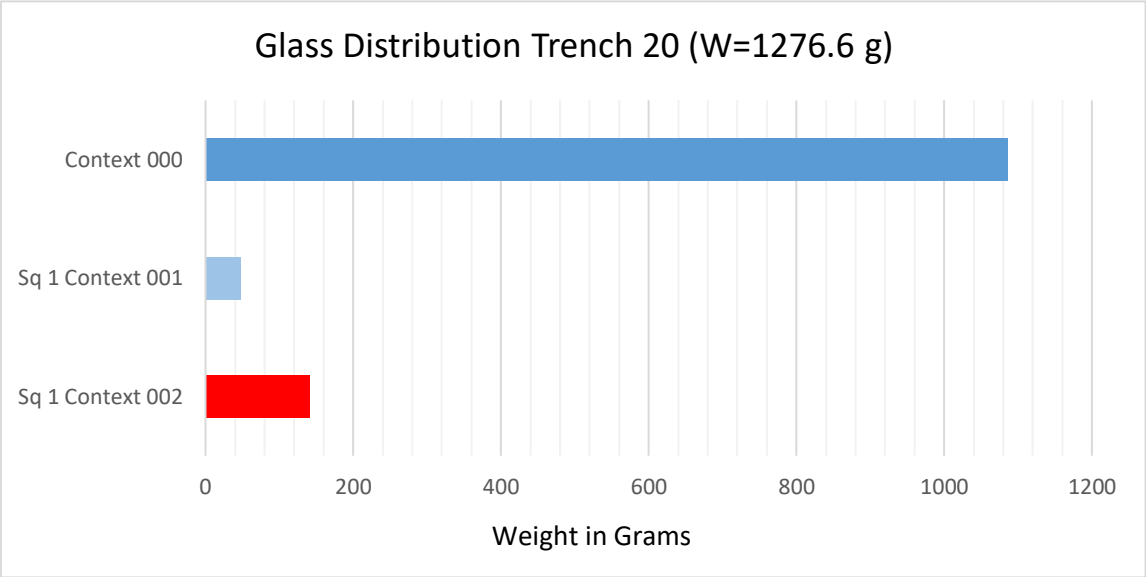


Figure 5. 94 Distribution of glass between contexts, Trench 20

5.10.1 Distribution of glass between contexts

Figure 5.94 shows that the majority of glass was retrieved from Context 000 or the contemporary ground surface (w=1087 g, 85%). The glass in Context 001 decreased significantly, with 48.5 g, (4%). Glass artefacts at Context 002 increased to 141 g or 11%. Overall, the artefacts at Trench 20 were relatively low in density, and the majority of them were located on the current ground surface. The increased pulse at context 002 again demonstrates the major occupation horizon belonging to the NMP camp.

5.10.2 Glass objects

All of the identifiable glass objects from Trench 20 were bottle fragments, which numbered seven or 100% (this total increased to 29 when grouped body fragments diagnostic to bottle level were included and counted individually). No knapped glass was present at Trench 20.

5.10.3 Probable contents

All three items that could be identified for probable contents were found at Context 000 (surface finds): alcohol-spirits (maker unidentified); olive green wine or champagne (maker unidentified); and a Lea and Perrin's Worcestershire sauce bottle.

.

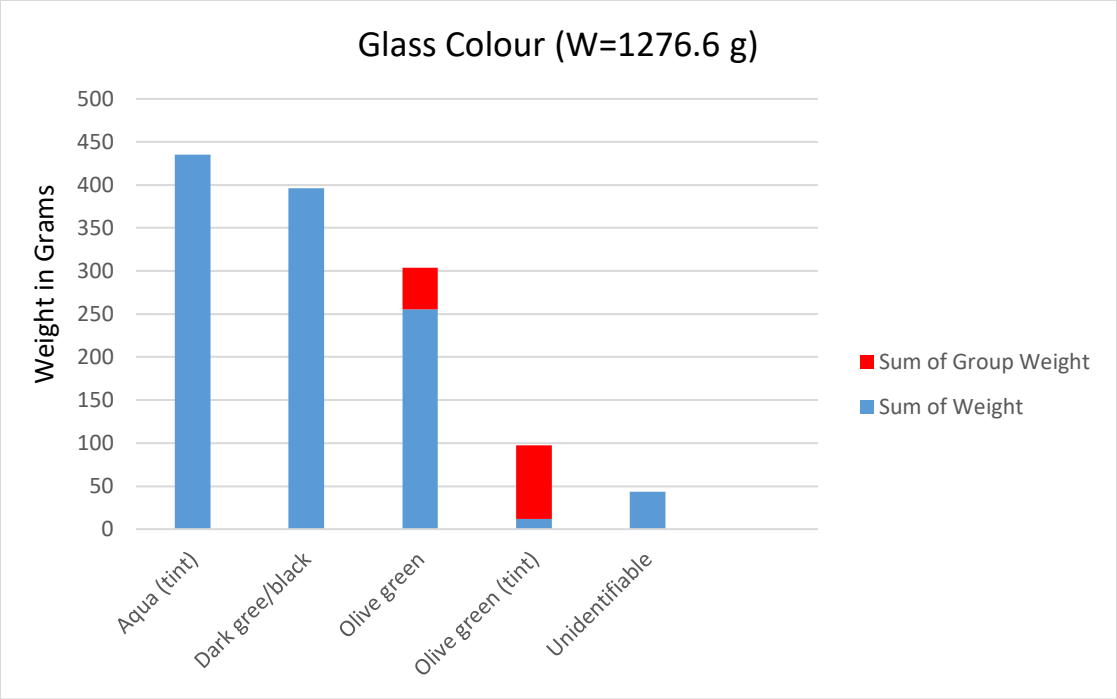


Figure 5. 95 Quantity of glass colour, Trench 20

5.10.4 Glass colour

Figure 5.95 shows that the most common glass colour was aqua tint (w=435.2 g), which was equivalent to 35% of the overall assemblage at Trench 20. Second in abundance was dark green/black (w=396.4 g, 32%), followed by olive green (w=304 g, 25%). The rarest glass colour was olive green tint (w=97.5 g, 8%; see Figure 5.96). Of the 1276.6 g of glass, 43.5 g was unidentifiable. Trench 20 had a higher percentage of aqua tint glass than the other trenches, which were dominated by colours associated with alcohol vessels.

Figure 5. 96 Body and base (heel) portion of an olive green tint bottle from Trench 20, Square 1, Context 002 (Photograph Bateman 2018)

5.10.5 Object component and MNV

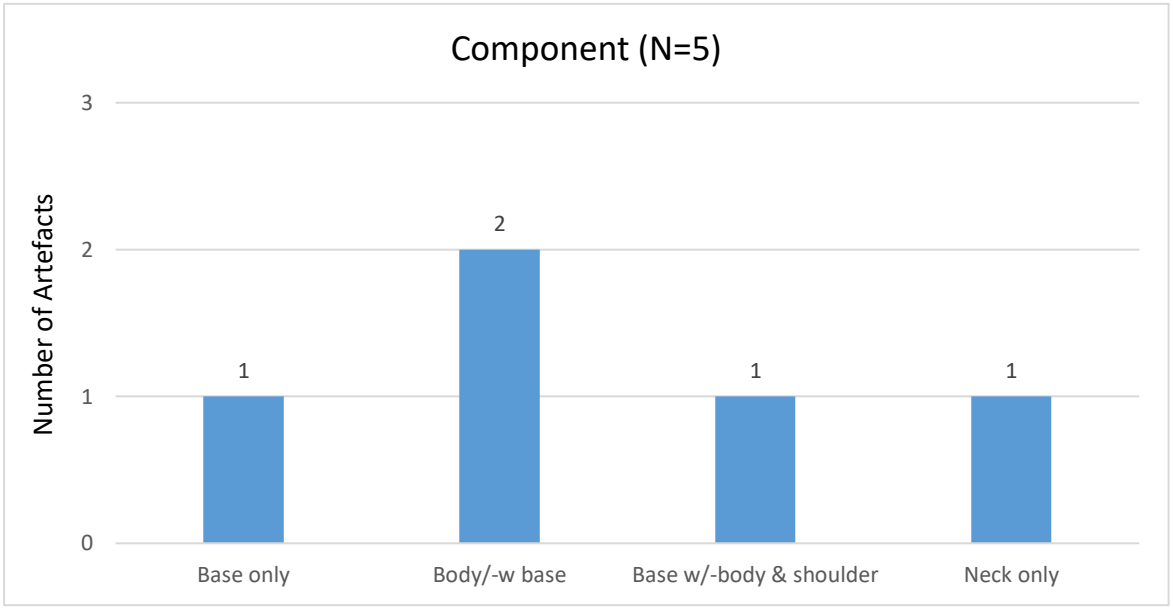


Figure 5. 97 Object component, Trench 20

Grouped body fragments (n=24) are not included in Figure 5.97, as they are not useful for calculating the MNV. Bodies with bases were the most common form of fragment (n=2, 40%). Bases, bases with a body and shoulder, and necks only, all numbered one fragment each (20%). Overall, four artefacts were represented by base fragments (see Figure 5.98). No finishes or complete bottles were present in the assemblage, therefore an MNV using the standard method was not possible. However, given that none of the base fragments at Trench 20 were associated (all were different colours), this suggests that there were at least four bottles.

Figure 5. 98 Base fragment of a wine/champagne bottle. Surface find from Trench 20 (Photograph Bateman 2018)

5.11 Results

The glass assemblage derived from Boralga weighed 72148.37 g or 72.15 kg. The MNV for all trenches was calculated to be 379 bottles. The overall glass items numbered 9584, which included grouped body fragments individually counted (n=8422), and single items (n=1162). There were 1544 artefact entries when sets of grouped fragments were labelled as one item. A total of 27490 g (38%) were surface finds, and 44658.37 g (62%) represented excavated contexts. The grouped glass sherd weight was substantial at 23374 g or 32%, demonstrating the highly fragmented state of the assemblage. Single items weighed 48774.37 g (68%), which included 19 complete bottles. The majority of glass was recovered from Context 002, which was the NMP horizon.

Most of the glass from Trenches 1, 3 and 20 sat on the contemporary ground surface. Both excavated squares at Trench 1 were low in artefact density. A body and base fragment from a gin bottle, and an almost complete wine or champagne bottle, collected from the ground surface, had a combined weight of 1124.48 g, which represented 80% of the total weight, thus dominating Context 000 at Trench 1. Similarly, the artefacts within excavated contexts at Trench 20 were relatively low in density, and a few heavy objects collected from the ground surface (two bottle bases and an almost complete Lea & Perrins' Worcestershire sauce bottle) had a combined weight of 1087.1 g (85%), which significantly dominated the rest of the assemblage. Trench 3 was a primary refuse area that had been previously excavated by looters, which most likely exposed the underlying artefacts to the ground surface. As a comparison, Trench 4 was an undiscovered refuse area located a short distance away, which still comprised a high number of artefacts located in Context 002.

All items fell within known occupation dates except for one older medicine bottle (a pain killer that most likely contained opiates) found at Trench 16, which may have been kept for a period of time prior and subsequently transferred to the site. Refuse areas (Trenches 3, 4, 7 and 16) contained the majority of glass items. Trench 4 demonstrated a greater diversity and higher quality of tableware types, with numerous pressed glass items and a cut glass bottle base. In terms of probable contents, Trench 16 had a higher percentage of medicine bottles than the other trenches, and Trench 7 had a significantly higher number of knapped glass pieces. The results also demonstrated that bottles were the most common glass objects, and that alcohol dominated the probable contents category, with the exception of Trench 4. Adolpho Wolf Aromatic Schnapps bottle glass, which dates between the 1850s and 1860s, was recovered from all analysed trenches (except for Trench 20) and can be found

in all contexts. Glass colour results showed that four out of the six trenches analysed were dominated by dark green shades.

5.12 Discussion

The quantity and diversity of glass derived from Boralga, combined with its spatial associations to known structures within the camp was sufficient to further confirm assumed spatial arrangements and zones, as several refuse areas were associated with particular buildings. Activities involving glass were most likely carried out at individual dwellings and disposed of within close proximity. Some glass objects could assist in identifying specific domestic activities and elicit some insights into the cultural and gender identities of the individuals who used them, although this in part confirms known aspects of the existing historical record with regard to the presence of women and children, hunting activities and the consumption of alcohol. However, the results gave more nuanced insights into the type and quantity of alcohol consumed, and the use of various types of medicines, tonics, ointments, pain killers, condiments, and perfume that was not otherwise historically recorded.

Although refuse areas can be problematic in terms of who was using what and when, the dump at Trench 7 was associated with the area identified through oral history, earlier surveys and a photograph showing the troopers' huts area (see Figure 2.10). The glass results support this interpretation, as the artefacts included a significantly higher number of knapped glass items within this zone. Knapped glass was produced and used by the Aboriginal women and troopers, possibly for hunting and processing traditional foods, as various archival documents show that food supplementation by troopers and their wives was essential for survival due to insufficient food rations. However, as it is likely that knives and European utensils were readily available to them, maintaining a connection to their culture and thus creating a sense of place that has value and meaning is therefore the more plausible explanation for the high quantity of knapped glass found at Trench 7.

Various glass beads including five seed beads were recovered from Trench 7. According to Wesley and Litster (2013), from the 1840s onwards Europeans traded glass seed beads along with flour and tobacco in order to access Aboriginal lands for various industries, such as lumber getting and pastoral industries (Wesley & Litster 2013; Figures 5.99 & 5.100). Documents on file also describe an instance where glass beads (and other items) were approved as a reward by David Seymour, the Commissioner of Police in Brisbane, for the rescue of missing gold miners by a group of Aboriginal

people from Moreton in 1893 (QSA290312 1893 Telegram from Fitzgerald in Batavia River Police Station file). The glass marble located at Trench 7 supports historical documentation that children were also occupying this zone (see Figures 2.10 & 5.72).

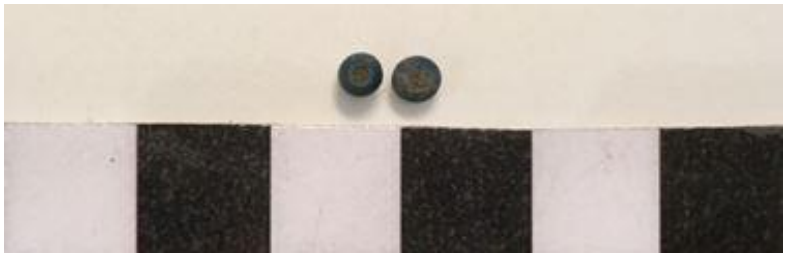


Figure 5. 99 Two cobalt blue, glass seed beads from Trench 7, Square 14, Context 002 (Photograph Bateman 2018)

Figure 5. 100 White, glass seed bead from Trench 7, Square 9, Context 002 (Photograph Bateman 2018)

The refuse area at Trench 4 revealed a much larger number of glass items and a greater diversity of tableware types than Trench 7, which was more moderate in quantity, quality and diversity. Items from Trench 4 included specialised vessel forms such as pressed and cut-glass objects, including bowls with lids, and a glass 'hobnail' style vessel (with a broken handle) associated with the presentation and consumption of drinks such as cordials. Items such as these are consistent with higher-status officer assemblages observed within encampments in America (Eichelberger 2019:114). Although Trench 7 contained fragments that equated to a single vinegar bottle and one non-alcoholic drink bottle, Trench 4 contained a much higher quantity of gustatory glass vessels including a large quantity of vinegar and sauce bottles, as well as luxury items such as perfume, signifying small indulgences in an inhospitable environment, and contributing supporting evidence to the notion that this refuse area was associated with the officer's quarters. The relatively high quantity of emerald green coloured glass derived from Trench 4 would suggest that wine or

champagne was also popular within this zone. Trench 4 was one of the closest refuse areas to the officer's quarters other than the refuse area at Trench 5 which was looted (Trench 4 is slightly more detached from the building, see Figure 3.5). Trench 16 was closest to what was identified as a possible saddle shed, but the contents of this refuse area indicated that it was a domestic deposit. Further exploration revealed ant bed flooring nearby, possibly belonging to an associated building. Of note was the large quantity of glass medicine bottles from this assemblage that included Chinese, patent, prescription as well as dispensing items.

The results showed that the darker green shades of glass dominated the overall assemblage at Boralga, and most likely represented wine or champagne bottles. Given that a significant portion of NMP work was conducted on patrol, a quantity of alcohol may have also been transferred off site. For example, troopers reported that 'sub-Inspector Frederick Clerk (not from Boralga), took seven bottles of spirits on patrol and was drunk while it lasted' (Thompson, Police Staff file 1862). Although some alcohol was considered medicinal such as gin, schnapps and brandy, conditions such as isolation, loneliness and the violent nature of the work were the most likely contributors to excess alcohol consumption amongst NMP officers. Although drunkenness was often tolerated, historic documents show that it was the most common cause for action by authorities, with at least 24 officers dismissed from the force for alcoholism (The Archaeology of the Queensland Native Mounted Police data base 2019; see Appendix 6 for a list of Officers dismissed for drunkenness). The glass analysis does not prove that alcoholism was a prevalent problem at this site, however Officer Joseph Judge resigned in 1881 after he was found guilty of drunkenness at Boralga (QSA563681Conduct sheet, Joseph Judge Police Staff file). There was also a suggestion by a trooper from the Upper Laura camp, that Officer Judge was suppling his troopers with alcohol: 'Camp Keeper never give boy "grog" only Judge (Constable)' (QSA847027 1880 Statement of Trooper Jerry 30 June, In letter 80/3846).

Historical records show that the highest consumption of alcohol per capita during European settlement in Australia peaked between 1851-1858 (Anderson 2015:103; Figure 5.101). The graph shows a preference by early settlers for spirits between 1844-1886, after which beer became more popular (Anderson 2015:10). Interestingly, wine consumption was relatively low from 1844 until the mid-twentieth century (Anderson 2015:10). This is in contrast to the findings at Boralga, where wine or champagne was the most popular alcoholic drink consumed (occupation 1875-c1894).

Consumption rates over the decades fluctuated with economic downfalls and financial pressures (Public Affairs, Commonwealth of Australia 2001:1). Anderson believes that the initial lack of consumer interest in wine from the mid-eighteenth and through the nineteenth century is understandable, given that the origin of the earliest settlers were usually British or Irish, where spirits and beer dominated drinking habits except amongst the upper classes. This pattern changed after the 1830s, when wine popularity increased slightly as new immigrants began settling in Victoria, South Australia and Western Australia, however wine did not exceed beer or spirit consumption before 1900 (Anderson 2015:10). According to Adams (2009:46, 57), many American officers viewed themselves in terms of military rank and social class, with the ideal officer being a gentlemen who was conservative, sophisticated and deserving of his position in society. Glass artefact assemblages at fort sites in America have revealed that champagne was the favoured alcoholic beverage among officer's, which tended to cost more (Adams 2009:119). Recent archaeological studies on alcohol glass at the Fort Hoskins and Fort Yamhill sites in Oregon which date between 1856-1866, suggested that higher-ranking officers were expressing higher social status through the consumption of more expensive alcoholic beverages (Eichelberger 2019:120).

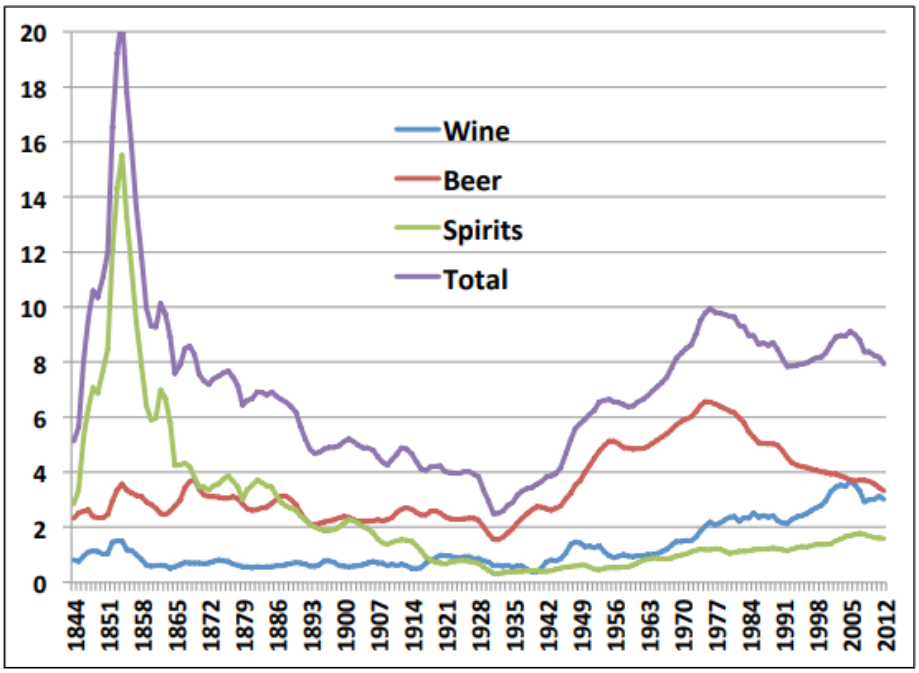


Figure 5. 101 Per capita consumption of alcohol from 1844-2012 (Anderson 2015:103)

Chapter 6 – Ceramic

6.1 Introduction

The ceramic at Boralga was abundant and was derived from both the ground surface and subsurface levels within the various refuse areas. Ceramic was almost universal at domestic sites during the period under investigation, and it typically survives in large quantities in various Australian contexts (Birmingham 1990; Casey 1999; Lawrence 1998, 2000, 2001; Lydon 1998; Wilson 1988). The ceramic assemblage at Boralga consisted of both vitreous (white granite) and non-vitreous (refined earthenware) and porcelain. Much of the assemblage was in fragments, which could often be conjoined to identify the primary intended form and function. In addition to European wares, Chinese domestic ceramics were also recovered, which mainly consisted of utilitarian storage vessels made of stoneware. Chinese immigrants began colonising the Pacific rim from the 1850s onwards, bringing with them their long tradition of food preservation techniques (Yang and Hellmann 1995). When the goldrush diminished, many Chinese people settled as market gardeners and farm hands. The Chinese presence at Boralga is unrecorded, and therefore information regarding occupancy at the site is unknown, however given the numerous Chinese objects recovered, it could be argued that a Chinese employee such as a cook may have resided at the site.

6.2 Ceramic history, identification and dating

The following typology specifically pertains to British wares within the Australian colonial context:

Earthenware – A total of 1047 earthenware fragments were recovered from the study site. Earthenware was most commonly used for utilitarian tablewares, and is often divided into two categories; coarse or refined, which can correspond with its use. For example, coarse earthenware is porous with visible inclusions, and was used in the seventeenth and eighteenth centuries for utilitarian vessels, tablewares, kitchenwares and clay tobacco pipes (Aultman *et al*. 2014:8). In Australia, coarse earthenwares will also be found in utilitarian forms, such as garden pots (Brooks 2005:29). Refined white-bodied earthenwares were developed in the mid-eighteenth century by English potters from better quality clay, and were mostly used for table and teawares (Aultman *et al*. 2014:8). The typological categories for refined earthenware was traditionally subdivided into creamware, pearlware and whiteware, however the amount of cream or blue in creamware and pearlware glazes gradually decreased over time, leaving only ‘whiteware’ as the end result (Brooks 2005:26). Within the Australian context, outside of the earliest British settlements, very little

creamware or pearlware is present at sites due to the fact that it was rarely used after c.1830 (Brooks 2005:26). The common ware-type referred throughout Australia as 'whiteware' is of limited use for chronological control, therefore decoration, style, and makers marks are more useful for establishing dates (Brooks 2005:26). For the purposes of this study, earthenware was divided into refined earthenware (described as porous), white granite or ironstone earthenware (described as vitreous), coarse/unrefined (terracotta or redware) and coarse/unrefined (yellowware).

Porcelain – A total of 403 porcelain fragments were recovered from Boralga. Bone china was introduced by Josiah Spode around 1794, and was the dominant porcelain type produced in Britain during the nineteenth century (Miller 2000:11). Bone china was often used for teaware, and differed from standard porcelain after bone powder was added to the clay, producing an off-white appearance and a coarser fabric (Brooks 2005:27). According to Brooks (2005:28), when Australian archaeologists refer to British examples of 'soft-paste porcelain' it almost always refers to bone china (bone china is actually a sub-type of soft-paste porcelain). The term 'hard-paste porcelain' refers to the more vitrified British and European porcelains which are similar to Chinese materials. The majority of hard paste porcelains recovered from Australian sites will most likely be Chinese (Brooks 2005:30), and are recognisable by the definite boundary between the body and the glaze. Both of the main types of porcelain were initially expensive, although ceramic innovation in Britain eventually drove the advent of cheaper alternatives (Brooks 2005:30).

Stoneware – A total of 335 stoneware fragments were recovered from the study site. Stoneware is highly fired, vitrified and opaque, with the paste colour most commonly found in Australia being grey, buff, or brown. Glazes may be a single colour slip or Bristol-glaze, salt glazed or unglazed (Brooks 2005:33). Stoneware was developed in the thirteenth century using traditional European methods in Germany (Aultman *et al*. 2014:9; Brooks 2005:33), though Asian stonewares existed independently at the time. Stoneware production was common throughout most of Western Europe and much of North America by the eighteenth and nineteenth centuries, with Australia producing its own stoneware from the beginning of the nineteenth century (Brooks 2005:33). Stoneware items recovered from Australian sites will most likely be either storage vessels or sewage fittings (Brooks 2005:33).

6.3 Dates for decorative methods and designs commonly found at Boralga

The following typology focusses on overall decorative methods and designs present at Boralga:

Moulded relief or embossing – A total of 91 ceramic fragments at the site were moulded (51 white moulded fragments were from Trench 16). Moulding is a raised decoration that often has no colour which was very popular between 1850-1890 on clear-glazed white granite and ironstone vessels (AHAPN Draft Historical Archaeological Material Cataloguing Guidelines 1998; Wetherbee 1985). To make a moulded object, the potter poured the clay slip into a Plaster of Paris mould carved with the required design. Moulding is a generic term used to describe a vast array of embossed decorations on a wide range of ware types (Brooks 2005:35). At Boralga, moulded designs of various patterns were identified on porous 'refined earthenware', as well as vitreous 'white granite' objects, with some items such as cups and saucers matching in design (Figures 6.1 & 6.2). Similar moulded designs were found at the Eyre's Creek NMP camp.

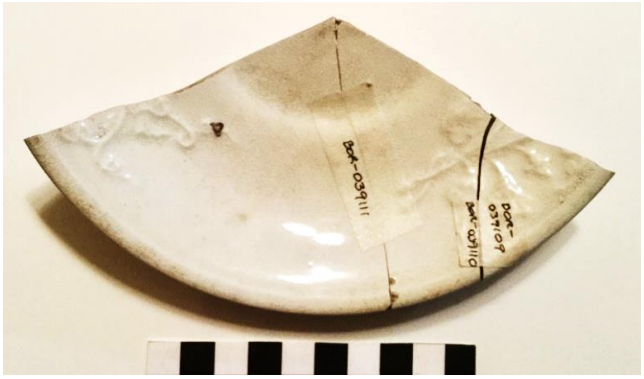


Figure 6. 1 White granite moulded relief design on a saucer from Trench 16 (Photograph Bateman 2018)

Figure 6. 2 Matching white granite moulded relief design on a coffee cup from Trench 16 (Photograph Bateman 2018)

Edge-banded – A total of 134 fragments at the site were edge-banded and were mostly represented by a blue or red (fades to pink) band and line design. These are included in underglaze, hand painted and transfer printed objects in Table 6.2. Edge-banding, also referred to as 'lined', 'linear' or 'band and line', is defined by thin, regular, horizontal bands of painted colour (which can vary in number and width) around the rim of an object (Brooks 2005:36). In order to produce the bands, the potter placed the vessel on a wheel and applied the pigment with a brush as the wheel spun. Stand-alone banded decoration with no other decorative features became popular post 1860 (Majewski & O'Brien 1987:161). Much of the edge-banded earthenware at Boralga featured typical handpainting on both porous 'refined earthenware' and vitrified 'white granite' objects (Figures 6.3 & 6.5), although several items appear to have a transfer printed edge-banded design (Figure 6.4). The printed technique was most likely adopted later as the design became increasingly popular and mass produced. Blue band and line items have also been found in NMP camps throughout Queensland at Boulia, Mistake Creek, and Eyre's Creek. These items were cheap and are commonly found throughout many historical archaeological sites (Casey 2005:102). Various objects at Boralga were clearly intended to match, such as cups, saucers, dinner plates and tureens, which were all decorated with either blue or red bands.

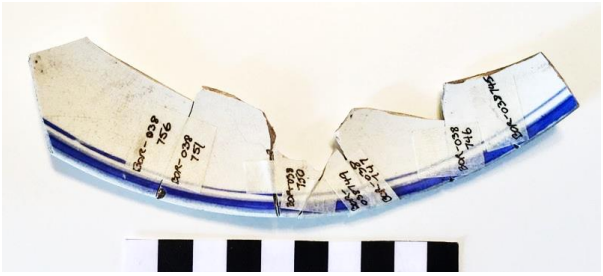


Figure 6. 3 Handpainted, blue edge-banded design on a refined earthenware saucer from Trench 16 (Photograph Bateman 2018)

Figure 6. 4 Transfer print, blue edge-banded design on a refined earthenware plate from Trench 16, (Photograph Bateman 2018)

Figure 6. 5 Handpainted, red edge-baned design on a refined earthenware dinner plate from Trench 4 (Photograph Bateman 2016)

Transfer print – A total of 369 ceramic fragments at the site were transfer printed. This technique was developed as early as 1750, but only gained popularity with the introduction of creamware in the early 1760s (Brooks 2005:43). The transfer print process involved the placement of transfer paper on an inked design, which was engraved onto a copper plate. While the object was still in its biscuit state, the transfer paper was placed onto the item, leaving behind the inked pattern before glazing and the final firing occurred (Majewski & O'Brien 1987:141-142). Original designs were black or red overglaze monochrome prints which were soon replaced by blue, and occasionally black underglaze prints from c1780. As technology advanced, new colours emerged in 1828, which included green, red, yellow and black. Polychrome transfer prints were introduced in 1840 (Majewski & O'Brien 1987:141-143; Miller 2000:13). Due to its popularity up until the mid-nineteenth century, thousands of transfer printed patterns have been produced, forming some recognisable styles based around various motifs and borders (Samford 1997:1). The few blue transfer printed items at Boralga (other than more recent band and line style) consisted of a blue cable design located around the rim of flatware objects such as plates and saucers (dated post 1860s), and a blue ivy design which decorated an earthenware chamber pot (Figures 6.6 & 6.7). The same blue cable design has also been identified on tableware in NMP camps throughout Queensland at Boulia, Mistake Creek and Eyre's Creek, however this design is quite common across many historical archaeological sites generally (Casey 2005:102). One identifiable blue transfer print was 'Asiatic Pheasant' (Figure 6.8), which decorated a refined earthenware serving platter, and dates post 1834 (Godden 1991:501). Although some blue transfer print was present at Boralga, there seemed to be a preference for brown transfer printed objects, with the central designs featuring floral and faunal motifs such as plants, flowers and birds (Figures 6.9, 6.10 & 6.11).

Figure 6. 6 Blue transfer print cable design on the rim of a white granite dinner plate from Trench 16 (Photograph Bateman 2018)

Figure 6. 7 Blue ivy transfer print on a refined earthenware chamber pot from Trench 7, (Photograph Bateman 2018)

Figure 6. 8 Blue transfer print ‘Asiatic Pheasant’ design on the rim of a refined earthenware platter from Trench 16 (Photograph Bateman 2018)

Figure 6. 9 Refined earthenware fragment with a brown transfer print flower motif from Trench 11 (Photograph Bateman 2017)

Figure 6. 10 Refined earthenware fragment featuring brown transfer print of a bird and twig on a patterned background from Trench 11 (Photograph Bateman 2017)

Figure 6. 11 Refined earthenware fragment featuring a brown transfer print of a pot plant from Trench 4 (Photograph Bateman 2017)

Rockingham glaze – A total of 20 objects and fragments at the site had a ‘Rockingham glaze’ or ‘Rockingham-type’ glaze. This technique has been in use from the 1840s to 1900, and is characterised by a thick dark brown glaze (frequently mottled with yellow), which is painted on to the vessel and then deliberately allowed to run down the sides (Brooks 2005:41). This gives the appearance of the glaze being dripped onto the vessel like treacle. Objects usually had moulded relief patterns under the glaze, and the technique was most commonly associated with buff coloured teapots (Brooks 2005:41). Both British and Australian made examples occur (Brooks 2005:41). Several Rockingham items were found at Boralga including vitreous earthenware teapot fragments that were associated with a complete lid and handle (Figure 6.12), and a fragment of an unidentified hollow ware vessel featuring the moulded face of a woman (Figure 6.13).

Figure 6. 12 Rockingham glaze teapot lid from Trench 16 (Photograph Bateman 2017)

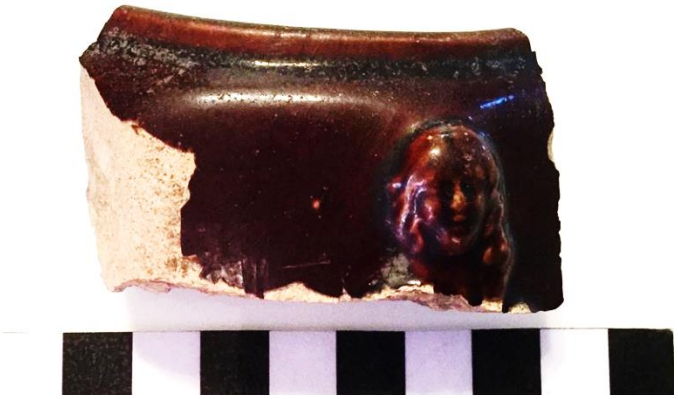


Figure 6. 13 Rockingham glaze - unidentified hollow ware fragment with the moulded face of a woman from Trench 16 (Photograph Bateman 2017)

Salt glaze – At total of 11 fragments at the site were salt glazed, which is a shiny glass-like glaze with a pitted surface that is applied to stoneware. The technique was discovered by accident in the Rhine region in Germany, when barrels and boxes used to salt fish were used by potters to fire the kilns (Dermer 2019:1). The texture is achieved by throwing salt into a hot kiln, which causes sodium from the salt to combine with the silica, forming a glassy coating of sodium silicate (Majewski & O'Brien 1987:110). The salt forms a slightly pitted surface on the object, similar to an orange peel, and can vary in colour on the same vessel (Brooks 2005:33). Salt-glazed stoneware found in Australia can originate from a variety of countries, and almost all examples in Australia are characterised by brown to buff glazed storage vessels (Brooks 2005:33). Salt-glazed stoneware at Boralga was not common, with the few salt-glazed objects recovered being food or drink storage vessels (Figure 6.14). Dates for these vessels are unknown since there are no visible associated makers marks, and the technique dates back to the fourteenth century (Dermer 2019:1).

Figure 6. 14 Salt-glazed, stoneware body fragment from a storage vessel with a dark brown glaze (which is most likely Chinese) from Trench 3 (Photograph Bateman 2016)

Chinese brownwares – A total of 30 fragments of Chinese brownware was derived from the site. The fabric is generally a coarse buff or grey-brown paste, and the glaze is often mid-to-dark brown on the outer surface, sometimes almost black (see Figure 6.15), while the interior is often a light brown colour (Yang & Hellmann 1995:59). These stoneware containers are generally utilitarian and include a wide range of vessel types, such as liquor bottles, wide mouthed food jars, spouted jars, barrel jars and ginger jars. The vessel shape and size was influenced by the products they contained, which was usually typical traditional Chinese foodstuffs. Bulbous, spouted, narrow-necked vessels were used for black vinegar, peanut oil, wine or soy sauce (Yang & Hellmann 1995:61). Wide-mouth jars were more suited for preserved foods, such as pickled vegetable, soya bean cheese and shrimp paste. These practical vessels were often re-used by the consumer for other purposes (Yang & Hellmann 1995:60). The most famous producer of Chinese brownware was the Potteries of Shek Waan in Canton, China, who made pottery for everyday domestic use (Laird 1918; Olsen 1978; Yang & Hellman 1995:59). Brownware forms, although wide-ranging in shape, usually have similar attributes with regard to glaze and body fabric, which have remained virtually the same for over 200 years, and therefore are not useful for establishing dates (Wegars 1998:48).

Figure 6. 15 Chinese brownware rim fragment from a barrel jar, surface find (Photograph Bateman 2016)

6.4 Overall ceramic analysis, Boralga NMP site

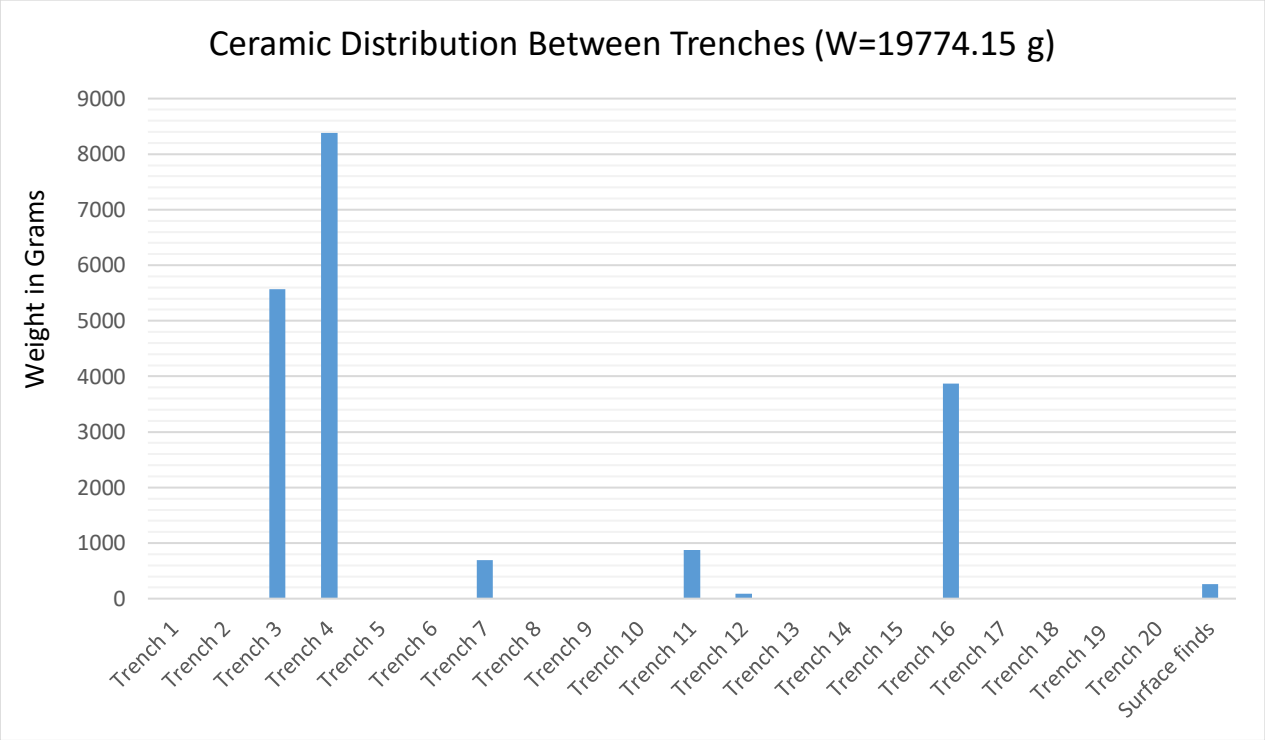


Figure 6. 16 Overall distribution of ceramic, all trenches

6.4.1 Overall distribution of ceramic between trenches

Of the 19774.15 g of ceramic recovered from the site, 1526.6 g were non-diagnostic grouped fragments. Figure 6.16 shows that Trench 4, which was a refuse area near the officer's quarters, dominated the overall assemblage (w=8377.11 g, 42%). Second in abundance was Trench 3 (w=5565.9 g, 28%), which was a looted refuse area. The next highest weight was Trench 16 (w=3874.3 g, 20%), which also contained a domestic deposit. The remaining trenches each contained less than 5% of the overall assemblage and are listed in order of abundance: Trench 11 (w=872.34 g, 4%); Trench 7, which was associated with the troopers' huts (w=691.9 g, 3%); surface finds (w=264.5 g, 1%); Trench 12 (w=89.4 g,<1%); Trench 2 (w=11.7 g, <1%); Trench 10 (w=10.4 g, <1%); Trench 1 (w=10.2 g, <1%); Trench 13 (w=2.7 g, <1%); Trench 8 (w=1.5 g, <1%); and Trench 5 (w=2.2 g, <1%). The following trenches contained no ceramic: Trenches 6, 9, 14, 15, 17, 18, 19, and 20. As expected, the refuse areas contained the highest quantity of ceramic.

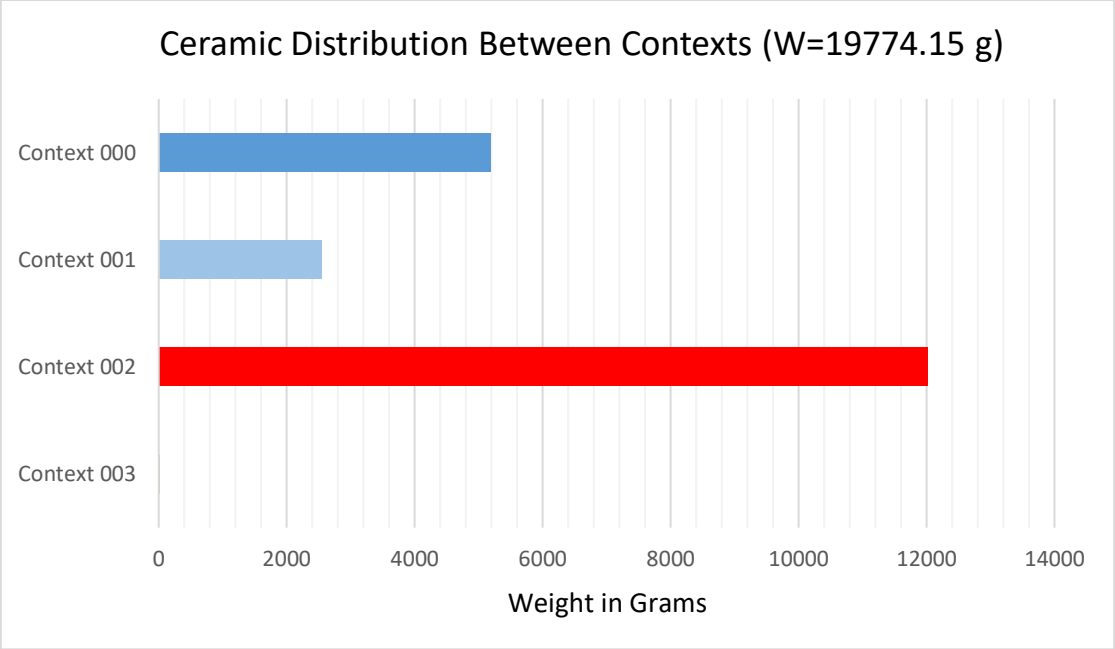


Figure 6. 17 Distribution of ceramic between contexts, all trenches

6.4.2 Overall distribution of ceramic between contexts

Figure 6.17 shows that Context 000 (w=5186 g, 26%) or surface finds, represented the second highest quantity of ceramic at the site, which decreased by almost half at Context 001(w=2546.54 g, 13%). The maximum quantity of ceramic was derived from Context 002 (w=12026.21g, 61%). Ceramic artefact densities significantly decreased at Context 003, which contained the minimum (w=15.4 g, <1%). The high quantity of ceramic artefacts recovered from Context 002 demonstrates the major occupation phase belonging to the NMP camp.

6.4.3 Technological ware type

Table 6. 1 Technological ware type frequencies for ceramic, all trenches

Ware type	Total weight (g)	Relative proportion weight %	Count
Earthenware	7580.45	39	1047
Porcelain	1465.59	7	403
Stoneware	10522.21	53	335
Unidentified	205.9	1	8
Total	**19774.15**	**100**	**1793**

Table 6.1 includes clay tobacco pipes and grouped non-diagnostic fragments. Stoneware dominated the assemblage for weight (w=10522.21 g, 53%), followed by earthenware (w=7580.45 g, 39%), then porcelain (w=1465.59 g, 7%), with unidentified material representing 205.09 g or 1%. Due to the varying densities of the different fabrics, ceramic weights are not indicative of the NMV or sherd count totals. Earthenware had the maximum number of sherds (n=1047, 58%), then porcelain (n=403, 22%), followed by stoneware (n=335, 19%). A total of 8 sherds (<1%) were unidentified.

6.4.4 Technological ware sub-type

Figure 6.18 shows that stoneware was the dominant sub-type by weight (w=10522.21 g, 53%), followed by refined earthenware (w=4542.65 g, 23%), white granite (w=3015.6 g, 15%), then soft paste porcelain (w=1202.09, 6%). Hard paste porcelain (w=263.5 g) and unidentified fabric (w=205.9 g) represented only 1% of the assemblage. Coarse unrefined earthenware - red ware or terracotta (w=21.2 g), and course unrefined earthenware – yellow ware (w=1 g) made up <1% each. In variance to the maximum weights, Figure 6.19 shows that refined earthenware had the maximum number of sherds (n=694, 39%), followed by soft paste porcelain (n=399, 22%), white granite (n=337, 19%), and stoneware (n=335, 19%). The remaining ceramic made up less than 1% of the assemblage and are listed in order of abundance: coarse unrefined earthenware - redware or terracotta (n=13); unidentified (n=8); hard paste porcelain (n=4); and coarse unrefined earthenware - yellow ware (n=3). Stoneware had fewer sherds than refined earthenware, as the fragments were generally much larger, but was dominant for weight due to the heavier, denser fabric.

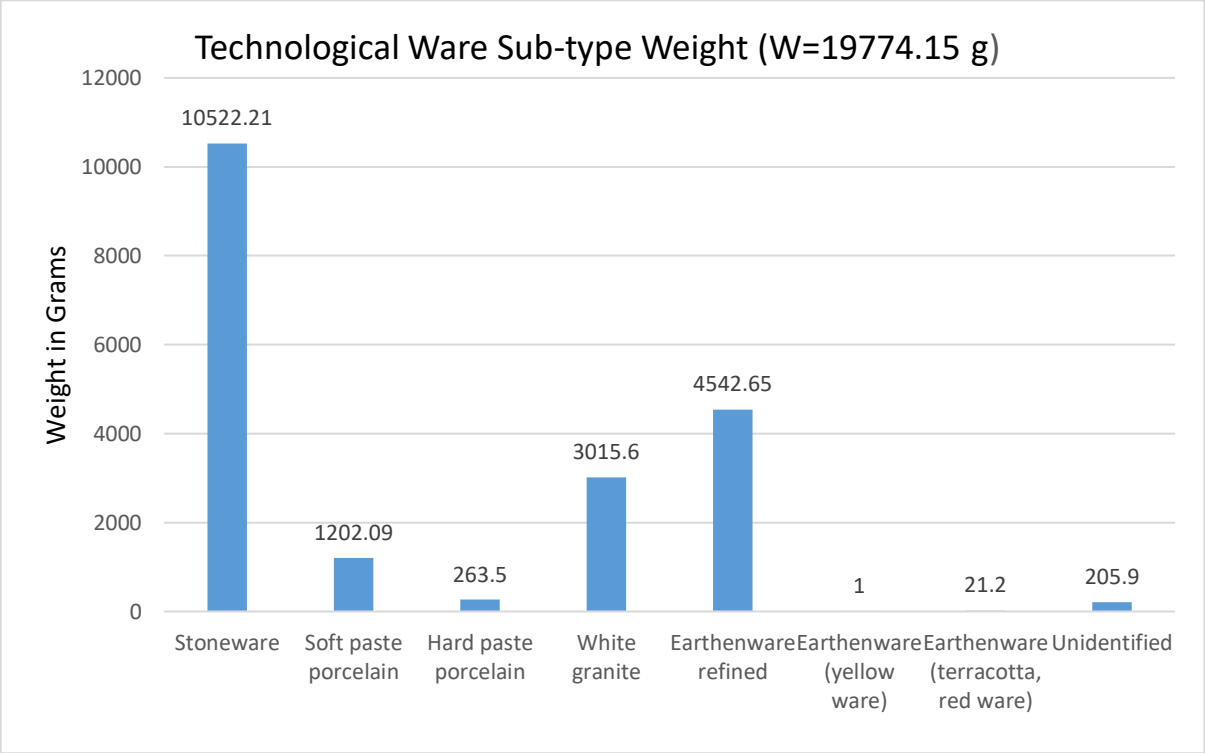


Figure 6. 18 Weight of technological ware sub-types, all trenches

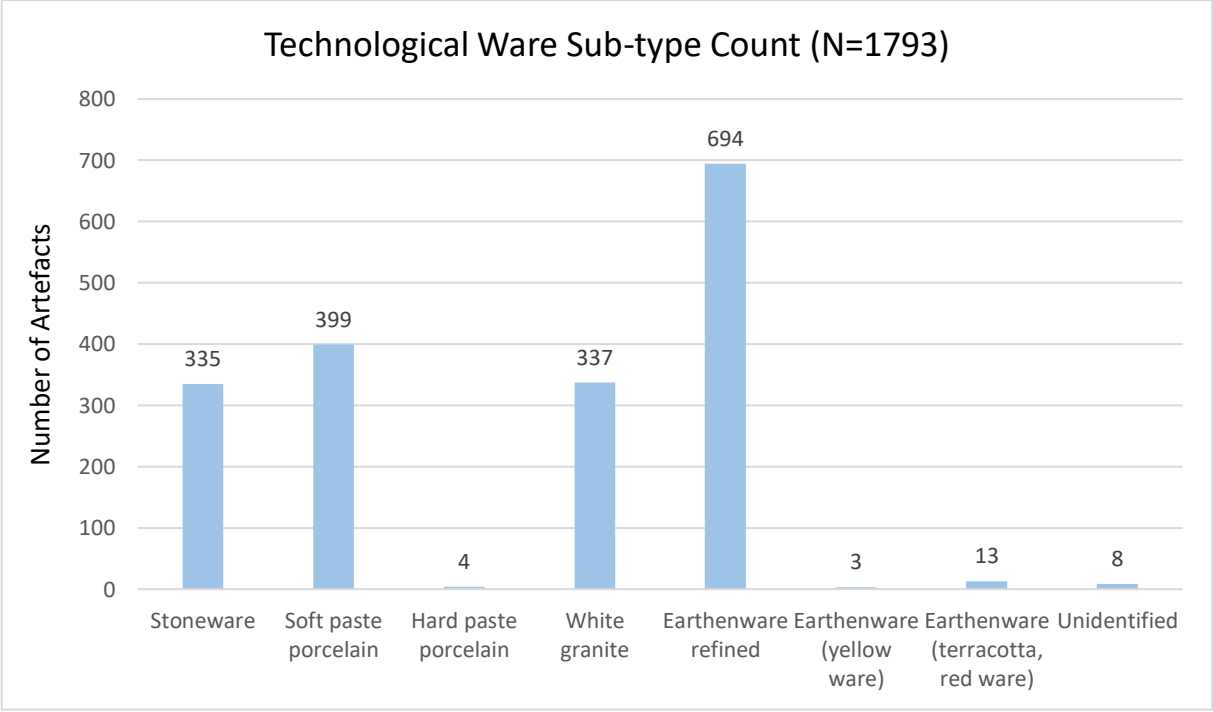


Figure 6. 19 Count of technological ware sub-type fragments, all trenches

6.4.5 Functional type

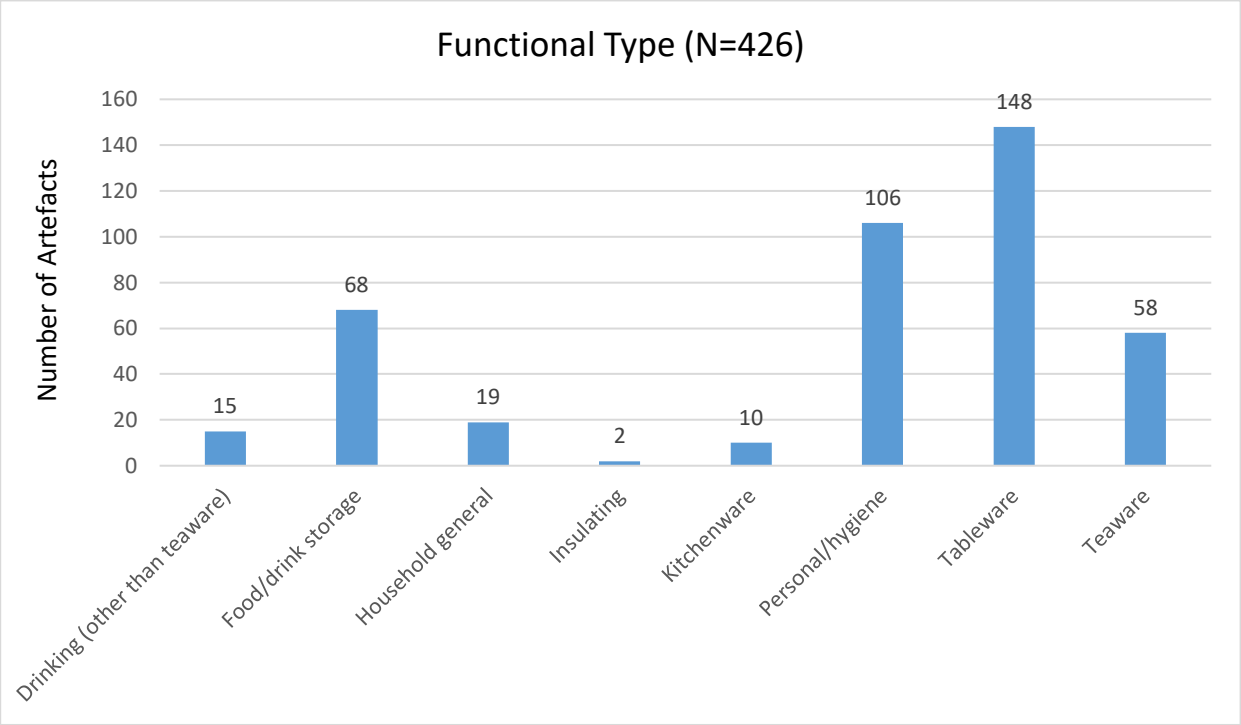


Figure 6. 20 Count of identifiable functional types - objects and fragments, all trenches

Figure 6.20 shows that 426 fragments could be identified for functional type. The graph indicates that tableware items dominated the overall assemblage with the maximum number (n=148), representing 60% of identifiable functional types. Personal/hygiene such as toys, chamber pots and ointment pots was next (n=106, 43%), followed by teaware (n=58, 24%), then food/drink storage (n=68, 28%). Household general had 19 items (8%) and drinking (other than teaware) had 15 (6%). Kitchenware represented 10 items (4%) and insulating had the minimum number, with two fragments (<1%).

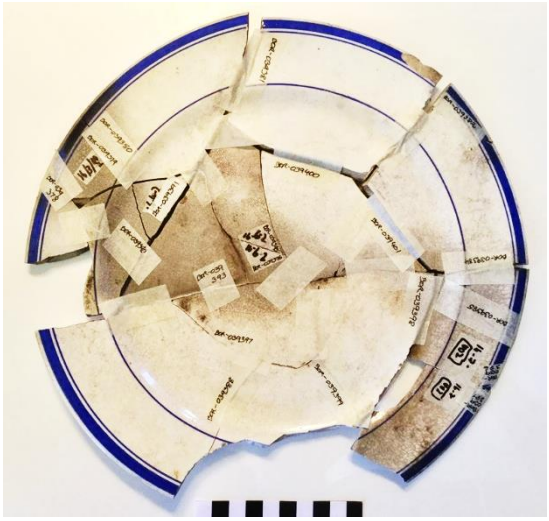


Figure 6. 21 Tableware from Trench 16. Conjoined blue band and line dinner plate (Photograph Bateman 2019)

6.4.6 Fragment count of identifiable objects

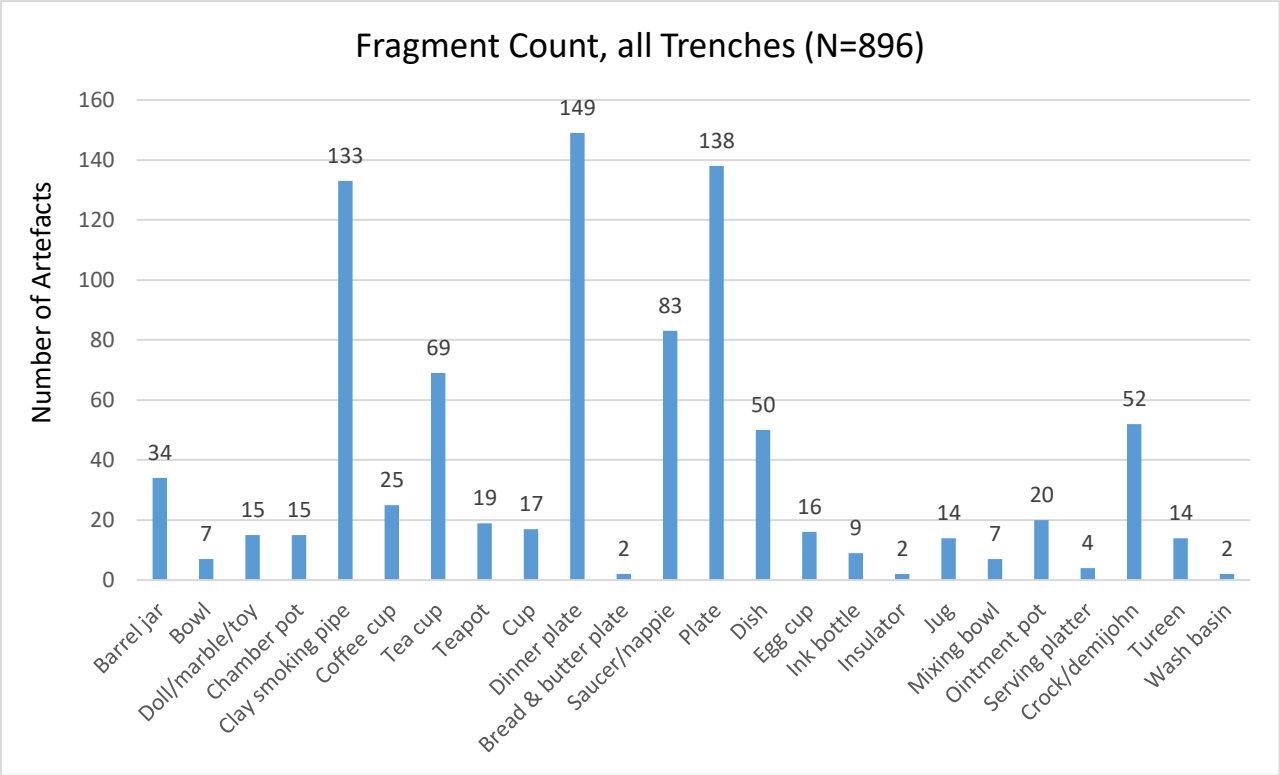


Figure 6. 22 Ceramic fragment count of identifiable objects, all trenches

Figure 6.22 shows a count of both identifiable complete objects and fragments but does not represent the MNV. A total of 24 different object types could be identified. Dinner plates had the maximum number of fragments (n=149, 17%), followed by plates that could not be identified to a particular form (n=138, 15%), then clay smoking pipes (n=133, 15%). No complete pipes were found. Next were saucers/nappies (n=83, 9%), tea cups (n=69, 8%), crocks/demijohns (n=52, 6%) and dishes (n=50, 6%). The remaining objects and fragments represented less than 5% of the assemblage and are listed in order of abundance: Barrel jars (n=34, 4%); coffee cups (n=25, 3%); ointment pots (n=20, 2%); teapots (n=19, 2%); cups that could not be identified to a specific type (n=17, 2%); egg cups (n=16, 2%); chamber pots (n=15, 2%); doll/marble/toys (n=15, 2%); jugs (n=14, 2%); tureens (n=14, 2%); and ink bottles (n=9, 1%). Constituting less than 1% were bowls (n=7, <1%), mixing bowls (n=7, <1%), and serving platters (n=4, <1%). Bread and butter plates, insulators and wash basins were the least abundant (n=2) or <1% each. The MNV is outlined in section 6.4.9.

6.4.7 Object component

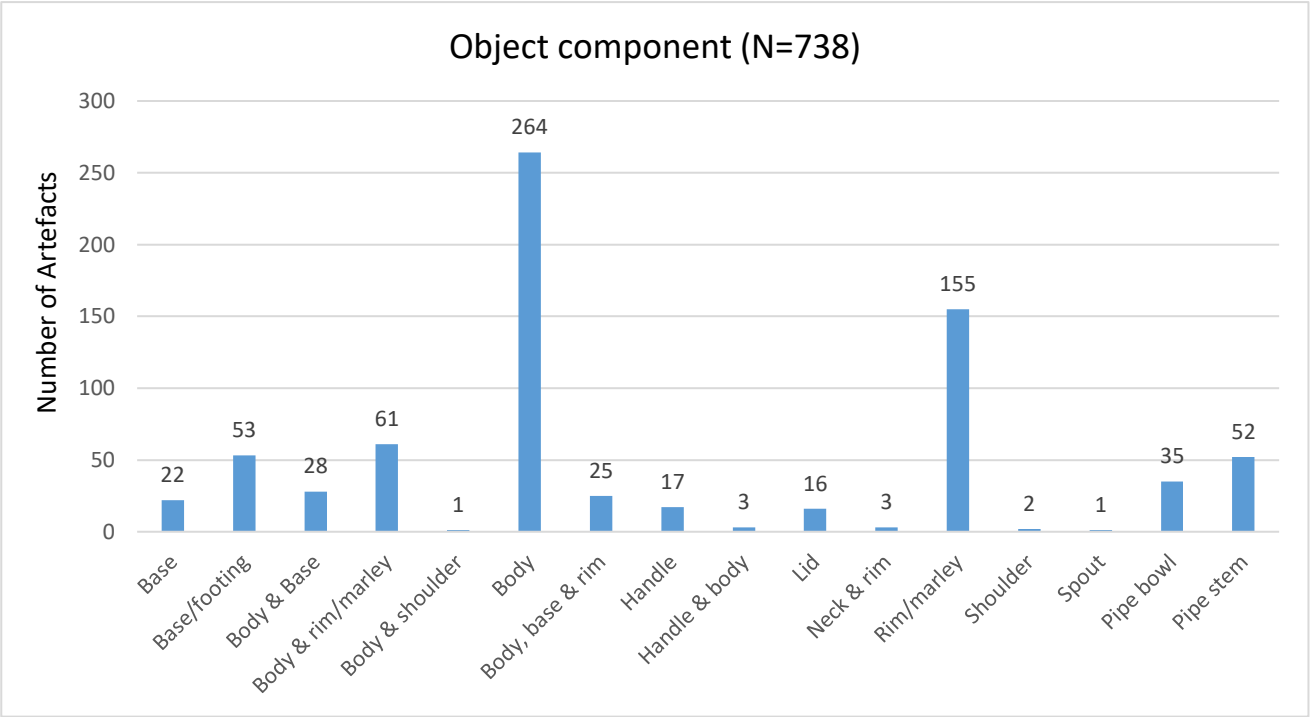


Figure 6. 23 Object component, all trenches

Figure 6.23 does not include grouped fragments or components that were not identifiable. Body sherds dominated the assemblage with a maximum of 264 fragments (36%). Second to body sherds, were rim and marley fragments (n=155, 21%), followed by bodies with rim/marley (n=61, 8%) then bases/footings (n=53, 7%), pipe stems (n=52, 7%) and pipe bowls (n=35, 5%). The remaining components each comprised less than 5% of the assemblage and are listed in order of abundance: bodies and base (n=28, 4%); bodies with base and rim (n=25, 3%); bases (n=22, 3%); handles (n=17, 2%); and lids (n=16, 2%). Necks with rim (n=3), and bodies with handle (n=3) were equivalent, making up <1% each, followed by shoulders (n=2, <1%). Spouts (n=1) and bodies and shoulder (n=1), each represented <1% of the assemblage.

6.4.8 Completeness

Ceramic fragments that were 0-50% of a complete object numbered 725, demonstrating the fragmented state of the assemblage. Only six fragments were 51-95% complete, and seven were 95-100% complete.

6.4.9 Ceramic MNV all trenches

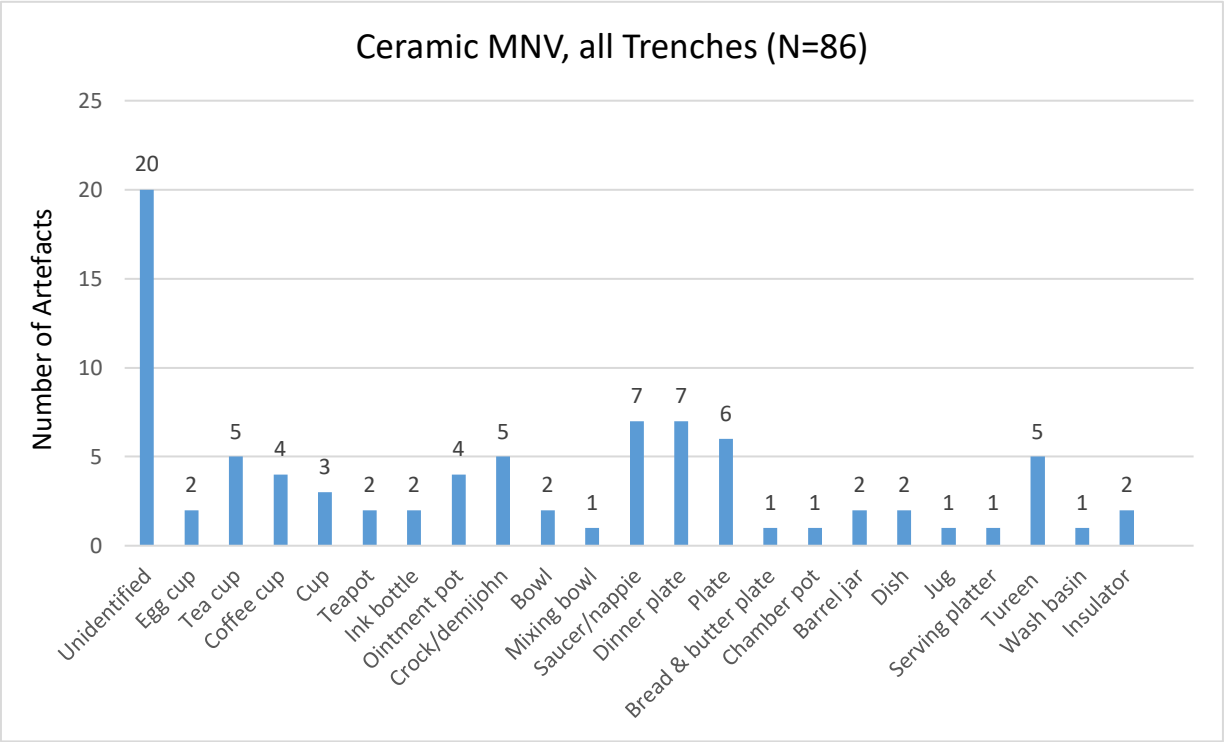


Figure 6. 24 MNV for ceramic, all trenches

The overall MNV was calculated to be 86 objects. The serving platter and tureens were oblong in shape, and as such the rims could not be measured using the base/rim diameter chart, thus the MNV was manually calculated according to technological ware type, design and decorative patterns. Base dimensions were used for the wash basin to establish the NMV as no associated rims were found. Bases were also used to establish egg cup numbers, as one full base was found near a matching ½ base, indicating two items. One teapot was found, however two different tea pot lids were recovered, indicating the existence of two teapots. Figure 6.24 shows that most ceramic sherds (consisting of rims) could not be identified to a particular form (n=20, 23%). The most frequent identifiable forms were dinner plates (n=7, 8%) and saucers/nappies (n=7, 8%), followed by six plates that could not be identified to a particular type (7%). Tea cups, crock/demijohns and tureens, all had five items (6% each). Next was coffee cups (n=4, 5%), followed by ointment pots/lids (n=4, 5%; see Figure 6.25), then cups (n=3, 3%). The following objects each comprised less than 5% of the assemblage: bowls (n=2, 2%); egg cups (n=2, 2%); teapot lids (n=2, 2%); ink bottles (n=2, 2%); barrel jar (n=2, 2%); dish (n=2, 2%); and insulator (n=2, 2%). The remaining objects had the minimum number with

one item each (1%): bread and butter plate, mixing bowl, jug, serving platter, chamber pot and wash basin. The four ointments pots contained products by Gosnell (most likely cold cream), dated post 1760, Halloways (n=2) dated mid-1800s, and Josephson's (n=1), who patented his ointment in 1866 in Sydney. Objects not counted in the MNV were clay pipes (which are covered in section 6.5.12), the face of a Chinese figurine, a porcelain doll head and limb, and pieces from a child's white porcelain tea set.

Figure 6. 25 Lid of Josephson's Australian Ointment pot, from Trench 4 (Photograph Bateman 2017)

6.4.10 Decoration type

Table 6. 2 Ceramic decoration type, all trenches

Decoration type	Number of fragments	Total Weight in g	Arc lengths rim %	Form and MNV
Moulded	30	396.2	80	1 Dinner plate
	8	128.4	60	1 Coffee cup
	4	122.5	45	1 Saucer/nappie
	18	127.9	33	1 Unidentified
Total	**60**	**775**	**218**	**MNV 4**
Single Colour Slip	25	836.3	13	1 Barrel jar
	49	3598.11	230	3 Crock/demijohns
	77	1752.8	22	1 Unidentified
	1	2.9	4	1 Dish
Total	**151**	**6187.21**	**269**	**MNV 6**
Salt glaze	9	371.9	11.25	1 Barrel jar
Total	**9**	**371.9**	**11.25**	**MNV 1**
Underglaze hand painted	43	559.4	151.5	2 Dinner plates
	8	23.3	20	1 Plate
	3	9.9	45	1 Coffee cup
	3	7.3	21	1 Tea cup
	3	17.8	26	1 Cup
	24	216.4	123	2 Saucer/nappies
	1	6	7	1 Bowl
	4	76.4	-	1 Tureen
	10	110.5	7	1 Unidentified
Total	**99**	**1027**	**400.5**	**MNV 11**

Underglaze transfer print	48	808.6	135.5	2 Dinner plates
	40	227.4	70.25	1 Plate
	3	8.9	15	1 Saucer/nappie
	1	7.4	4	1 Bread and butter plate
	7	29	61	1 Coffee cup
	17	99.4	236	3 Ointment pots
	4	273.6	-	1 Serving platter
	6	107.5	-	4 Tureen
	165	1174.7	32	1 Unidentified
	11	131.3	41	1 Chamber pot
Total	**302**	**2867.8**	**594.75**	**MNV 16**
Rockingham-type glaze	16	174.4	57	1 Teapot
	1	107.5	100	1 Teapot lid
	2	54.1	11	1 Unidentified
Total	**19**	**336**	**168**	**MNV 3**
Sprigging	4	5.2	10	1 Cup
Total	**4**	**5.2**	**10**	**MNV 1**
Gilt	1	8.3	-	1 Unidentified
Total	**1**	**8.3**	-	**MNV 1**
Unglazed	49	2083.3	10	1 Dish
Total	**49**	**2083.3**	**10**	**MNV 1**
Overall totals	**694**	**13661.71**	**1681.5**	**Total decorated MNV 44**

Table 6.2 shows that of the 86 ceramic objects identified at Boralga, 44 (51%) were decorated with a variety of different styles. Transfer print was the most popular decoration type (MNV=16), followed by handpainted (MNV=11), then single colour slip (MNV=6). Moulded objects had an MNV of four, then Rockingham-type glaze fragments with an MNV of three. Salt glaze, sprigging, gilt and unglazed all had an MNV of one object each. Figure 6.26 shows an example of a plate decorated with brown underglaze transfer print.

Figure 6. 26 Underglaze transfer print on a refined earthenware plate from Trench 4 (Photograph Bateman 2017)

6.4.11 Maker's marks/trademarks

Figure 6. 27 Maker's marks on table ware items from Trench 16 (Photograph Bateman 2019)

Other than clay smoking pipes and ointment pots, five tableware items had European maker's marks, which were all from Trench 16. Two refined earthenware plates display 'W.H. Grindley, England' in black print and incorporate the Royal Coat of Arms which dates between c1891-1925 (Godden 1991:293-294). The use of the word 'England' indicates that the date is from 1891 onwards (see McKinley Tariff Act 1891). Another two refined earthenware items had an ornate cipher backstamp in the middle (CB) surrounded by the words 'Royal Semiporcelaine'. One of these objects was a plate and the other was unidentified (Figure 6.27). Semiporcelain is usually any of several ceramic wares that resemble porcelain in that it is vitrified and durable, but is actually the hard-bodied or non-translucent white earthenware referred to as ironstone. In this instance however, the object is made from relatively porous refined earthenware. The CB maker's mark most likely belongs to the Clementson Brothers established in 1832 (Birks 2020; Pottery Gazette, February 20, 1880). A fifth maker's mark contained the word 'Staffordshire' on an unidentified refined earthenware object, which was most likely a plate. Not enough of the maker's mark was present to identify the manufacturer, as Staffordshire was the hub of ceramic production and had hundreds of manufacturers due to its close proximity to Devonshire clay and its central location to water and land transport.

6.4.12 Clay smoking pipes

All 143 clay smoking pipe fragments were from sub-surface levels within refuse areas (w=219.6 g). No complete clay pipes were found, however three half, and two quarter bowl fragments (average weight 6.72 g) and seven near complete stems (average weight 4.17 g) were used to estimate an EVE for unidentified/undecorated stems and bowls. The clay pipe stem and bowl count was calculated to be 56 in total. As the bowls (n=21) are associated with stems (n=35), the MNI was based on the component with the largest quantity, which was stems numbering 35. This number is relatively low considering clay smoking pipes break easily, and contemporary accounts based on normal pipe usage estimate longevity from only several days to two weeks (Wilson & Kelly 1987:39). It must be considered however, that much smoking and disposal of clay pipes would have occurred while out on patrol, consequently many clay pipes will never be accounted for.

Problems can arise when using makers marks for dating purposes, as new pipes that entered production in chronological order remained available over long periods of time, therefore a pipe available in 1873 could still be bought in 1900 (Nayton 1992:78). The McKinley Tariff Act of 1891 is one way of indicating pipes made from 1891 onwards, as it was declared that goods entering the United States must be marked with the country of origin, not just the town. It is likely that once the moulds were altered to accommodate this new rule, pipes destined for other markets would have been treated the same way (Nayton 1992:78). Only two clay pipe manufacturers could be identified, which were both Thomas Davidson designs from Glasgow in Scotland that date between 1862-1911 (Wilson & Kelly 1987:26). A third clay pipe was also from Glasgow, but the maker could not be established. The presence of pipes from Scotland is not surprising, as the collapse of colonial production in Australia by the 1840s coincided with the rise of Scottish exporters who specifically targeted the Australian market, which peaked between 1875-1885 (Wilson & Kelly 1987:43).

Therefore, the origin and type of clay smoking pipes used at Boralga was most likely dictated by supply as well as financial constraints. The makers of four clay pipes from London and two from Cork and Dublin were also unidentified, as no other information was present. The only discernible pipe style at the site was consistent with the Cutty style, which had variations of conical, egg shaped chambers that had an average height of 33.69 mm and a width of 22.17 mm. However, of the two more complete bowl and stem combinations, only one bowl had an exaggerated forward cant typical of the Cutty (Pease 2007). One blackened stem/bowl combination had a ‘spur’ or ‘boot’ which

allowed the smoker to grasp the base of the pipe without burning his/her hand, also a feature of the Cutty style (Pease 2007). Many of the pipes at the site were blackened on the outside as a result of burning within the refuse pits. Two pipe mouth pieces had clear tooth wear marks and one unusual pipe was made of redware which was too fragmented to identify the origin, maker or type.

Tobacco use was wide spread throughout all social classes, therefore the manner in which it was inhaled went in and out of fashion over time, and reflected contemporary attitudes towards class and gender (Gojak & Stuart 1999:42). Snuff and cigars were preferred by the upper classes, and clay pipes were generally associated with lower socio-economic groups, until cigarettes took over in the late nineteenth century (Gojak & Stuart 1999:40; Walker 1980:279). Within the upper and middle classes, smoking was associated with leisure and contemplation, whereas smoking within the working classes related to labour and boisterous entertainment (Gojak & Stuart 1999:42). An excerpt from the *Sydney Gazette* (1832:2) stated that 'eight or nine of every ten labouring men used tobacco'. This sentiment was supported by Cunningham (1827:133), who believed that 'all of the lower classes were determined smokers'. Walker (1980:268) states that pipe smoking was extremely widespread among Aboriginal men and women after white contact. Although society always viewed women who smoked pipes as devoid of civilization and of the lowest class, it was highly fashionable amongst gentlemen of the higher orders during the late eighteenth century (Gojak & Stuart 1999:40; Walker 1980:271). Moulded pipe decoration had no bearing on cost, as pipes were cheap and mass-produced during the time of NMP occupation at Boralga (Wilson & Kelly 1987:3). Tobacco smoking was prevalent amongst men and women, as well as all classes, therefore it could be assumed that any of the occupants at Boralga may have used smoking pipes, as evidenced by pipes found in refuse tips associated with both the troopers' (Trench 7) and officers' quarters (Trench 4, 12 and 16).

Figure 6. 28 Half section of an undecorated clay pipe bowl from Trench 7 (Photograph Bateman 2018)

Table 6. 3 Clay pipe spatial frequency, length and weight

Portion	Trench 4	Trench 7	Trench 12	Trench 16
Stem	3	44	1	10
Stem with mouth piece	1	8	0	1
Stem with bowl	0	5	0	0
Bowl	0	66	0	1
Heel	0	3	0	0
Total	**4**	**126**	**1**	**12**
Weight	12.4	170.3	1.9	35
Mean weight g	3.1	1.35	1.9	2.92
Mean stem length mm	23.66	20.83	30.13	27.22
Relative proportion by weight (%)	6	78	<1	16

Figure 6. 29 Half section of a clay pipe bowl/stem with embossed pattern from Trench 7 (Photograph Bateman 2018)

Table 6. 4 Clay pipe summary, all trenches

Trench	Name	Location	Country	Date range	Portion	Weight in grams	MNI
4	Unid.	Unid.	Unid.	Unid.	Stem	5.9	2
4	Unid.	Unid.	London	Post 1891	Stem & Mouth piece	3.2	1
4	Unid.	Unid.	Unid.	Unid.	Heel	1.5	1
7 &16	Davidson	Glasgow	Scotland	1862-1911	Stem	5.1	2
7	Unid.	Unid.	London	Post 1891	Stem	3.9	3
7	Unid.	Dublin	Ireland	Post 1891	Stem	4.3	1
7	Unid.	Unid.	Unid.	Unid.	Stem	48	12
7	Unid.	Cork	Ireland	Post 1891	Stem & Mouth piece	6.1	1
7	Unid.	Unid.	London	Post 1891	Stem & Mouth piece	2.7	1
7	Unid.	Unid.	Unid.	Unid.	Stem & Mouth piece	5.5	5
7	Unid.	Unid.	Unid.	Unid.	Mouth piece	0.4	1
7	Unid.	Unid.	Unid.	Unid.	Stem & Bowl	13.5	4
7	Unid.	Unid.	Unid.	Unid.	Bowl	80.9	12
7	Unid.	Unid.	Unid.	Unid.	Heel	5.3	3
12	Unid.	Unid.	Unid.	Unid.	Stem	1.9	1
16	Unid.	Glasgow	Scotland	Post 1891	Stem	6.7	1
16	Unid.	Unid.	Unid.	Unid.	Stem	18.1	4
16	Unid.	Unid.	Unid.	Unid.	Bowl	6.6	1
					Total	**219.6 g**	**56**

Table 6. 5 Identifiable clay pipe motifs on stems and bowls

Motif	Count	MNI
Fluted	3	1
Ribbed	1	1
Leaves	6	4
Branch	4	4
Harp	1	1
Feather	1	1
Pine cone	1	1
Anchor	1	1
Cartouche	6	6
Total	**24**	**20**

Figure 6. 30 Moulded relief motif of an Irish harp on a clay pipe bowl from Trench 7 (Photograph Bateman 2018)

6.5 Ceramic analyses, individual trenches

The following sections analyse five of the 20 trenches at Boralga in more detail, as trenches 3, 4, 7, 11 and 16 each contained 1% or more of the overall ceramic weight (see Figure 6.16). Overall information pertaining to decoration type, makers marks and clay smoking pipes was covered in sections 6.5.10, 6.5.11 and 6.5.12.

6.6 Trench 3

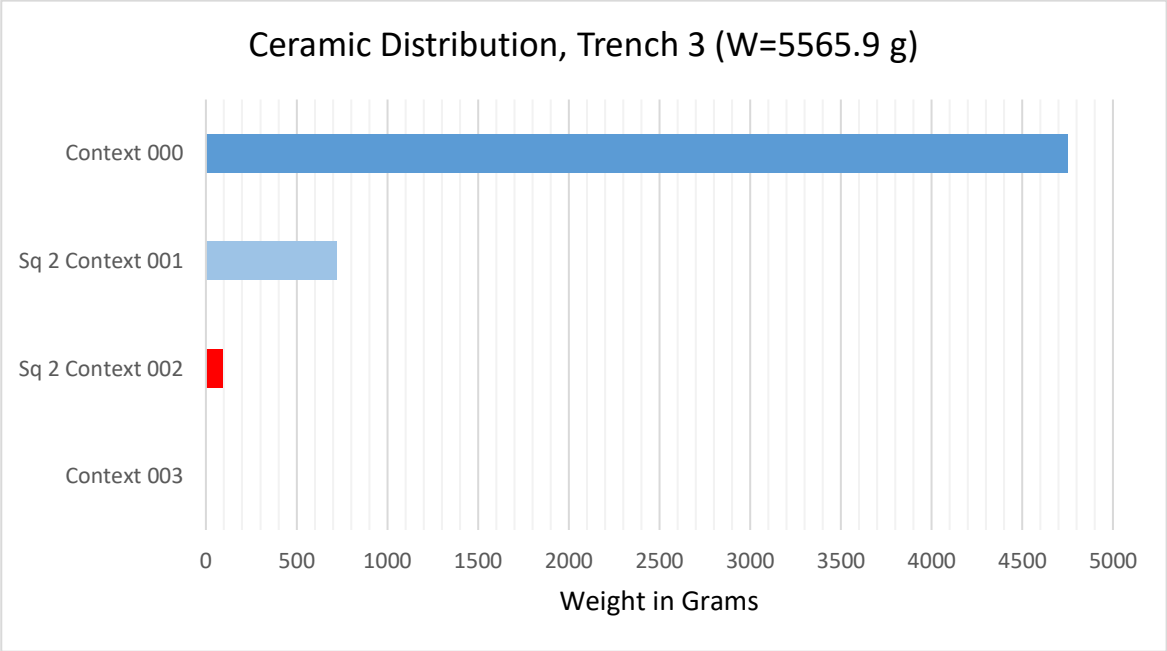


Figure 6. 31 Distribution of ceramic between contexts, Trench 3

6.6.1 Distribution of ceramic between contexts

Of the 5565.9 g of ceramic derived from Trench 3, there were no grouped fragments. Figure 6.31 shows that Context 000 contained the greatest quantity of ceramic (w=4751.2 g, 85%). Square 2, Context 001 decreased significantly (w=720.7 g, 13%), and Square 2, Context 002 contained the minimum with only 94 g (2%). Context 003 contained no ceramic.

6.6.2. Technological ware type

Table 6. 6 Technological ware type frequencies for ceramic, Trench 3

Ware type	Total weight (g)	Relative proportion weight %	Count
Earthenware	620.1	11	32
Porcelain	264.8	5	5
Stoneware	4665.1	84	37
Unidentified	15.9	<1	2
Total	**5565.9**	**100**	**76**

Table 6.6 includes clay tobacco pipes and grouped non-diagnostic fragments. Stoneware dominated Trench 3 for weight (w=4665.1 g, 84%), followed by earthenware (w=620.1 g, 11%), then porcelain (w=264.8 g, 5%), with unidentified material representing 15.9 g or <1%. Stoneware had the maximum number for sherd count (n=37, 49%), followed by earthenware (n=32, 42%), then porcelain (n=5, 7%). A total of two sherds (<1%) were of an unidentified fabric.

6.6.3. Technological ware sub-type

Figure 6.32 shows that stoneware was the dominant ceramic sub-type by weight (w=4665.1 g, 84%), followed by white granite (w=580.4 g, 10%) then hard paste porcelain (w=258.3 g, 5%). Refined earthenware (w=39.7 g), unidentified fabric (w=15.9 g) and soft paste porcelain (w=6.5 g) each represented <1% of Trench 3. No coarse unrefined earthenware (red ware/terracotta or yellow ware) was present. Figure 6.33 shows that stoneware also had the maximum number of sherds (n=37, 49%), followed by white granite (n=26, 34%), then refined earthenware (n=6, 8%). The remaining ware sub-types each represented 5% or less: soft paste porcelain (n=4, 5%); unidentified (n=2, 3%); and hard paste porcelain (n=1, 1%).

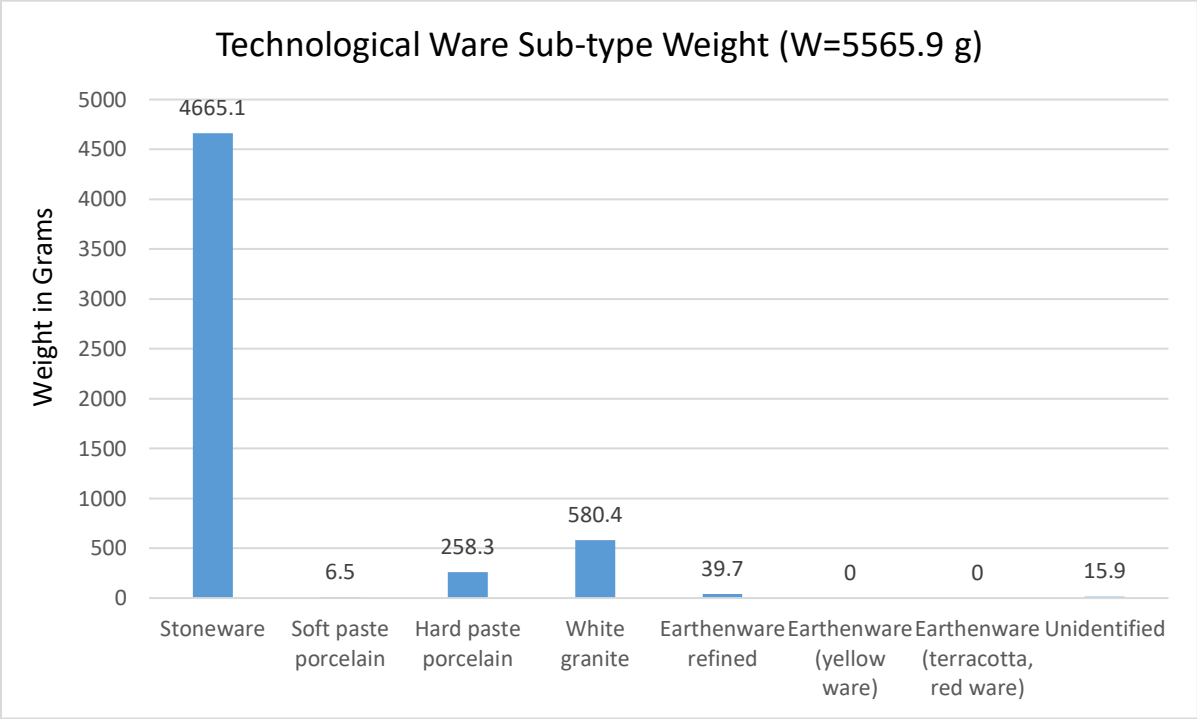


Figure 6. 32 Weight of technological ware sub-types, Trench 3

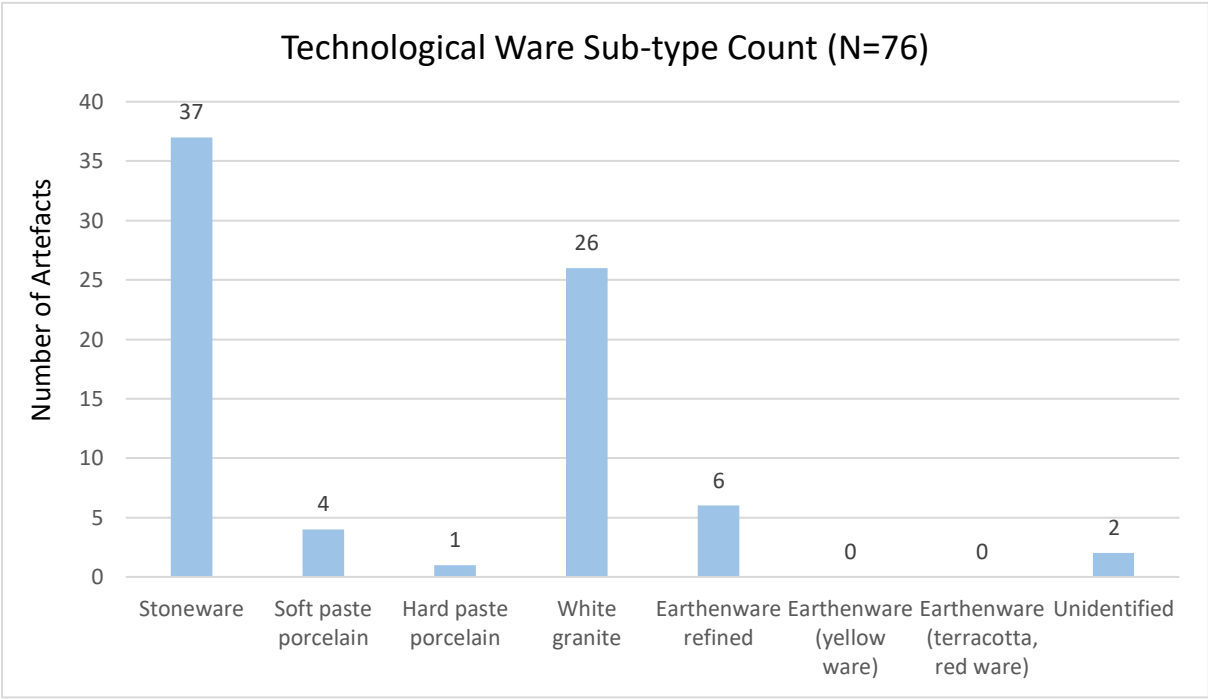


Figure 6. 33 Count of technological ware sub-type fragments, Trench 3

6.6.4. Functional type

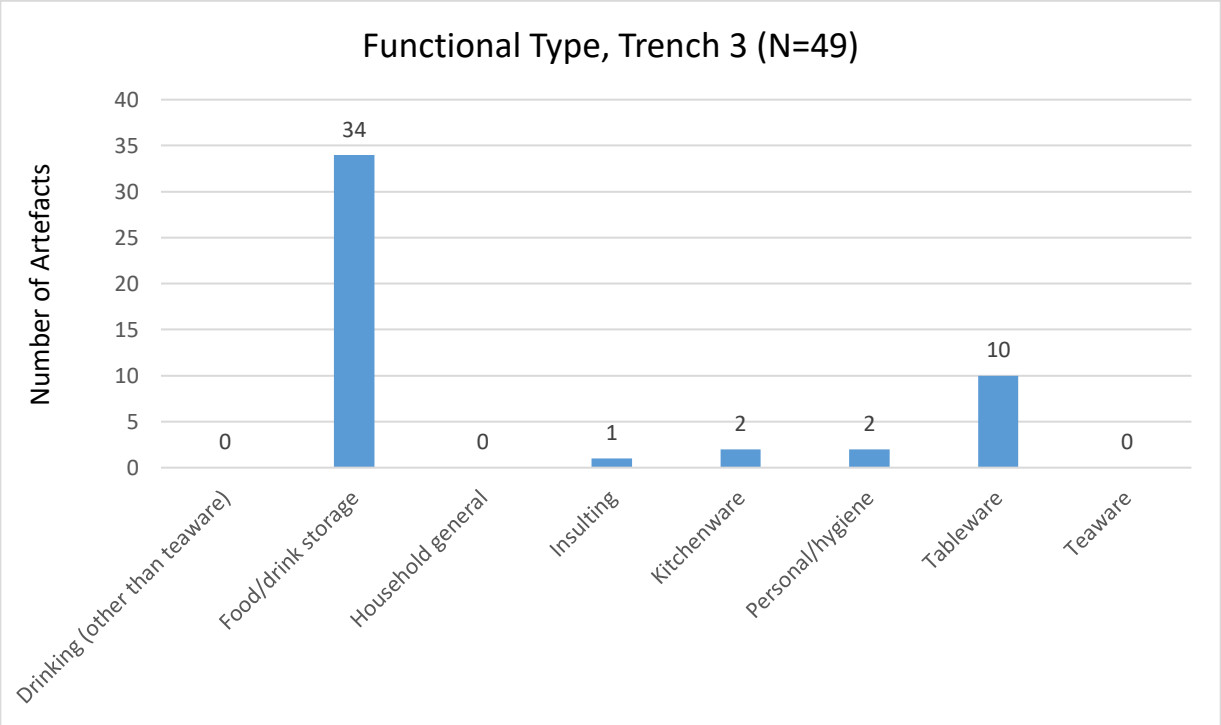


Figure 6. 34 Count of identifiable functional types - objects and fragments, Trench 3

Figure 6.34 shows that 49 fragments were identified for functional type. Food/drink storage vessels dominated the assemblage (n=34, 69%; Figure 6.35), followed by tableware (n=10, 20%), then kitchenware and personal/hygiene vessels with two items each (4%). There was one telegraph insulator fragment (2%). There were no fragments representing drinking (other than teaware), household-general or teaware.

Figure 6. 35 Base fragment of a stoneware food/drink storage vessel from Trench 3 (Photograph Bateman 2016)

6.6.5 Fragment count of identifiable objects

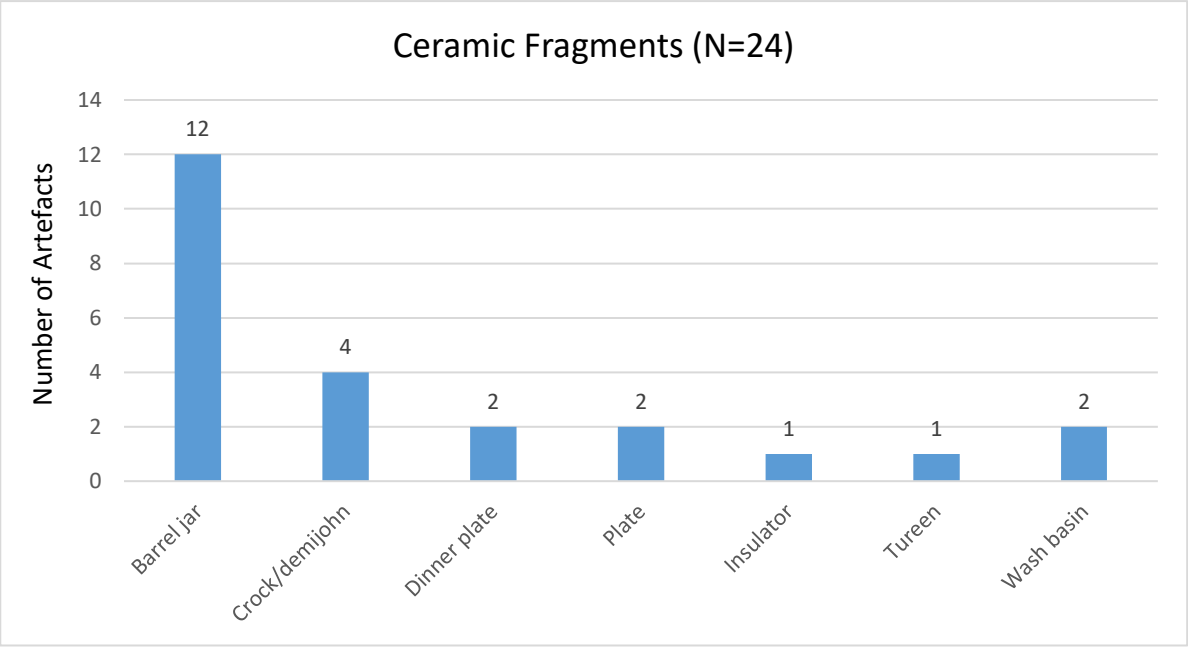


Figure 6. 36 Ceramic fragment count of identifiable objects, Trench 3

No complete objects were derived from Trench 3. Figure 6.36 shows a count of identifiable fragments, and does not represent the MNV. A total of seven different object types could be identified. Barrel jars (n=12) represented 50% of identifiable items. Next was crock/demijohn (n=4, 17%), followed by three items equivalent in number (n=2) representing 8% each: dinner plates, plates that could not be identified to a particular form, and wash basin fragments. There was one fragment from an insulator (Figure 6.37) and one from a tureen, each representing 4% of identifiable objects at Trench 3. The MNV is outlined in section 6.6.8

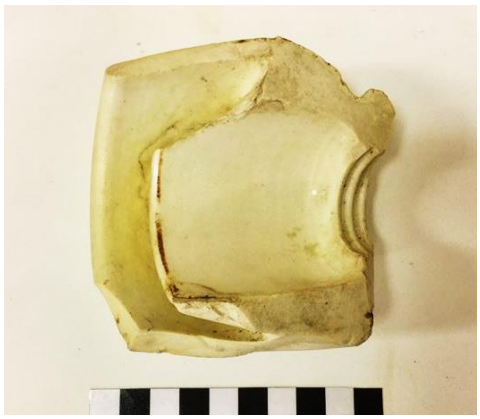


Figure 6. 37 Fragment of a porcelain bell insulator from Trench 3 (Photograph Bateman 2016)

6.6.6. Object component

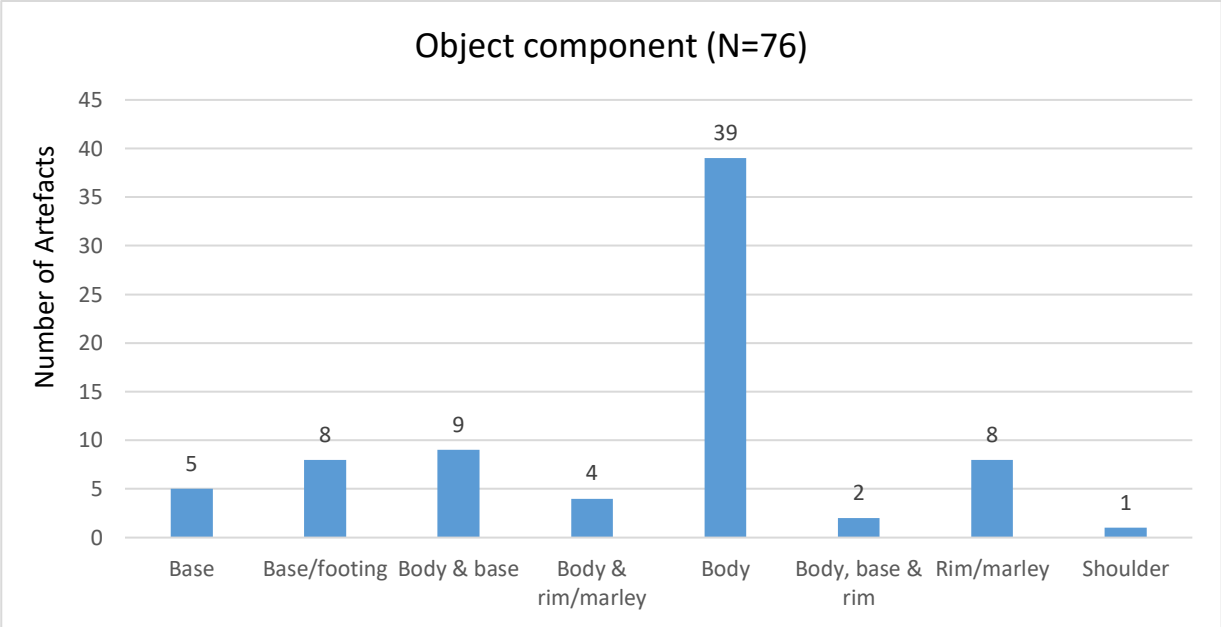


Figure 6. 38 Object component, Trench 3

Figure 6.38 shows that body sherds dominated the assemblage with a maximum of 39 fragments (51%). Second, was bodies with base (n=9, 12%; Figure 6.39), followed by bases/footings (n=8, 11%) and rims/marleys (n=8, 11%), then bases (n=5, 7%), and bodies with rim/marley (n=4, 5%). The remaining components each comprised less than 5% of the assemblage: bodies with base and rim (n=2, 3%) and shoulders (n=1, 1%).

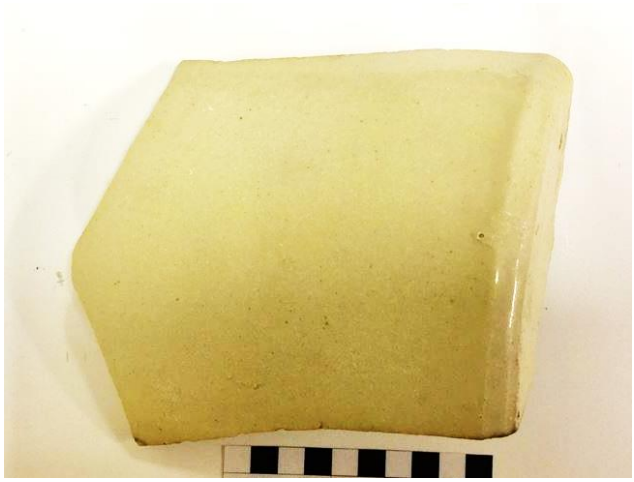


Figure 6. 39 Stoneware body and base fragment of a crock/demijohn from Trench 3 (Photograph Bateman 2016)

6.6.7 Completeness

All 76 fragments comprised 0-50% of a complete object.

6.6.8. Ceramic NMV, Trench 3

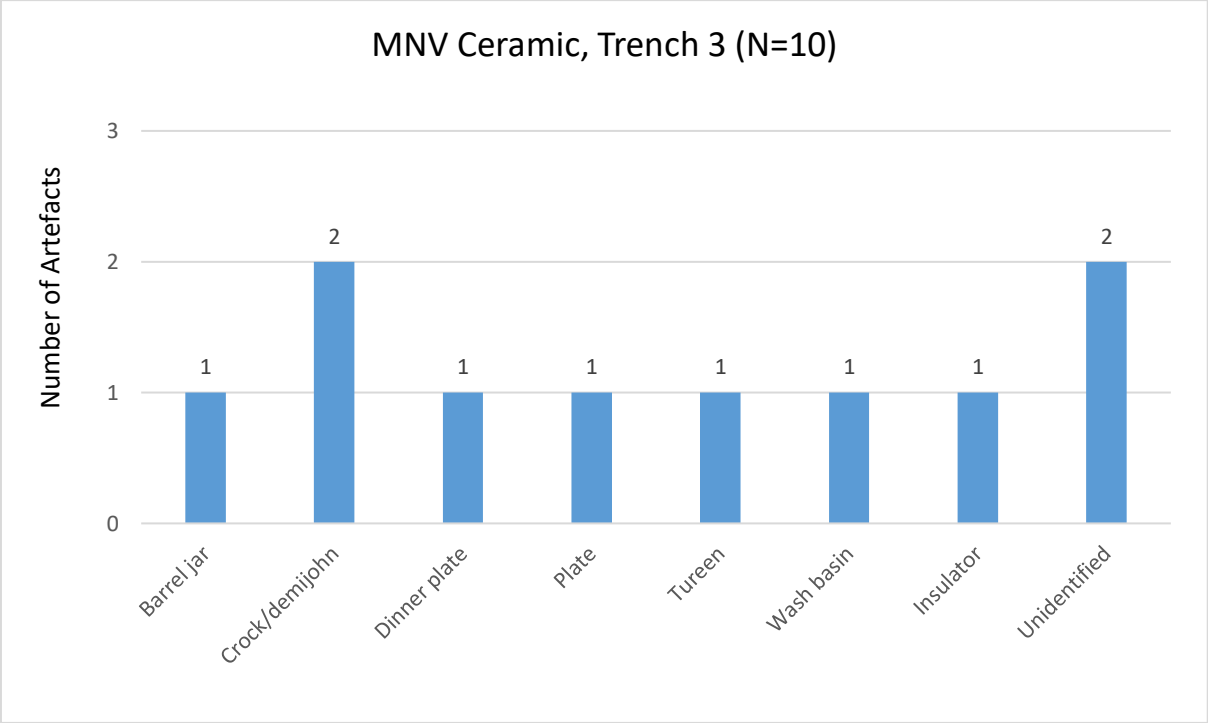


Figure 6. 40 MNV for ceramic, Trench 3

The MNV for ceramic at Trench 3 was 10 objects in total. Figure 6.40 shows that there were two crock/demijohns and two unidentified objects (representing 20% each). There was only one example of all other objects (10% each).

Figure 6. 41 Refined earthenware plate fragment from Trench 3 (Photogragh Bateman 2016)

6.6.9. Identifiable motifs

Table 6. 7 Count of identifiable motifs from Trench 3

Identifiable motifs	Fragment Count	Colour	component	Object
Band and line	2	Blue	Rim	Dinner plate
	1	Blue	Rim	Unidentified
Total	**3**			
Flowers	1	Brown	Rim	Dinner plate
	1	Brown	Body rim/marley	Unidentified
	1	Brown	Body	Unidentified
Total	**3**			
Rings	1	Brown	Body	Unidentified
Total	**1**			
Leaves	4	Brown	Body	Plate
	1	Brown	Rim/marley	Plate
	1	Brown	Base	Unidentified
Total	**6**			
Bird	1	Brown	Base/footing	Unidentified
Total	**1**			
Column	1	Brown	Base/footing	Plate
Total	**1**			
Overall total	**15**			

Table 6.7 shows that 15 fragments or 20% of the assemblage at Trench 3 was decorated with identifiable motifs (conjoins counted as one fragment). Brown transfer print leaf motifs were most popular (six items), followed by blue band and line, and brown transfer print flowers (three items each). Lastly, there was one fragment each from three different brown transfer prints: a ring pattern, a bird, and a column. Overall, brown transfer prints (n=12) featuring natural floral patterns were the design of choice for Trench 3.

6.6.10 Conjoins

Trench 3 had eight conjoined sets comprising 17 fragments in total, which formed portions of objects listed in Table 6.8. The MNV for conjoins was calculated to be four objects, which are included in the total MNV for Trench 3 as shown in Figure 6.40. The majority of conjoins were stoneware fragments (n=10, or five sets), and the remainder was earthenware (n=7, or three sets). A full summary of conjoins from Trench 3 including squares, contexts, objects, technological ware types, joins and catalogue numbers is outlined in Appendix 9, Table 9.1. An example of a conjoined earthenware dinner plate from Trench 3 is shown in Figure 6.42.

Table 6. 8 Conjoined MNV Trench 3

Vessel	MNV
Dinner plate	1
Barrel jar	1
Unidentified	2

Figure 6. 42 Conjoined earthenware fragments of a dinner plate from Trench 3 (Photograph Bateman 2016)

6.7 Trench 4

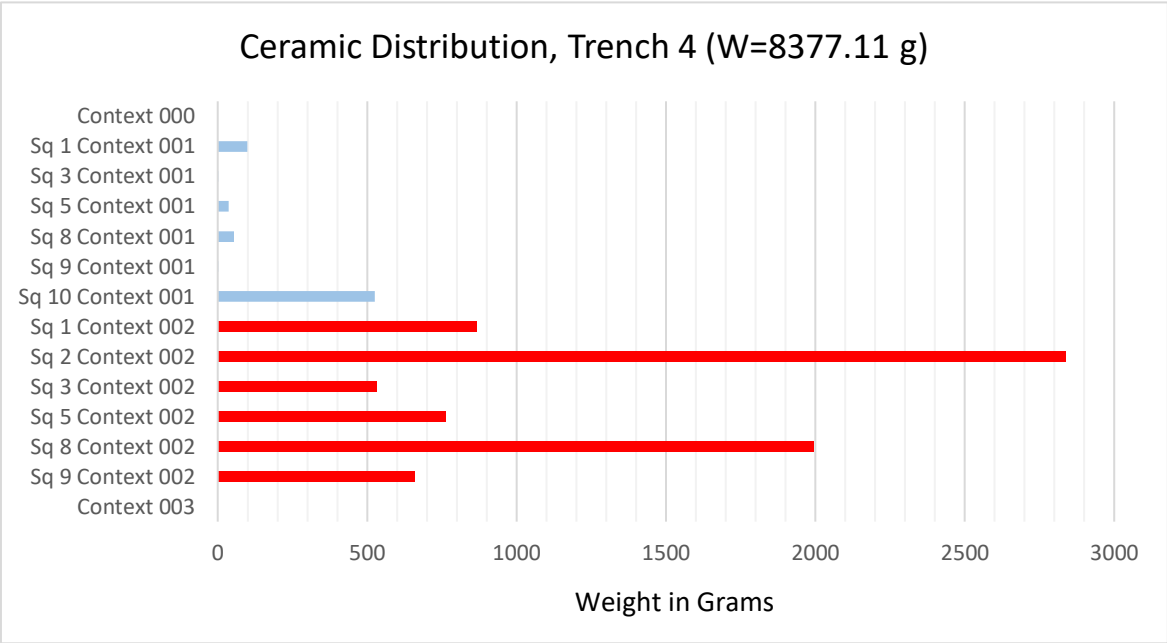


Figure 6. 43 Distribution of ceramic between contexts, Trench 4

6.7.1 Distribution of ceramic between contexts

Figure 6.43 shows the distribution of ceramics between contexts at Trench 4 and includes both individual diagnostic items and non-diagnostic grouped items, and totalled 8377.11 g. No ceramic was recovered from Context 000, (surface finds). Context 001 was relatively low in ceramic artefact density (w=720.7 g, 9%), but increased significantly at Context 002 (w=7656.41, 91%). Square 2, Context 002 contained the highest quantity of ceramic between squares (w=2837.92 g, 34%) and Square 3, Context 001 had the least (1.1 g, <1%). The increased pulses at Context 002 demonstrate the major occupation horizon belonging to the NMP camp. Context 003 contained no ceramic. An example of a ceramic fragment derived from Context 002 is shown in Figure 6.44.

Figure 6. 44 Fragment of an embossed, unidentified porcelain object from Square 9, Context 002 (Photograph Bateman 2016)

6.7.2. Technological ware type

Table 6. 9 Technological ware type frequencies for ceramic, Trench 4

Ware type	Total weight (g)	Relative proportion weight %	Count
Earthenware	2516.41	30	473
Porcelain	751.09	9	264
Stoneware	5109.61	61	260
Total	**8377.11**	**100**	**997**

Table 6.9 includes clay tobacco pipes and non-diagnostic grouped fragments. Similar to Trench 3, stoneware dominated Trench 4 (w=5109.61 g, 61%), followed by earthenware (w=2516.41 g, 30%), then porcelain (w=751.09 g, 9%). In contrast to Trench 3, there were more sherds of earthenware (n=473, 47%), followed by porcelain (n=264, 26%), then stoneware (n=260, 26%).

6.7.3. Technological ware sub-type

Similar to Trench 3, Figure 6.45 shows that stoneware was the dominant ceramic sub-type by weight (w=5109.61 g, 61%), followed by refined earthenware (w=1629.51 g, 19%), white granite (w=777.7 g, 9%), then soft paste porcelain (w=748.29 g, 9%). Fabric that was unidentifiable to sub-type (w=108.6 g) and hard paste porcelain (w=2.8 g) represented only 1% of the assemblage. Coarse unrefined earthenware was recovered in both yellow ware (w=0.4 g) and red ware (w=0.2 g) forms, but only constitutes <1% each. In contrast to the maximum weight result, Figure 6.46 shows that refined earthenware dominated the ceramic count (n=320, 33%), followed by soft paste porcelain (n=262, 27%), stoneware (n=260, 27%), and white granite (n=125, 13%). The remaining ceramic sub-types made up less than 5% of the assemblage and are listed in order of abundance: unidentified (n=25, 3%); coarse unrefined earthenware – yellow ware (n=2, 1%); hard paste porcelain (n=2, 1%), and coarse unrefined earthenware – terracotta or red ware (n=1, <1%). Stoneware had fewer sherds than refined earthenware, as the fragments were generally much larger, but was dominant for weight due to the heavier, denser fabric.

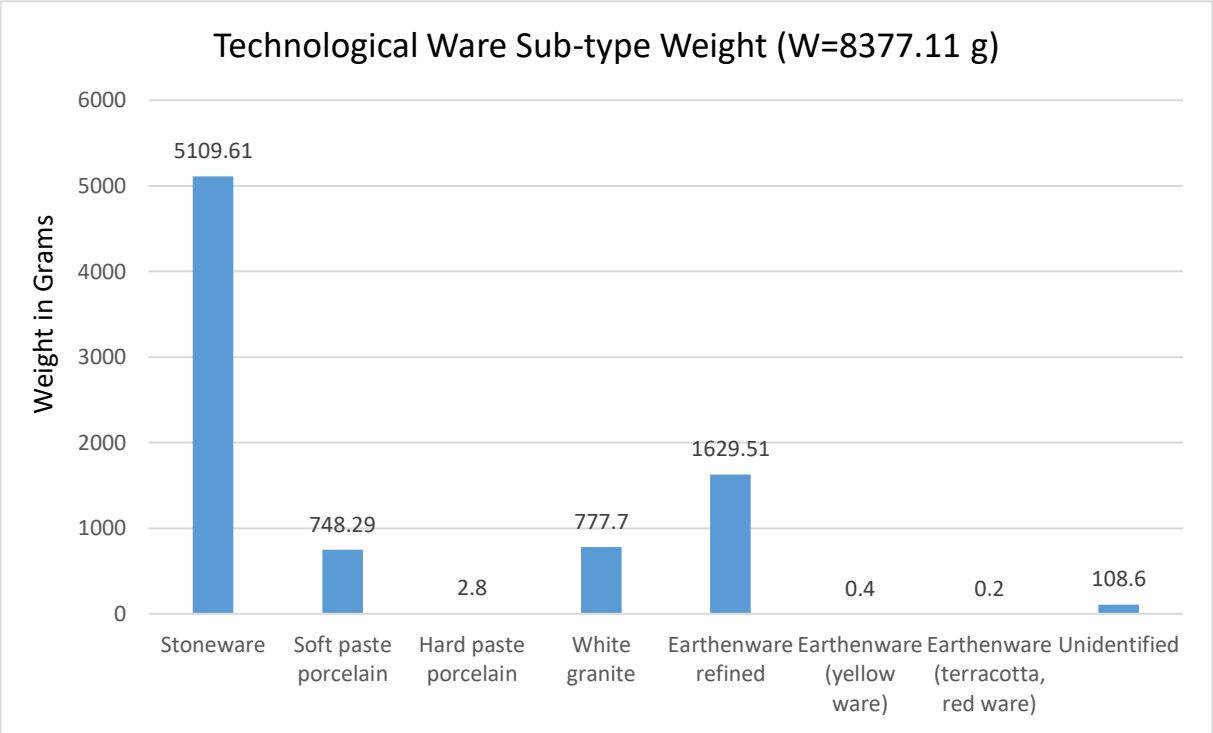


Figure 6. 45 Weight of technological ware sub-types, Trench 4

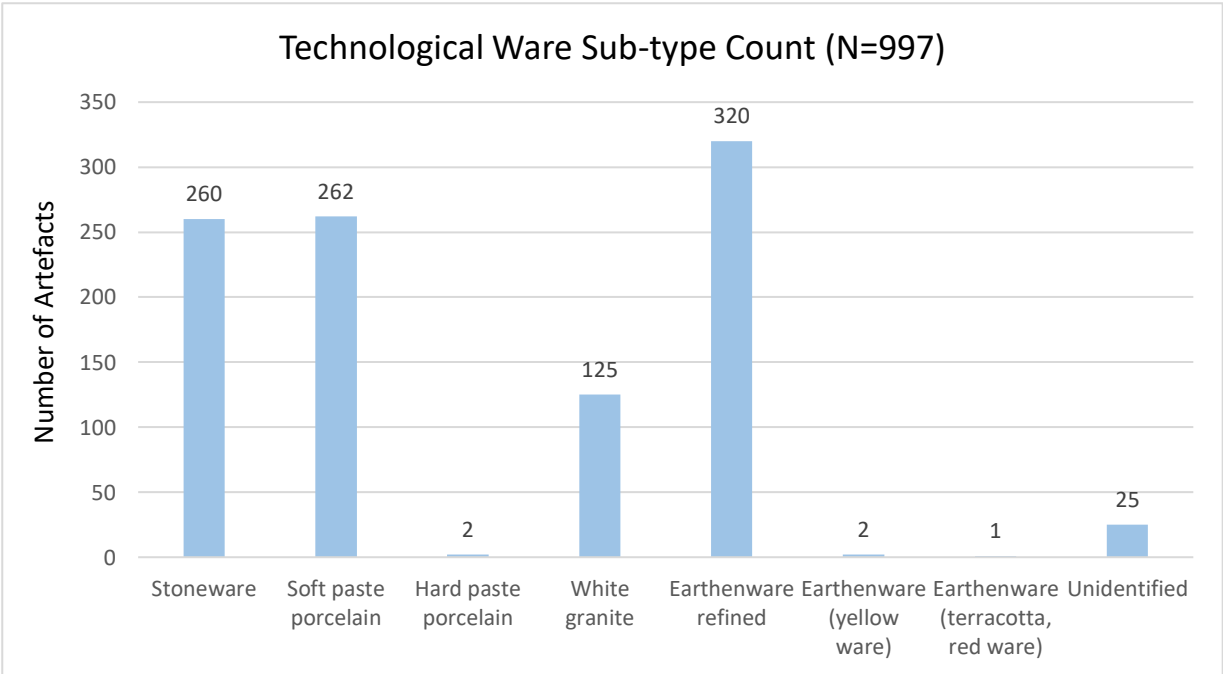


Figure 6. 46 Count of technological ware sub-type fragments, Trench 4

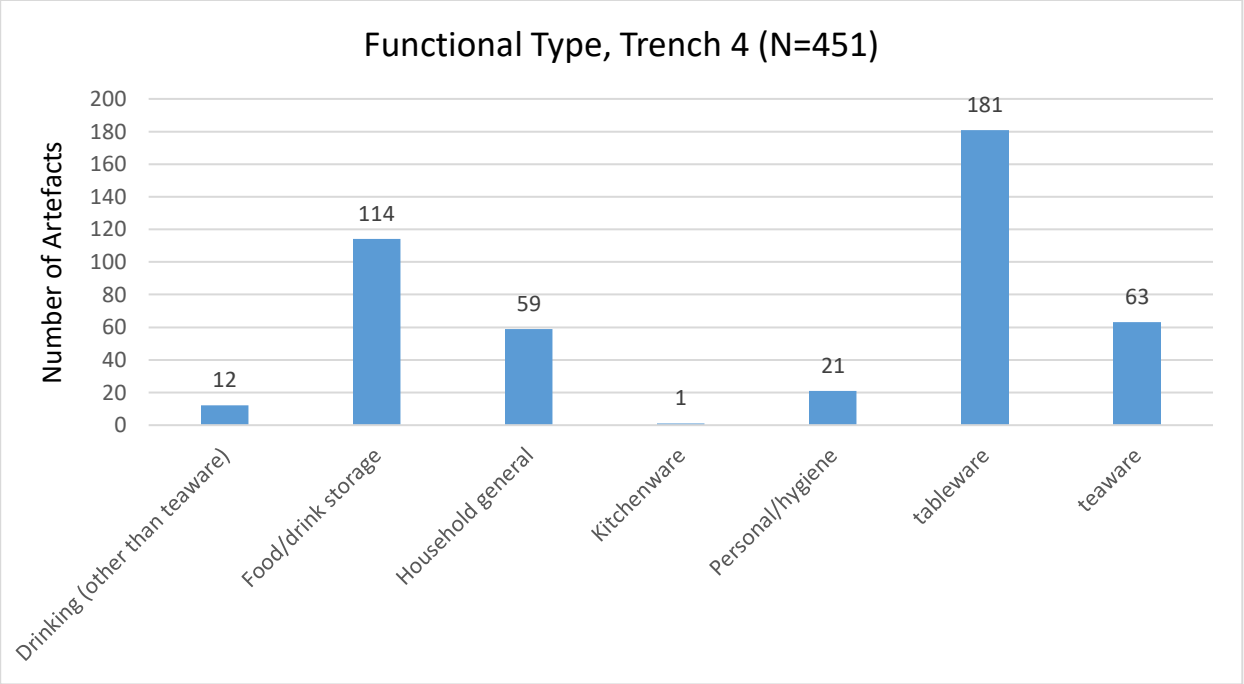


Figure 6. 47 Count of identifiable functional types - objects and fragments, Trench 4

6.7.4. Functional type

Figure 6.47 shows that 451 fragments and complete objects were recorded for functional type. Tableware dominated the assemblage (n=181, 40%), followed by food/drink storage (n=114, 25%), teaware (n=63, 14%), household general (n=59, 13%) then personal/hygiene (n=21, 5%). Drinking other than teaware (n=12, 4%) represented <5% of the assemblage, and kitchenware had the minimum (n=1, <1%). Figure 6.48 shows an example of a drink storage vessel from Trench 4.

Figure 6. 48 Conjoined neck and rim fragments of a drink storage vessel or demijohn from Trench 4 (Photograph Bateman 2016)

6.7.5 Fragment count of identifiable objects

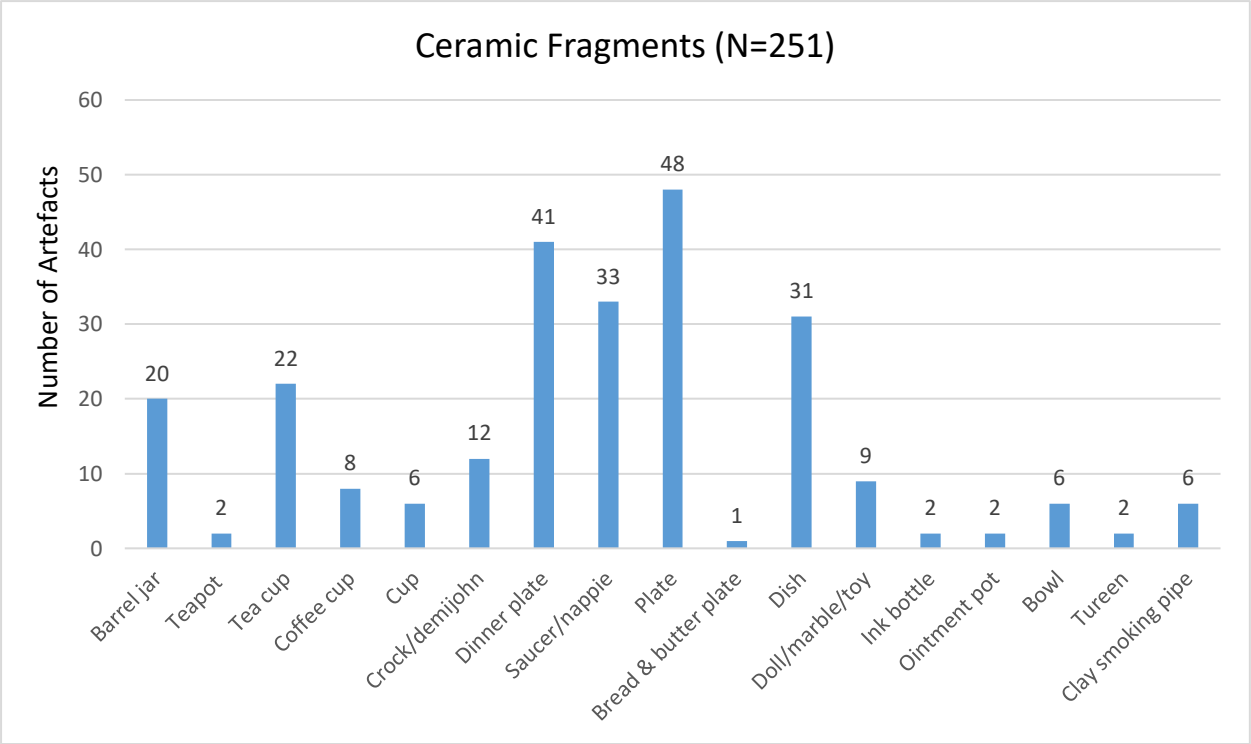


Figure 6. 49 Ceramic fragment count of identifiable objects, Trench 4

A total of 17 different object types could be identified, which was the widest variety of ceramic objects derived from the site (Figure 6.49). Plates that could not be identified to a particular type (n=48) represented 19%. Next were dinner plates (n=41, 16%), followed by saucers/nappies (n=33, 13%), dishes (n=31, 12%), tea cups (n=22, 9%), barrel jars (n=20, 8%) and crock/demijohns (n=12, 5%). The remaining items constituted <5% and are listed in order of abundance: doll/marble/toys (n=9, 4%); coffee cups (n=8, 3%); cups (n=6, 2%); and bowls (n=6, 2%). There were two fragments each of a teapot, ink bottle, ointment pot and tureen (<1% each). Bread and butter plates had the minimum number of identifiable objects with only one fragment (<1%). The MNV is outlined in section 6.7.8

6.7.6 Object component

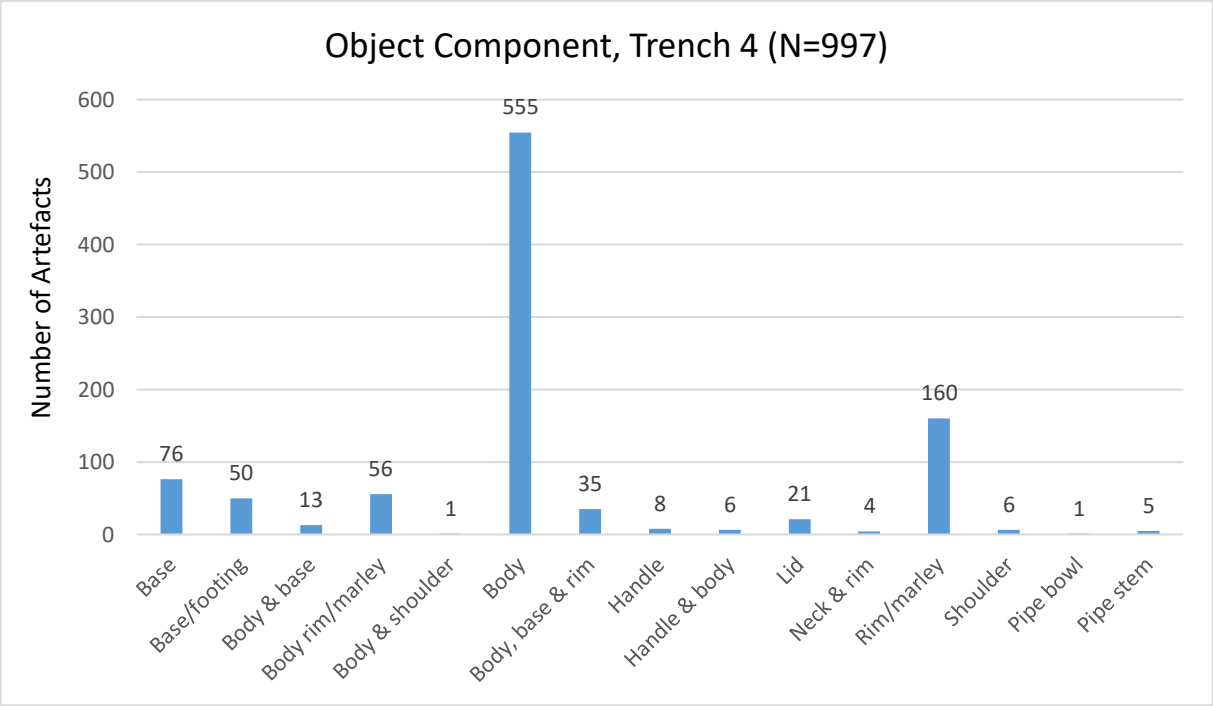


Figure 6. 50 Object component, Trench 4

Figure 6.50 shows that body sherds dominated the assemblage with a maximum of 555 fragments (56%). Second to body sherds, was rims/marleys (n=160, 16%), followed by bases (n=76, 8%), bodies with rim/marley (n=56, 6%), bases/footings (n=50, 5%). The remaining components each comprised less than 5% of the assemblage which was bodies with base and rim (n=35, 4%), lids (n=21, 2%), bodies and base (n=13, 1%). Less than 1% was handles (n=8), bodies with handle (n=6), bodies (n=6), shoulders (n=6), pipe stems (n=5), and necks and rim, (n=4). The minimum was bodies and shoulder (n=1) and pipe bowls (n=1).

6.7.7. Completeness

The majority of fragments comprised 0-50% of a complete object and numbered 987. Fragments that were 51-95% complete had the minimum with three, and objects that were 96-100% complete totalled seven.

6.7.8 Ceramic NMV, Trench 4

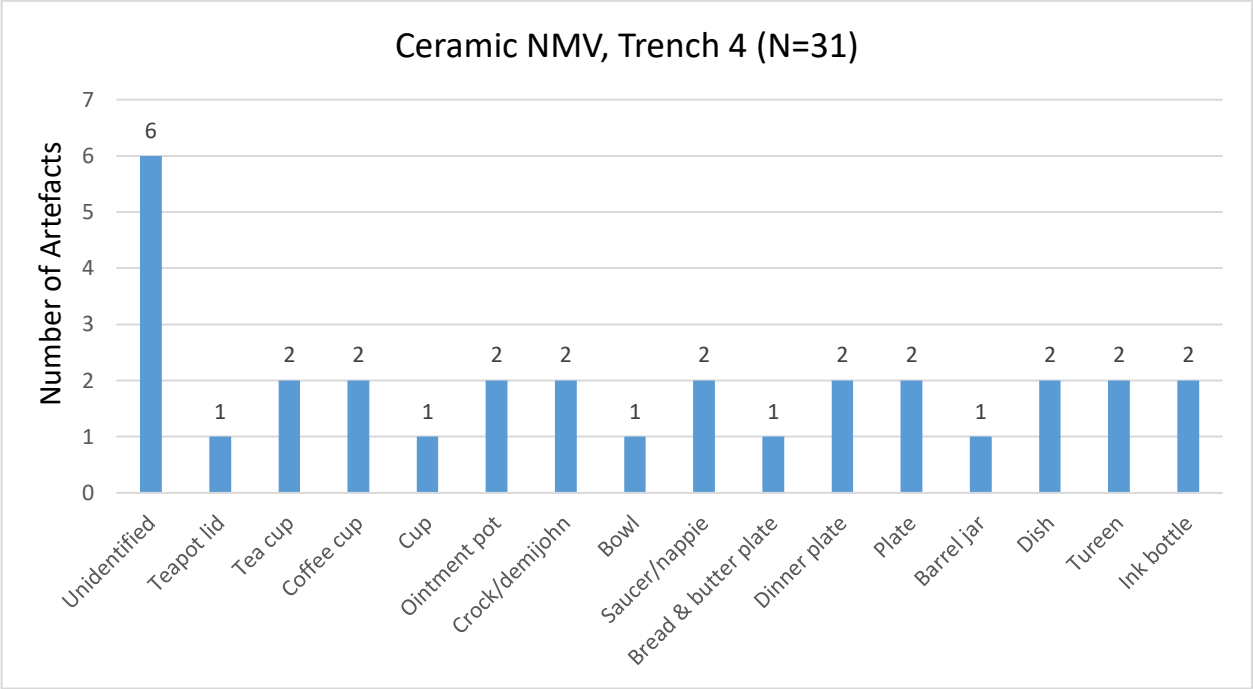


Figure 6. 51 MNV for ceramic, Trench 4

The MNV for ceramic at Trench 4 was 31 objects, which was the maximum number of objects for the entire ceramic assemblage at Boralga (36%). As tureens are oblong in shape, the rims could not be measured using the base/rim diameter chart, thus the MNV was qualitatively calculated according to design and decorative patterns. Figure 6.51 shows that unidentified objects dominated (n=6, 19%). Crocks/demijohns, ointment pots, saucers/nappies, dinner plates, plates, dishes, tureens and ink bottles, coffee cups and tea cups all numbered two, representing 6% each. There was one example of a teapot lid, cup, bowl, bread and butter plate and barrel jar (3% each). Objects from Trench 4 not counted in the MNV were clay pipes (which are covered in section 6.5.12), and a child's white porcelain tea set which encompassed a broken saucer, two tea cups, (both in fragments, with one complete cup after conjoining), one cup (no handle), and tiny tea pot lid (see Figures 6.52, 6.53 & 6.54).

Figure 6. 52 Conjoined porcelain tea cup from a child's tea set, Trench 4
(Photograph Bateman 2016)

Figure 6. 53 Porcelain teapot lid from a child's tea set, Trench 4
(Photograph Bateman 2016)

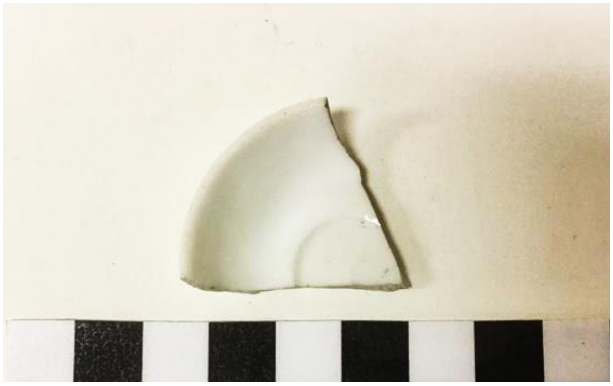


Figure 6. 54 Porcelain saucer from a child's tea set, Trench 4
(Photograph Bateman 2016)

6.7.9 Identifiable motifs

Table 6. 10 Count of identifiable motifs at Trench 4

Identifiable motifs	Fragment Count	Colour	component	Object
Band and line	4	Blue	Rim/marley	Dinner plate
	2	Blue	Rim	Dinner plate
	2	Blue	Rim	Plate
	2	Blue	Lid	Tureen
	1	Blue	Rim	Tureen
	1	Blue	Handle	Tureen
	1	Blue	Rim	Tea cup
	2	Blue	Rim	Unidentified
	1	Blue	Lid	Unidentified
	1	Blue	Base/footing	Unidentified
Total	**17**			
Band and line	6	Red	Rim/marley	Dinner plate
	1	Red	Rim	Plate
	1	Red	Rim	Tea cup
Total	**8**			
Leaves	3	Brown	Footing	Plate
	2	Brown	Rim	Plate
	1	Brown	Body	Plate
	3	Brown	Rim	Dinner Plate
	1	Brown	Rim	Saucer/nappie
	12	Brown	Body	Unidentified
	1	Brown	Rim	Unidentified
	1	Brown	Footing	Unidentified
	1	Brown	Base/body	Coffee cup

	1	Brown	Rim & body	Coffee cup
	2	Brown	Rim	Coffee cup
	1	Brown	Body	Cup
Total	**29**			
Leaves and Flowers	1	Brown	Lid	Tureen
	2	Brown	Body	Cup
	1	Brown	Rim & body	Plate
	1	Brown	Footing	Plate
	1	Brown	Rim	Plate
	2	Brown	Body	Unidentified
	1	Brown	Body/rim/base	Unidentified
Total	**9**			
Flowers	1	Brown	Body	Cup
	8	Brown	Body	Unidentified
	2	Brown	Body/rim/base	Unidentified
	2	Brown	Body	Plate
Total	**13**			
Twigs	1	Brown	Rim/marley	Bread & butter plate
	3	Brown	Body	Unidentified
	1	Brown	Rim	Saucer/nappie
Total	**5**			
Berries & flowers	1	Brown	Rim	Saucer/nappie
	2	Brown	Body	Unidentified
	1	Brown	Body	Plate
Total	**4**			
Lines	1	Brown	Rim	Unidentified
	2	Brown	Body	Unidentified

Total	**3**			
Greek Key Style	1	Brown	Marley	Plate
	2	Brown	Body	Unidentified
Total	**3**			
Lotus style Anthemion	2	Brown	Body	Unidentified
Total	**2**			
Pot plant	2	Brown	Body	Unidentified
Total	**2**			
Country scenery	1	Brown	Body	Cup
Buildings scenery	1	Brown	Body/rim	Coffee cup
Total	**2**			
Chinese boat	1	Brown	Body	Unidentified
Total	**1**			
Concentric rings	1	Brown	Body	Plate
Total	**1**			
Leaves & geometric pattern	1	Brown	Rim	Dinner plate
Total	**1**			
Overall total	**100**			

Table 6.10 shows that 100 fragments (10 %) from Trench 4 were decorated with identifiable motifs (conjoins counted as one fragment). Similar to Trench 3, brown transfer print leaf motifs were the most prevalent (n=29 items), followed by blue band and line (n=17). There were 13 fragments with a brown transfer flower print, nine with a brown transfer print of leaves and flowers, and eight with a brown leaf only print. Other brown transfer print patterns had five or fewer fragments: twigs (n=5); berries and flowers (n=4); lines, which were a striped pattern (n=3); and Greek Key (n=3). Lotus style Anthemion and pot plants both had two items, with the remainder totalling one item each: Chinese boat, concentric rings and leaves with geometric pattern. Overall, brown transfer print was the theme of choice for Trench 4 (n=75).

6.7.10 Conjoins

Trench 4 had the maximum number of conjoins at Boralga with 106 conjoined sets comprising of 405 fragments in total (Table 6.11). The MNV for conjoins was calculated to be 24 objects, which are included in the total MNV for Trench 4 shown in Figure 6.51 (except for the toy tea cup). The majority of conjoins were earthenware (n=181 fragments or 54 sets), followed by stoneware (n=131 fragments or 26 sets), then porcelain (n=93 fragments or 25 sets). A full summary of conjoins from Trench 4, which includes square, context, objects, ware type, joins and catalogue numbers is outlined in Appendix 9, Table 9.2. An example of conjoins are shown below in Figures 6.55, 6.56, 6.57, 6.58 and 6.59.

Table 6. 11 Conjoin MNV, Trench 4

Vessel	NMV
Dinner plate	1
Plate	2
Saucer/nappie	1
Teapot lid	1
Tea cup	2
Toy tea cup	1
Coffee cup	2
Ink bottle	2
Dish	2
Bowl	1
Tureen	2
Ointment pot	1
Barrel jar	1
Crock/demijohn	2
Unidentified	3
Total	**24**

Figure 6. 55 A conjoined stoneware dish from Trench 4
(Photograph Bateman 2016)

Figure 6. 56 A conjoined stoneware dish from Trench 4
(Photograph Bateman 2016)

Figure 6. 57 Conjoined fragments of an unidentified stoneware object with a Chinese logogram from Trench 4 (Photograph Bateman 2016)

Figure 6. 58 Conjoined porcelain saucer/nappie from Trench 4 (Photograph Bateman 2016)

Figure 6. 59 Conjoined earthenware dinner plate from Trench 4 (Photograph Bateman 2016)

6.8 Trench 7

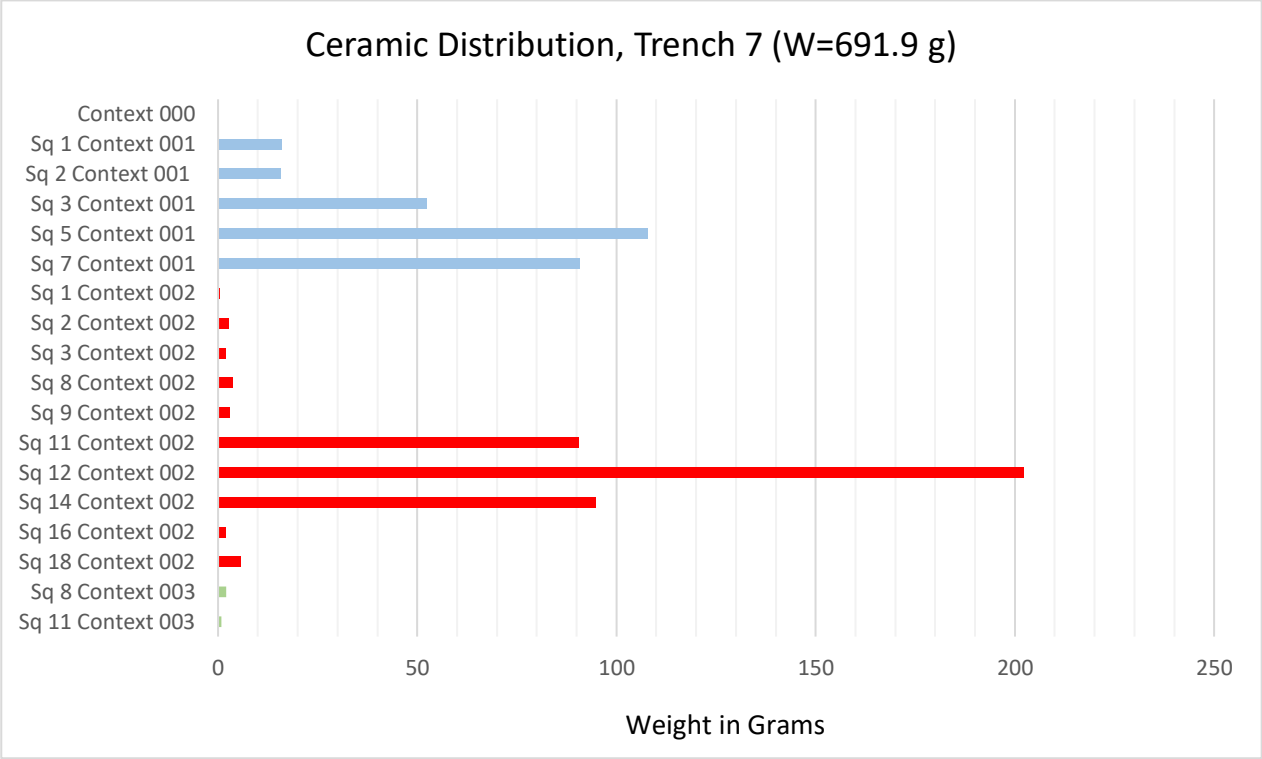


Figure 6.60 Distribution of ceramic between contexts, Trench 7

6.8.1 Distribution of ceramic between contexts

Figure 6.60 shows the distribution of ceramic between contexts at Trench 7 and includes both individual and non-diagnostic grouped weights, which totalled 691.9 g. The ceramic artefact density at Trench 7 was relatively low. Context 000 had no ceramic. Context 001 contained 282.5 g (41%) and Context 002 had the maximum weight with 406.6 g or 59%, with a significant increase at Square 11. Ceramic artefact densities reduced at Context 003 (2.8 g or <1%). Square 12, Context 002 contained the highest quantity of ceramic between squares (w=202.1 g, 29%) and Square 1, Context 002 had the minimum (0.5 g, <1%). An example of an object derived from Context 002 is shown in Figure 6.61.

Figure 6. 61 Clay smoking pipe from Square 11, Context 002 (Photograph Bateman 2018)

6.8.2. Technological ware type

Table 6. 12 Technological ware type frequencies, Trench 7

Ware type	Total weight (g)	Relative proportion weight %	Count
Earthenware	454.5	66	148
Porcelain	35.3	5	6
Stoneware	202.1	29	19
Total	691.9	100	173

Table 6.12 includes clay tobacco pipes and non-diagnostic grouped fragments. Earthenware dominated Trench 7 (w=454.5, 66%) which was mostly clay smoking pipes, then stoneware (w=202.1 g, 29%), followed by porcelain which had the minimum weight represented by an insulator and one rim fragment of a saucer (w=35.3 g, 5%). The order remained the same when the number of fragments were counted: earthenware (n=148, 86%), followed by stoneware (n=19, 11%), then porcelain (n=6, 3%).

6.8.3 Technological ware sub-type

In variance to Trenches 3 and 4 which contained more stoneware, Figure 6.62 shows that refined earthenware was dominant for sub-type by weight (w=409.2 g, 59%), followed by stoneware (w=202.1 g, 29%), soft paste porcelain (w=32.9 g, 5%), white granite (w=31.6 g, 5%), then coarse unrefined earthenware – terracotta or red ware (w=13.7 g, 2%). Hard paste porcelain had the minimum (w=2.4 g, <1%). No coarse unrefined earthenware – yellow ware was present. Figure 6.63 shows that refined earthenware also had the maximum number of sherds (n=118, 68%), followed by stoneware and white granite (n=19) or 11% each. Coarse unrefined earthenware – terracotta or red ware was next (n=11, 6%), then soft paste porcelain (n=5, 3%), followed by hard paste porcelain which only had one fragment, representing <1%.

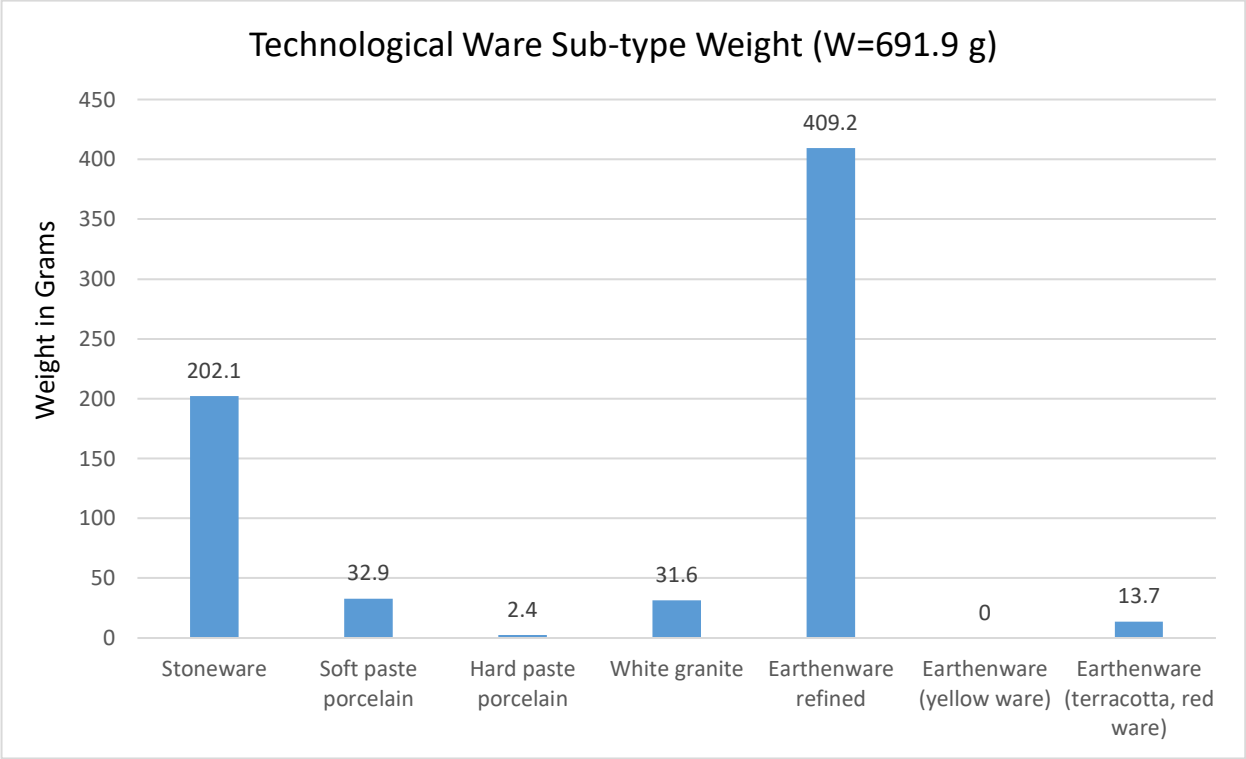


Figure 6. 62 Weight of technological ware sub-types, Trench 7

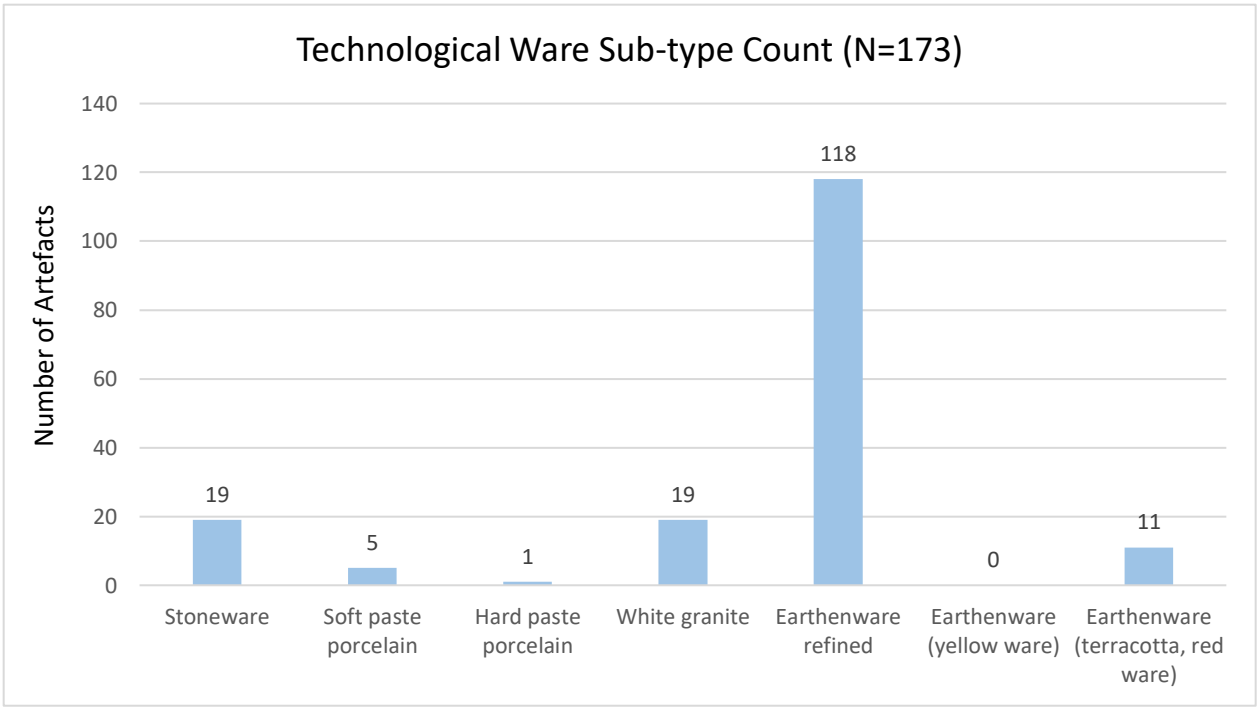


Figure 6. 63 Count of technological ware sub-type, Trench 7

6.8.4 Functional type

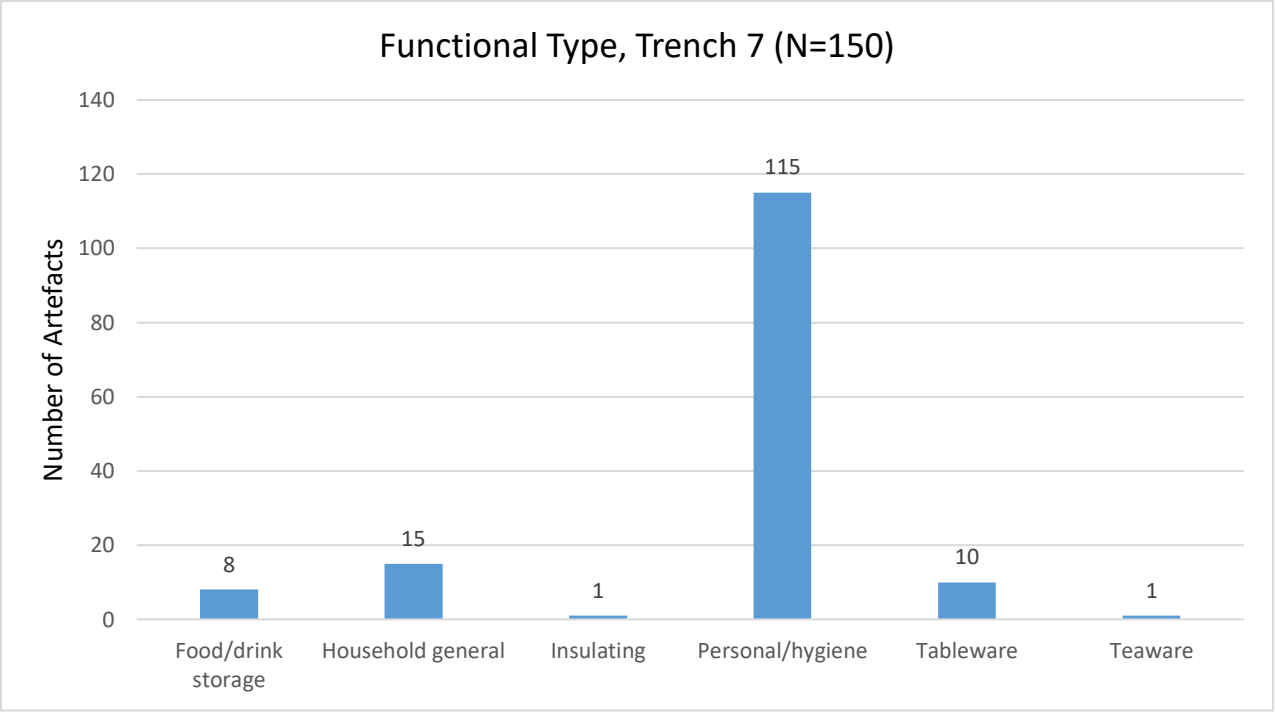


Figure 6. 64 Count of identifiable functional types - objects and fragments, Trench 7

Figure 6.64 shows that 150 fragments and complete objects were identified for functional type. Personal/hygiene items dominated the assemblage (n=115, 77%); these were predominantly clay smoking pipe fragments, but also included a partial face of a porcelain Chinese figurine (Figure 6.65). Next was household general (n=15, 10%), followed by tableware (n=10, 7%), then food/drink storage (n=8, 5%). Insulating and teaware had the minimum with only one item each, representing <1% of the assemblage at Trench 7.

Figure 6. 65 Personal item from Trench 7. Face portion of a Chinese figurine (Photograph Bateman 2018)

6.8.5. Fragment count of identifiable objects

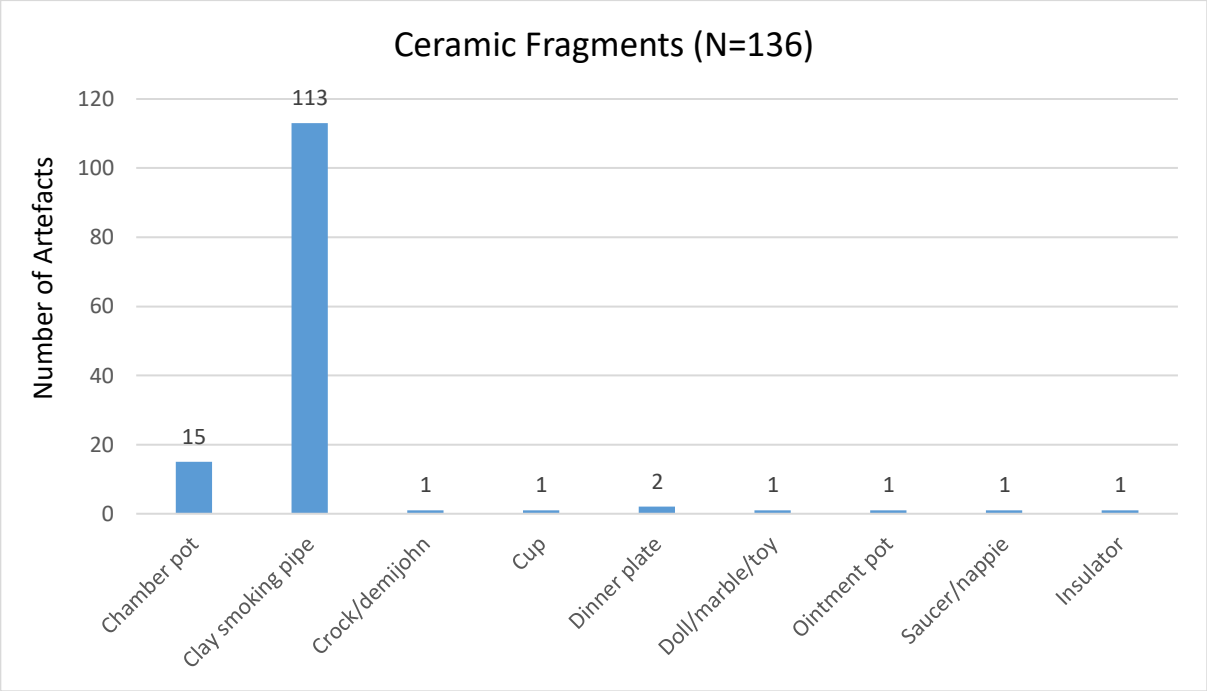


Figure 6. 66 Ceramic fragment count of identifiable objects, Trench 7

Figure 6.66 shows a count of objects and fragments that were identifiable, and does not represent the MNV. A total of nine different object types could be identified. Clay smoking pipes had the maximum number of identifiable items (n=113, 83%). Next were chamber pot fragments (n=15, 11%), followed by dinner plates (n=2, 1%), then with one fragment each (<1%): crock/demijohn, cup, doll/marble/toy, ointment pot, saucer/nappie and an insulator. The MNV is outlined in section 6.8.8

Figure 6. 67 Red ware clay pipe bowl fragments from Trench 7
(Photograph Bateman 2018)

6.8.6 Object component

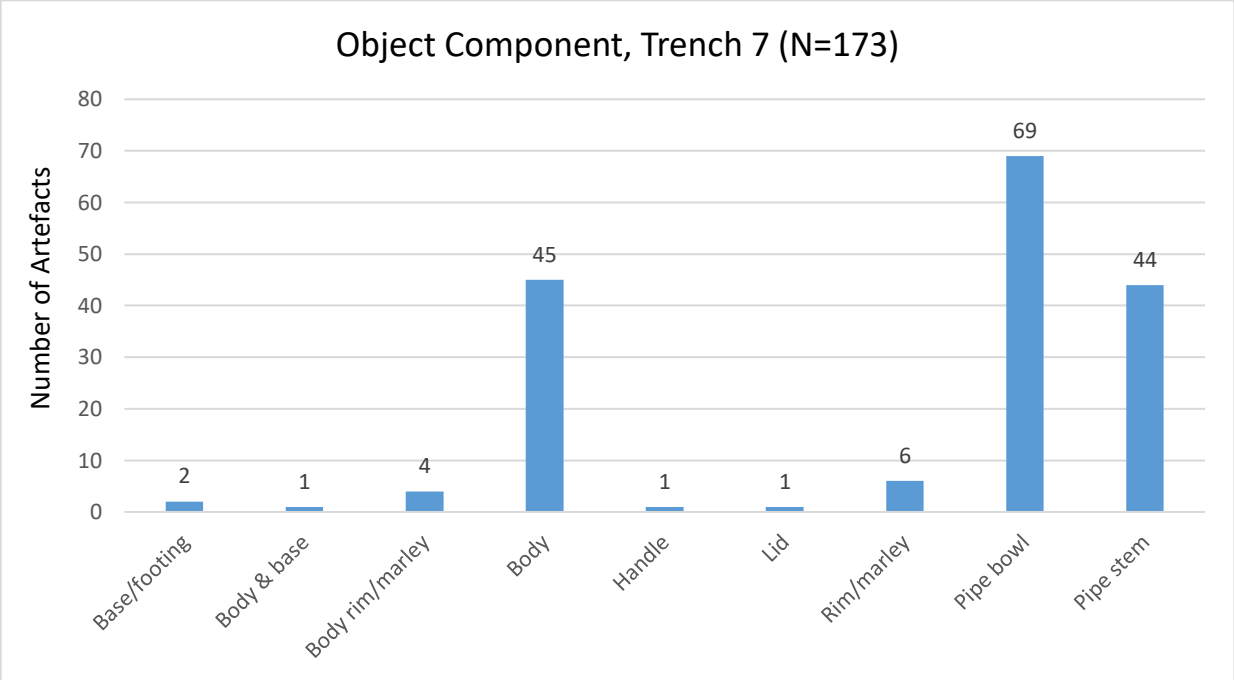


Figure 6. 68 Object component, Trench 7

Figure 6.68 shows that pipe bowls dominated the assemblage with a maximum of 68 fragments (40%), followed by body fragments (n=45, 26%) then pipe stem pieces (n=44, 25%). Rims/marleys were next (n=6, 3%), followed by bodies with rim/marley (n=4, 2%), then bases/footings (n=2, 1%). The remaining components were equivalent with one fragment each (<1%); bodies and base, handles and lids.

6.8.7. Completeness

The majority of fragments (n=171) represented 0-50% of a complete object. Two fragments were 51-95% complete. Figure 6.69 shows an example of a rim fragment of a demijohn from Trench 7.

Figure 6. 69 Rim fragment of a demijohn from Trench 7
(Photograph Bateman 2018)

6.8.8 Ceramic NMV, Trench 7

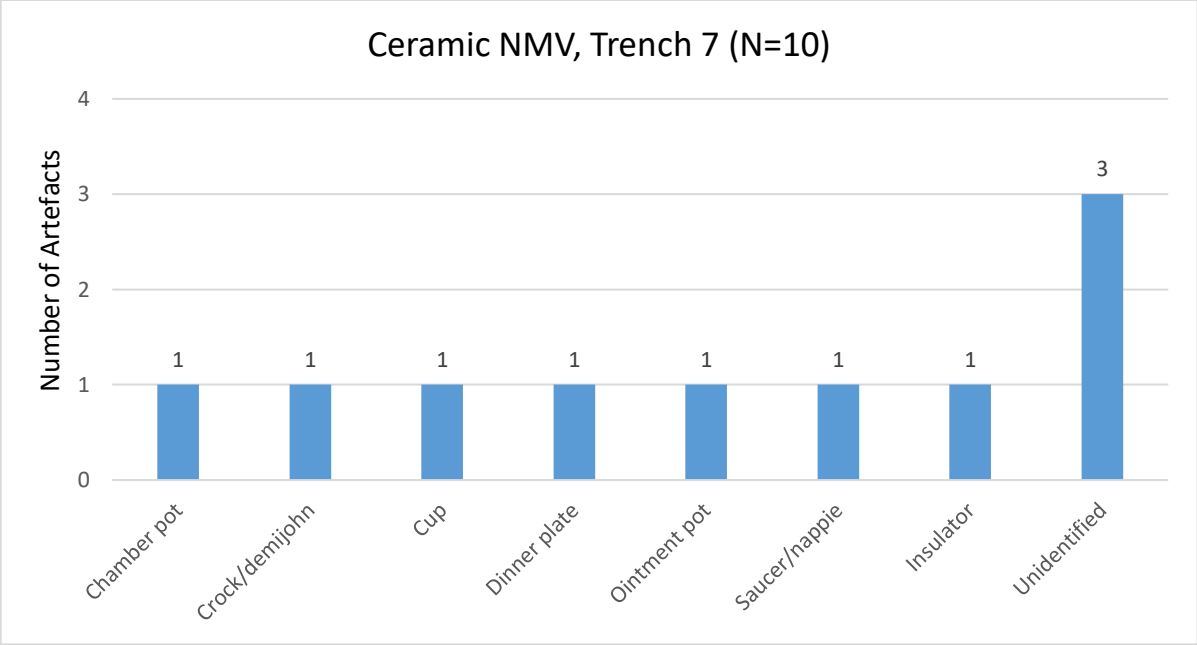


Figure 6. 70 MNV for ceramic, Trench 7

The MNV for ceramic at Trench 7 was calculated to be 10 objects. Figure 6.70 shows that there was one item in all identifiable object categories (10% each), and there were three unidentified objects (30%). Clay pipes were not counted in the MNV (see section 6.5.12), nor was the Chinese figurine (see Figure 6.62). Figure 6.71 shows an example of an identified object fragment from Trench 7.

Figure 6. 71 Lid fragment of a John Gosnell ointment pot from Trench 7 (Photograph Bateman 2018)

6.8.9 Identifiable motifs

Table 6. 13 Count of identifiable motifs at Trench 7

Identifiable motifs	Fragment Count	Colour	component	Object
Ivy Leaves	1	Blue	Body and rim	Chamber pot
	1	Blue	Body and base	Chamber pot
	2	Blue	Body	Chamber pot
Total	**4**			
Banded	1	Blue	Rim	Chamber pot
Total	**1**			
Circles and Swirls	1	Brown	Handle	Unidentified
Total	**1**			
Overall Total	**6**			

Figure 6. 72 Body fragment of an earthenware object with an unidentified registration daimond.

Table 6.13 shows that six fragments or 3% of Trench 7 was decorated with identifiable motifs (conjoins counted as one fragment). Four fragments of a chamber pot had a blue flow transfer print of an ivy leaf pattern, and the same chamber pot also had a blue banded rim. The other identifiable motif was a brown transfer print of circles and swirls on a decorated handle from an unidentified object. Figure 6.72 shows an example of an unidentifiable registration diamond.

6.8.10 Conjoins

Table 6. 14 Conjoin NMV, Trench 7

Vessel	NMV
Unidentified	2
Chamber pot	1

Trench 7 had five conjoins comprising 15 fragments in total. The MNV for conjoins was calculated to be three objects (Table 6.14), which are included in the total MNV for Trench 7 shown in Figure 6.70. The technology type for the majority of conjoins was earthenware (a chamber pot, n=11 fragments or three sets, and an unidentified earthenware object, n=2 fragments or one set). An unidentified stoneware object had one conjoin. (n=2 fragments). There were no porcelain conjoins. A full summary of conjoins from Trench 7, which includes square, context, objects, ware type, joins and catalogue numbers is outlined in Appendix 9, Table 9.3. Figure 6.73 shows conjoined base and body fragments from the chamber pot, and Figure 6.7 (from section 6.3) shows the rim and body portion of the same chamber pot.

Figure 6. 73 Conjoined base and body section of a chamber pot from Trench 7 (Photograph Bateman 2018)

6.9 Trench 11

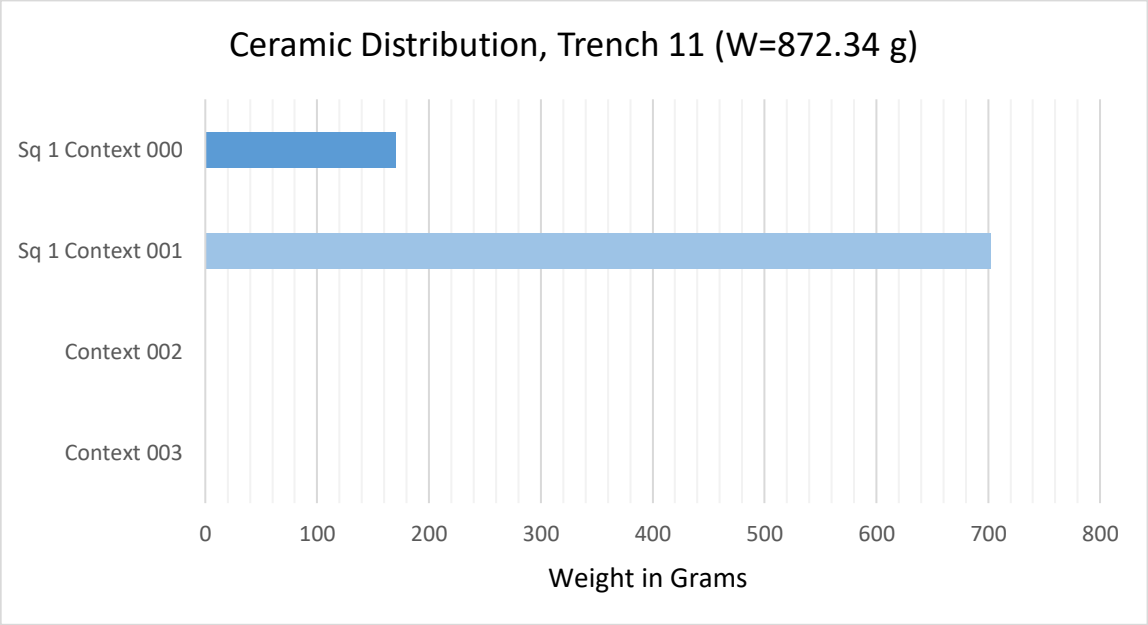


Figure 6. 74 Distribution of ceramic between contexts, Trench 11

6.9.1 Distribution of ceramic between contexts

Figure 6.74 shows that all ceramic from Trench 11 was recovered from Contexts 000 (surface) and 001. Of the total weight (872.34 g), Context 000 contained 170.3 g (20%), and Context 001 had 702.4 g, (81%). Figure 6.75 shows an example of an unidentified object derived from Context 001.

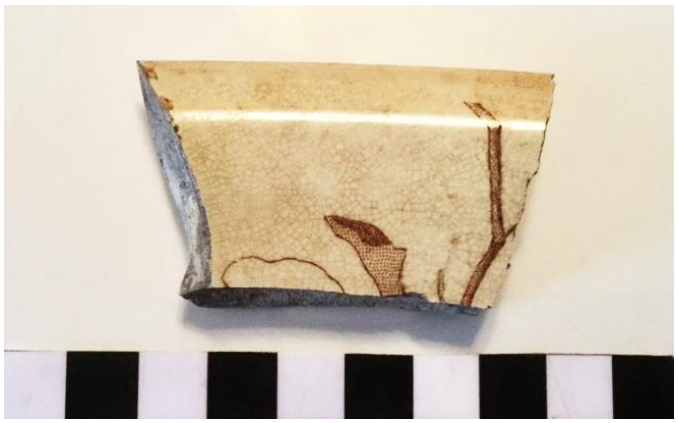


Figure 6. 75 Body and rim fragment of an unidentified earthenware object from Context 001 (Photograph Bateman 2017)

6.9.2 Technological ware type

Table 6. 15 Technological ware type frequencies for ceramic, Trench 11

Ware type	Total weight (g)	Relative proportion weight %	Count
Earthenware	645.84	74	62
Porcelain	9.3	1	2
Stoneware	217.2	25	12
Total	**872.34**	**100**	**76**

Table 6.15 includes clay tobacco pipes and unidentified grouped fragments. Earthenware dominated Trench 11 (w=645.84, 74%), then stoneware (w=217.2 g, 25%), followed by porcelain (w=9.3 g, 1%). Maximum and minimum counts corresponded with weight in terms of relative quantities: earthenware (n=62, 82%), followed by stoneware (n=12, 16%), then porcelain (n=2, 3%).

6.9.3 Technological ware sub-type

Figure 6.77 shows that refined earthenware dominated for sub-type by weight (w=462.84 g, 53%), followed by stoneware (w=217.2 g, 25%), white granite (w=183 g, 21%), then soft paste porcelain (w=9.3 g, 1%). No hard paste porcelain or coarse unrefined earthenware (either yellow ware or red ware), was present. Fragments counts demonstrated the same pattern (Figure 6.78): refined earthenware (n=56, 74%); followed by stoneware (n=12, 16%); white granite (n=6, 8%); then soft paste porcelain (n=2, 3%).

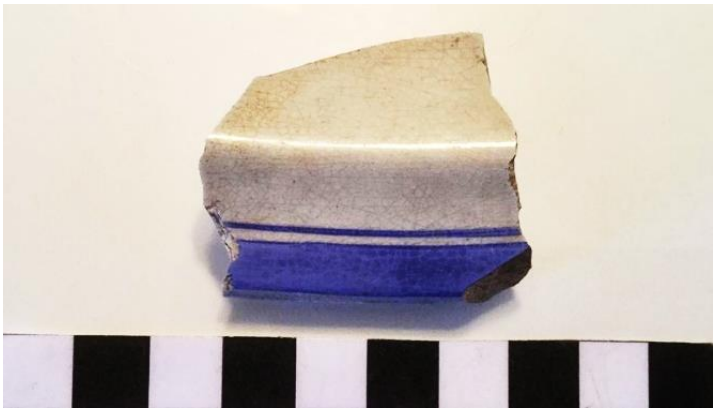


Figure 6. 76 Earthenware body and rim fragment of an unidentified object from Trench 11 (Phtotograph Bateman 2017)

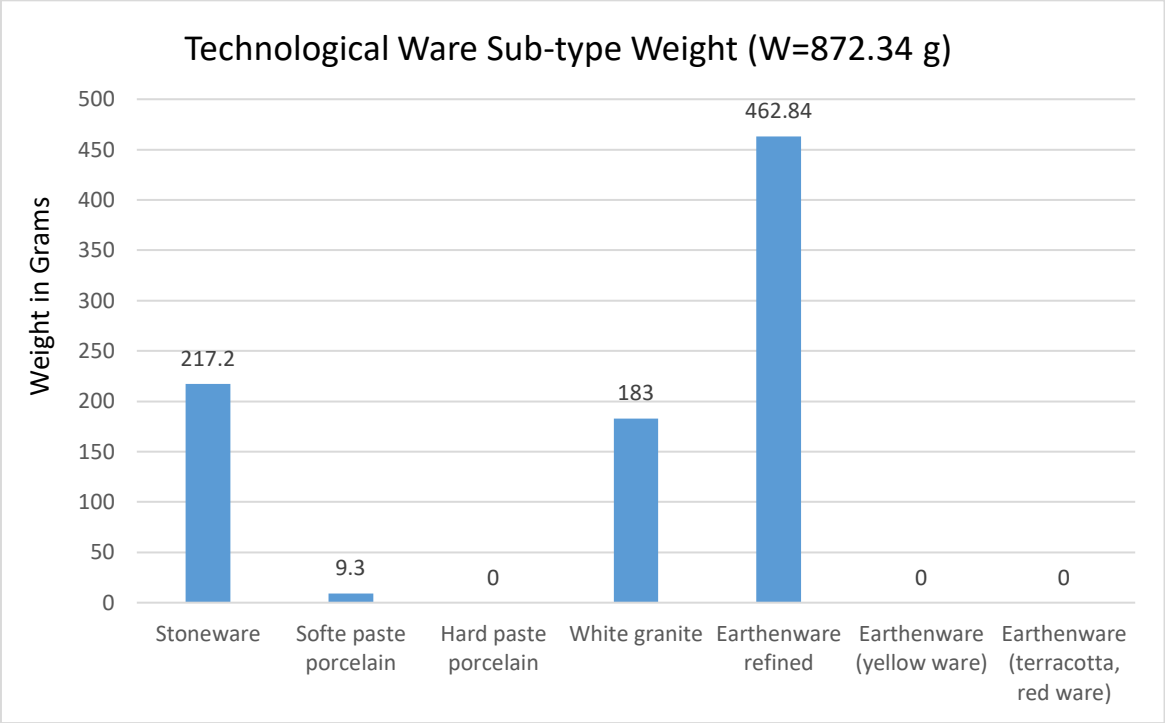


Figure 6. 77 Weight of technological ware sub-types, Trench 11

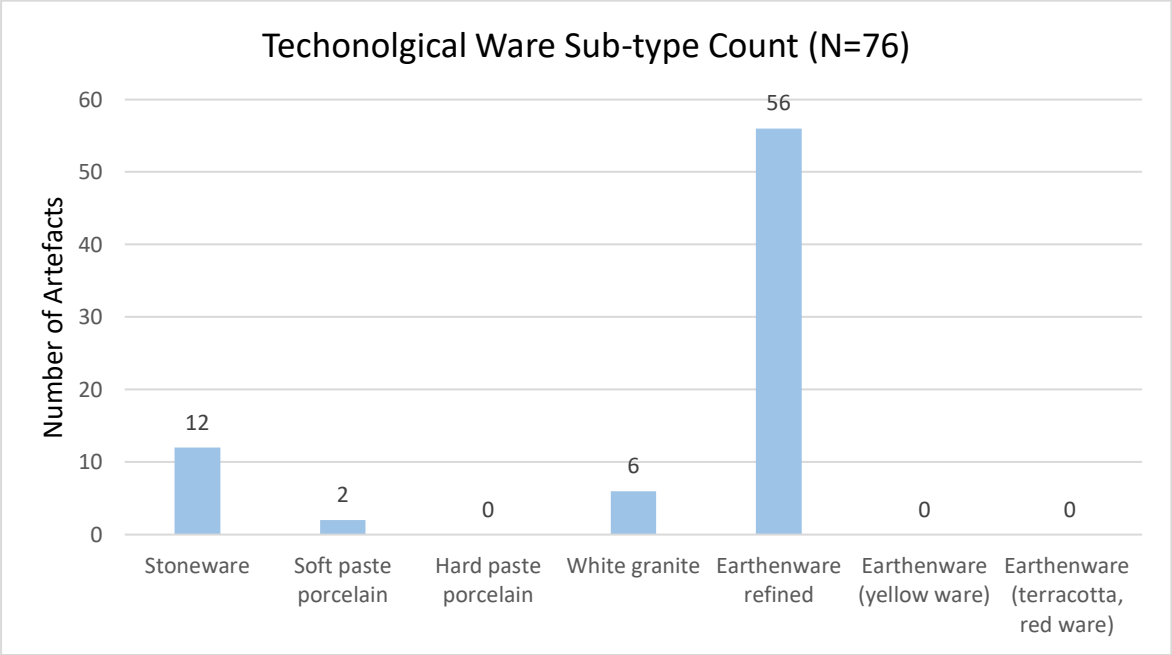


Figure 6. 78 Count of technological ware sub-type, Trench 11

6.9.4 Functional type

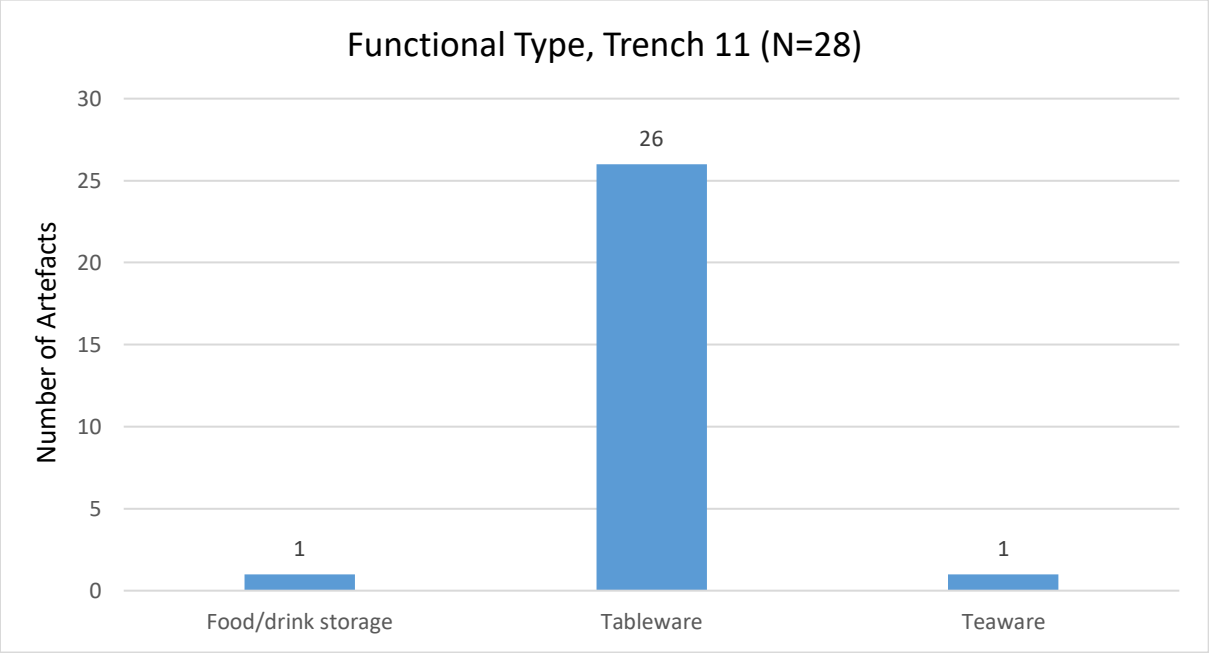


Figure 6. 79 Count of identifiable functional types – objects and fragments, Trench 11

Figure 6.79 shows that a total of 28 fragments were identified for functional type. Tableware dominated the assemblage (n=26, 93%), followed by teaware and food/drink storage with one item (3.5%) each. Figure 6.80 shows tableware footing fragments from Trench 11.

Figure 6. 80 Tableware base/footing fragments – earthenware plate from Trench 11 (Photograph Bateman 2017)

6.9.5. Fragment count of identifiable objects

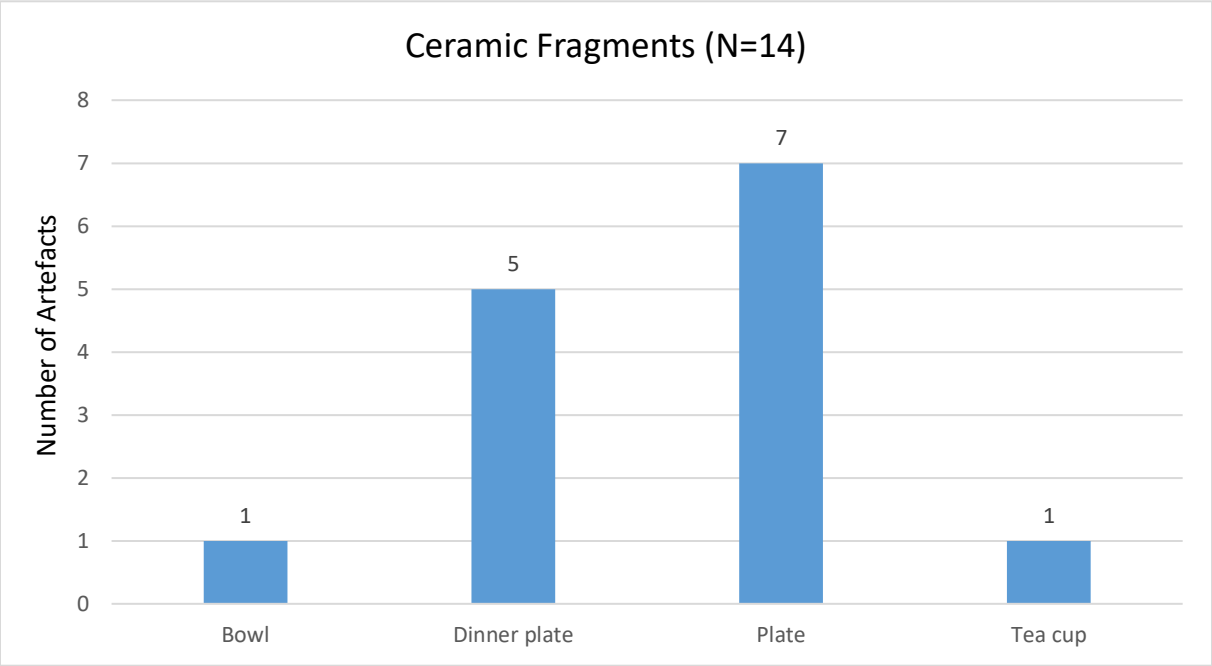


Figure 6. 81 Ceramic fragment count of identifiable objects, Trench 11

Figure 6.81 shows a count of object fragments that were identifiable (n=14), and does not represent the MNV. A total of four different object types could be identified. Plates that could not be identified to a particular form had the maximum number (n=7, 50%), followed by dinner plates (n=5, 36%; Figure 6.82). Bowl and tea cup had one item each (7%). The MNV is outlined in section 6.9.8

Figure 6. 82 Conjoined rim and marley fragments of an earthenware dinner plate from Trench 11 (Photograph Bateman 2017)

6.9.6 Object component

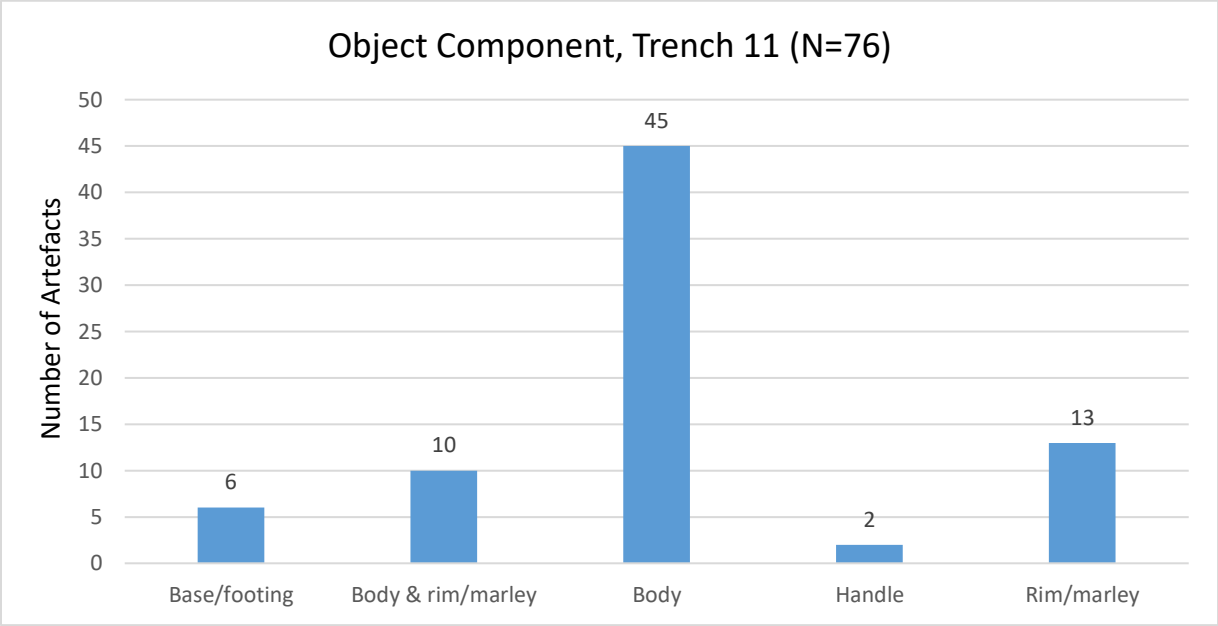


Figure 6. 83 Object component, Trench 11

Figure 6.83 shows that body portions dominated the assemblage with a maximum of 45 fragments (59%), followed by rims/marleys (n=13, 17%) then bodies with a rim/marley (n=10, 13%). Bases/footings numbered six (8%), and the minimum was handle fragments with two (3%). Figure 6.84 shows an example of a handle fragment from Trench 11.

6.9.7 Completeness

All 76 fragments were 0-50% of a complete object.

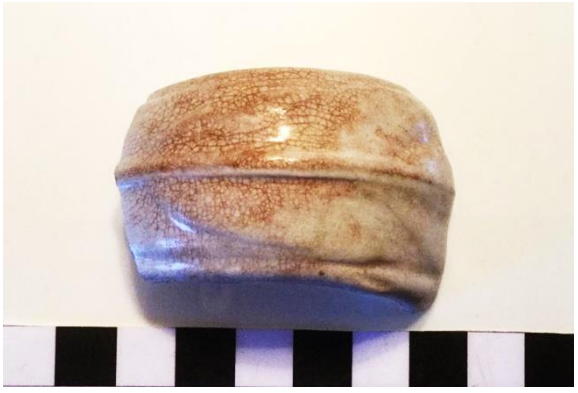


Figure 6. 84 Handle fragment of an unidentified earthenware object from Trench 11 (Photograph Bateman 2017)

6.9.8 Ceramic NMV, Trench 11

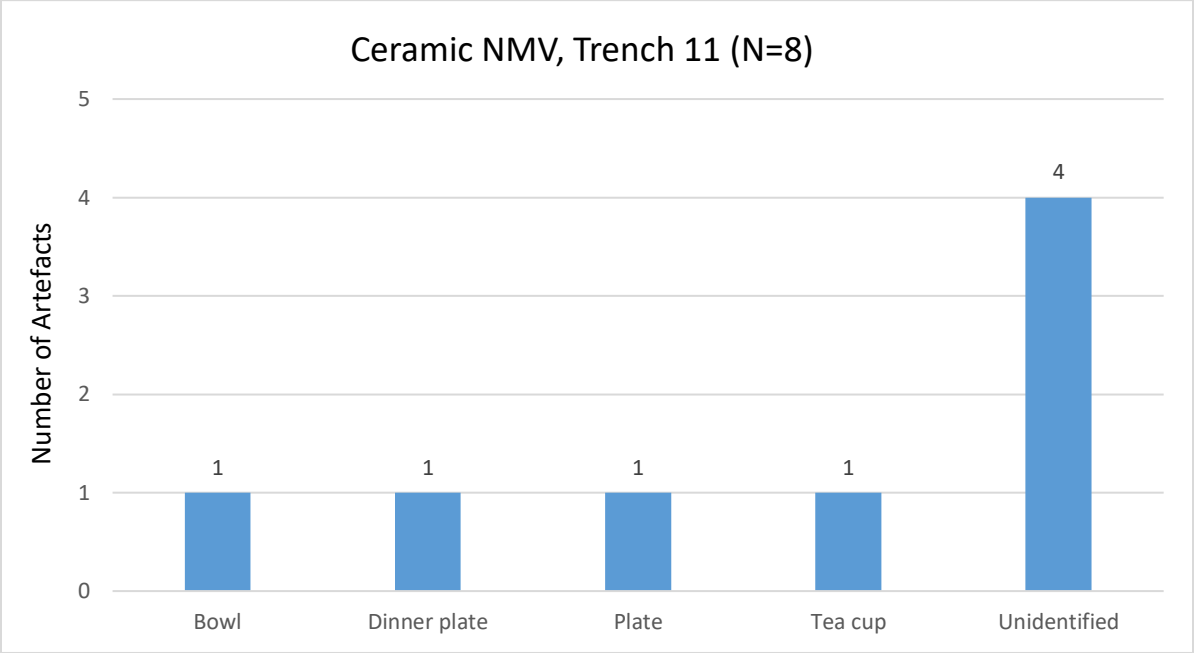


Figure 6. 85 MNV for ceramic, Trench 11

The MNV for ceramic at Trench 11 was eight objects, with no complete objects recovered. This was the minimum number of objects for the entire ceramic assemblage at Boralga (9%). Figure 6.85 shows that unidentified objects dominated (n=4, 50%), and all remaining objects were equivalent with one item each (12.5% per item).

6.9.9 Identifiable motifs

Table 6.16 shows that 23 fragments (30%) from Trench 11 were decorated with identifiable motifs (conjoins counted as one fragment). The red band and line design dominated with nine fragments, followed by flower patterns and leaf designs with four fragments each. The remaining patterns had one fragment each: blue band and line, brown transfer print flowers and twigs, flowers and leaves, circles and swirls, and brown bands.

Table 6. 16 Count of identifiable motifs at Trench 11

Identifiable motifs	Fragment Count	Colour	component	Object
Band and line	5	Red	Marley	Dinner plate
	1	Red	Rim	Dinner plate
	1	Red	Rim and Marley	Dinner plate
	1	Red	Rim	Unidentified
	1	Red	Body	Bowl
Total	**9**			
Band and line	1	Blue	Rim and body	Unidentified
Total	**1**			
Flowers	3	Brown	Body	Unidentified
	1	Brown	Rim and marley	Unidentified
Total	**4**			
Flowers and twigs	1	Brown	Rim and body	Unidentified
Total	**1**			
Flowers and leaves	1	Brown	Body and rim	Unidentified
Total	**1**			
Leaves	2	Brown	Rim and body	Unidentified
	1	Brown	Body	Unidentified
	1	Green	Body	Unidentified
Total	**4**			
Bands	1	Brown	Body and rim	Unidentified
Total	**1**			
Circles and swirls	**1**	Brown	Handle	Unidentified
Total	**1**			
Overall total	**23**			

6.9.10 Conjoins

Table 6. 17 Conjoin MNV, Trench 11

Vessel	NMV
Unidentified	1
Dinner plate	1
Total	**2**

Trench 11 had four conjoined sets comprising of eight fragments in total. The MNV for conjoins was calculated to be two objects (Table 6.17), which are included in the total MNV for Trench 11 shown in Figure 6.85. The technology type for all conjoins was earthenware; four fragments (two sets consisting of two fragments each) were from a red band and line dinner plate, and the remaining four fragments (two sets consisting of two fragments each) were from an unidentified object with a brown transfer print. A full summary of conjoins from Trench 11 which includes square, context, objects, ware type, joins, catalogue numbers are outlined in Appendix 9, Table 9.4.

Figure 6. 86 Conjoined body and rim fragments with brown transfer print of a leaf. Unidentified earthenware object from Trench 11 (Photograph Bateman 2017)

6.10 Trench 16

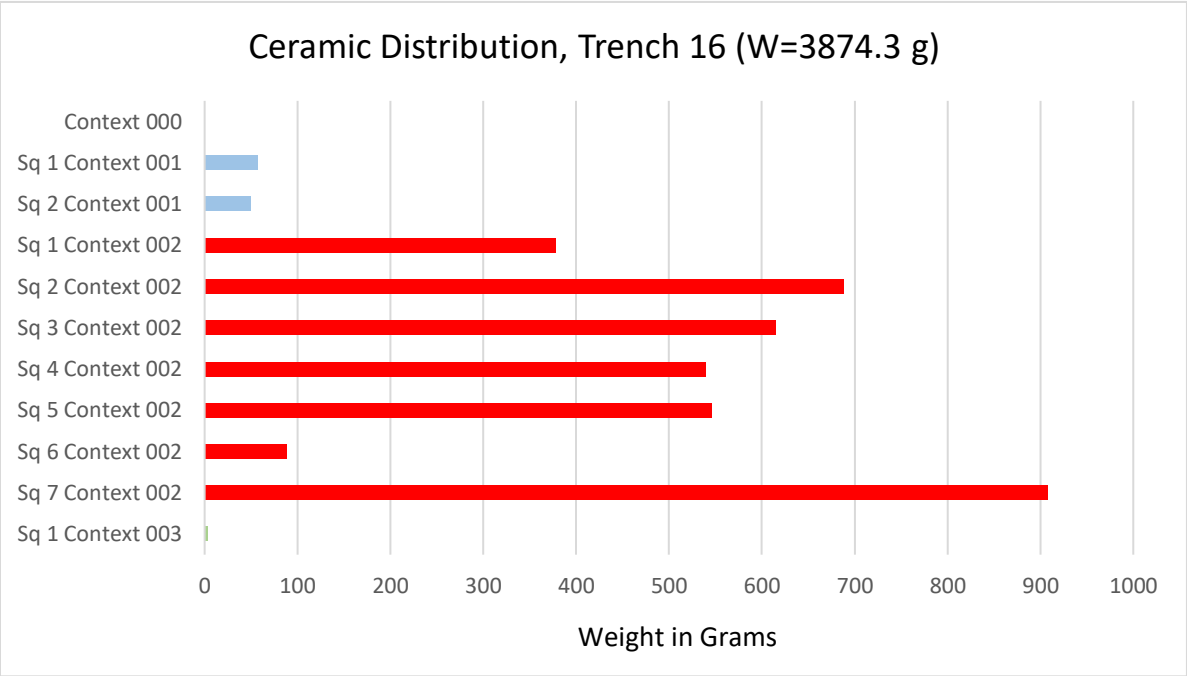


Figure 6. 87 Distribution of ceramic between contexts, Trench 16

6.10.1 Distribution of ceramic between contexts

Figure 6.87 shows the distribution of ceramic between contexts at Trench 16, which totalled 3874.3 g. No ceramic was recovered from Context 000. Context 001 contained 107.4 g (3%), and Context 002 significantly increased to 3763.4 g (97%). Context 003 encompassed the minimum (3.5 g, <1%). The increased pulses at Context 002 shows the NMP horizon. The maximum quantity between squares was Square 7 Context 002 (908.3 g, 23%), and the minimum was Square 1, Context 003 (3.5 g, <1%). Figure 6.88 shows an example of a conjoined porcelain tea cup derived from Context 002.

Figure 6. 88 Conjoined porcelain tea cup from Square 2, Context 002 (Photograph Bateman 2018)

6.10.2 Technological ware type

Table 6. 18 Technological ware type frequencies for ceramic, Trench 16

Ware type	Total weight (g)	Relative proportion weight %	Count
Earthenware	3318.7	86	331
Porcelain	479.6	12	120
Stoneware	76	2	7
Total	**3874.3**	**100**	**458**

Table 6.18 includes clay tobacco pipes and grouped fragments. Earthenware dominated Trench 16 (w=3318.7 g, 86%), followed by porcelain (w=479.6 g, 12%), then stoneware (w=76 g, 2%). Maximum and minimum counts corresponded with weight in terms of relative quantities: earthenware (n=329, 72%); followed by porcelain (n=120, 26%); then stoneware (n=2, <1%).

6.10.3 Technological ware sub-type

Figure 6.89 shows that refined earthenware dominated for sub-type by weight (w=1992.8 g, 51%), followed by white granite (w=1318.4 g, 34%), soft paste porcelain (w=479.6 g, 12%), stoneware (w=76 g, 2%), then unrefined earthenware - terracotta or red ware (w=7.5 g, <1%). No hard paste porcelain or coarse unrefined earthenware – yellow ware was present. Figure 6.90 shows that refined earthenware also had the maximum number of sherds (n=189, 41%), followed by white granite (n=141, 31%), soft paste porcelain (n=120, 26%), stoneware (n=7, 2%) and lastly, unrefined earthenware – terracotta or red ware which only had one fragment (<1%).

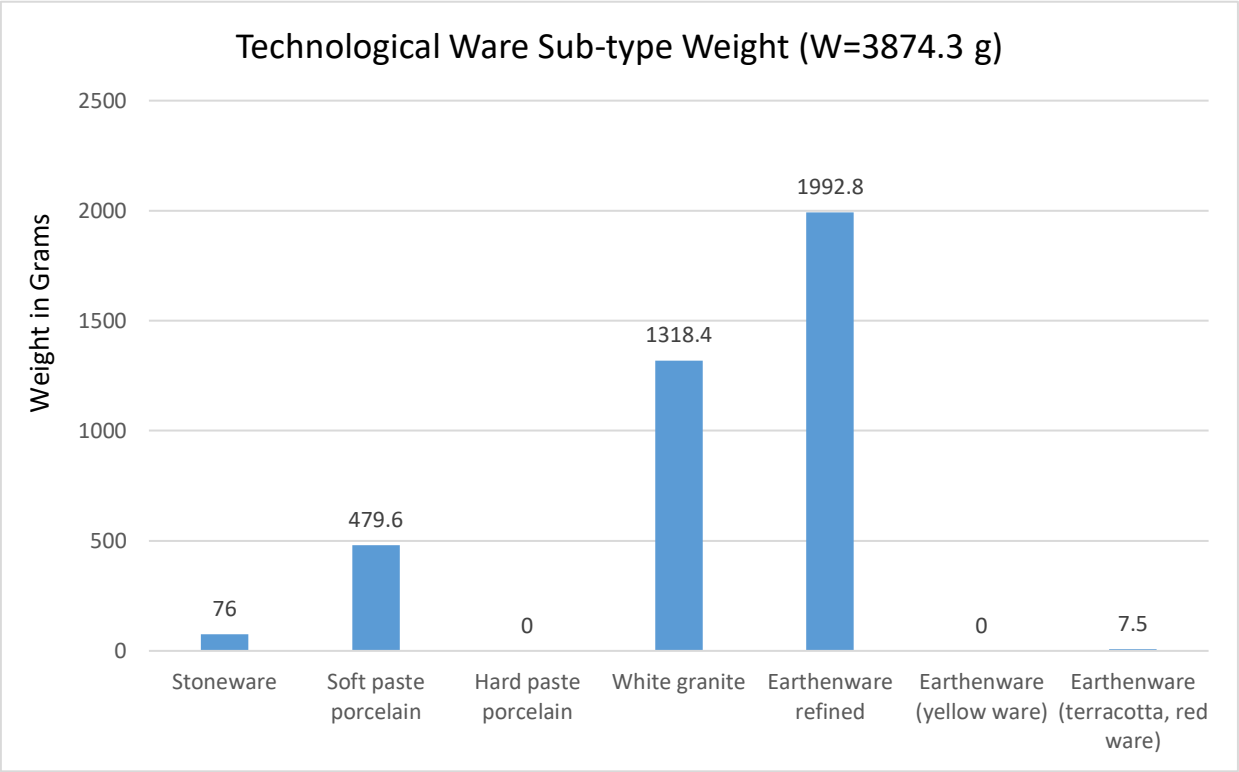


Figure 6. 89 weight of technological ware sub-type, Trench 16

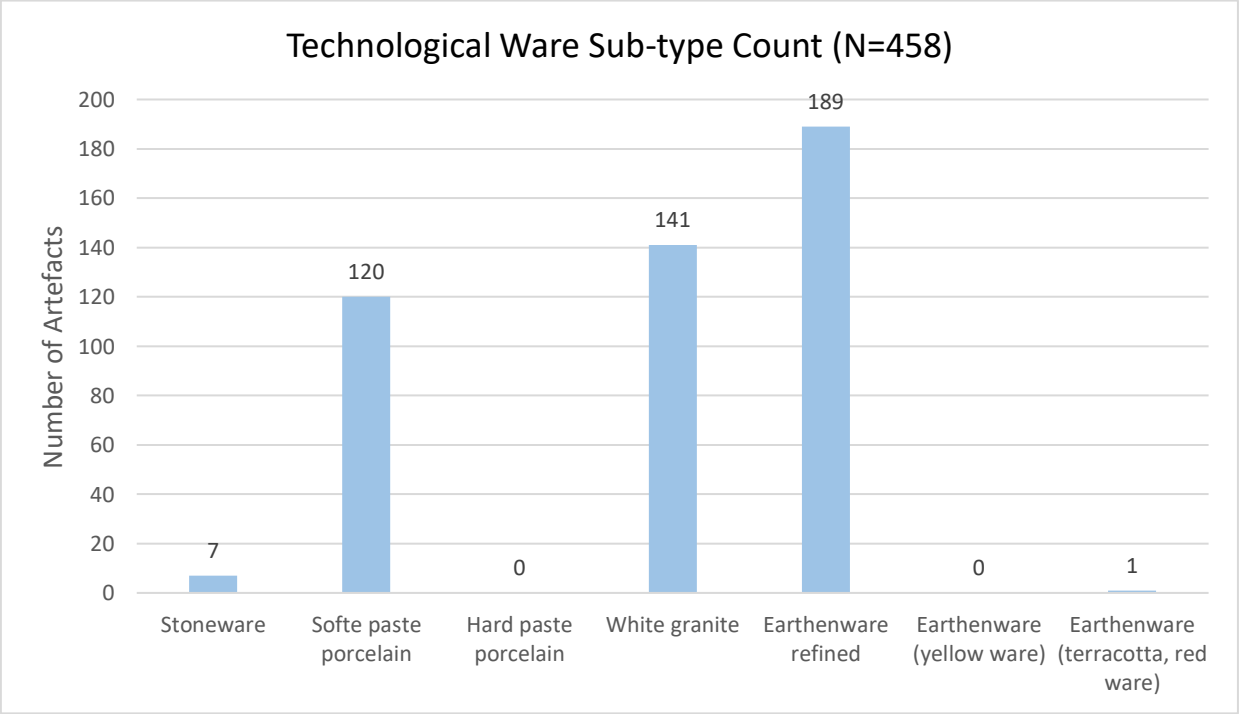
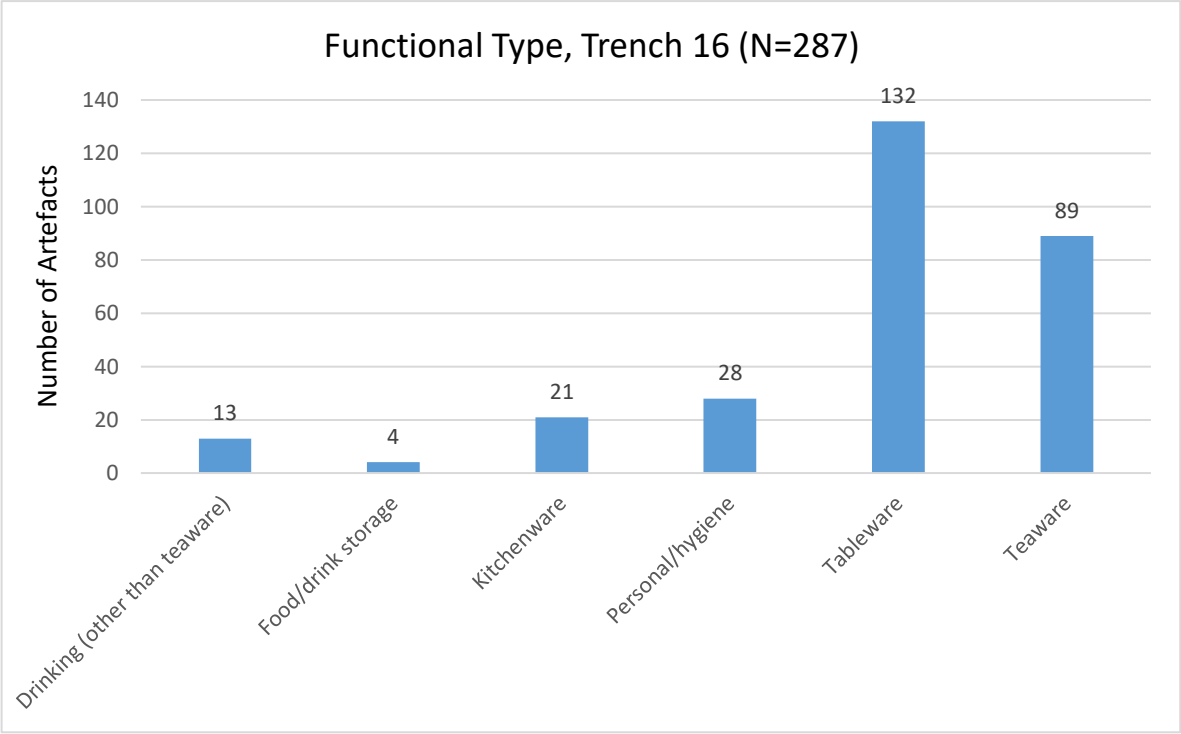


Figure 6. 90 Count of technological ware sub-type, Trench 16

6.10.4 Functional type



Fgure 6. 91 Count of identifiable functional types – objects and fragments, Trench 16

Figure 6.91 shows that a total of 287 fragments and complete objects were identified for functional type. Similar to Trenches 11 and 4, tableware dominated the assemblage (n=132, 46%). Next was teaware (n=89, 31%; Figure 6.92), followed by personal/hygiene (n=28, 10%), kitchenware (n=21, 7%), then drinking (other than teaware) which had 13 items (5%). Food/drink storage had the least with four items (1%).

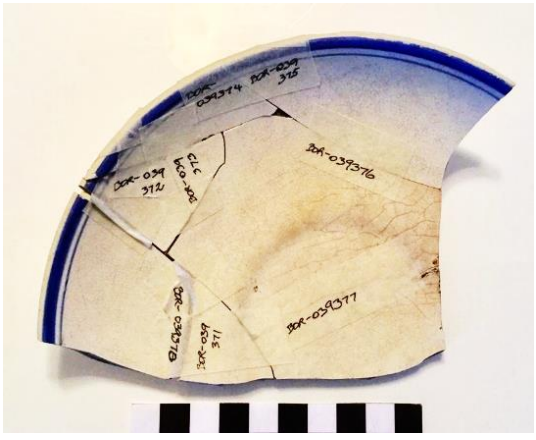


Figure 6. 92 Conjoined teaware fragments – earthenware saucer from Trench 16 (Photograph Bateman 2017)

6.10.5. Fragment count of identifiable objects

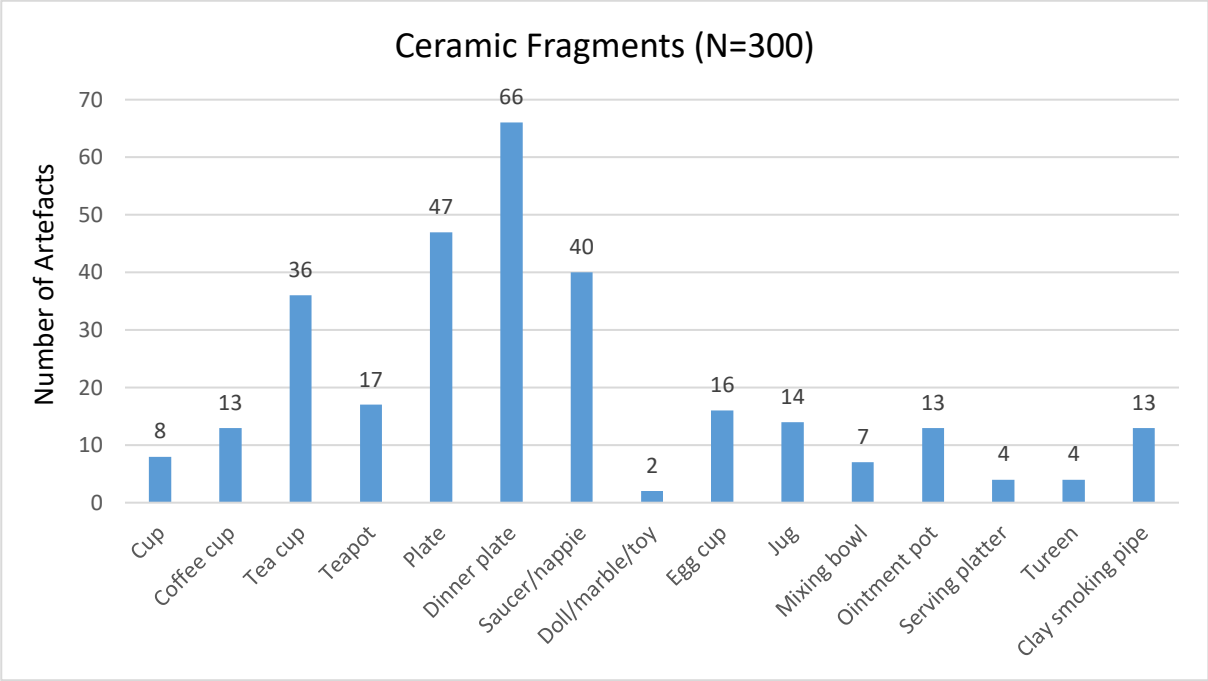


Figure 6. 93 Ceramic fragment count of identifiable objects, Trench 16

Figure 6.93 shows that 15 different object types were identified, and does not represent the MNV. Dinner plates had the maximum number (n=66, 22%), followed by plates not identified to a particular type (n=47, 16%), then saucers/nappies (n=40, 13%). Next in order of abundance was: tea cups (n=36, 12%); teapots (n=17, 6%); egg cups (n=16, 5%); jugs (n=14, 5%); coffee cups (n=13, 4%); clay smoking pipes (n=13, 4%); cups (n=8, %); and mixing bowls (n=7, 3%). Serving platters and tureens had four items each (1%) and dolls/marbles/toys had the least (n=2, <1%). Figure 6.94 shows a porcelain egg cup from Trench 16. The MNV is outlined in section 6.10.8

Figure 6. 94 Porcelain egg cup from Trench 16
(Photograph Bateman 2018)

6.10.6 Object component

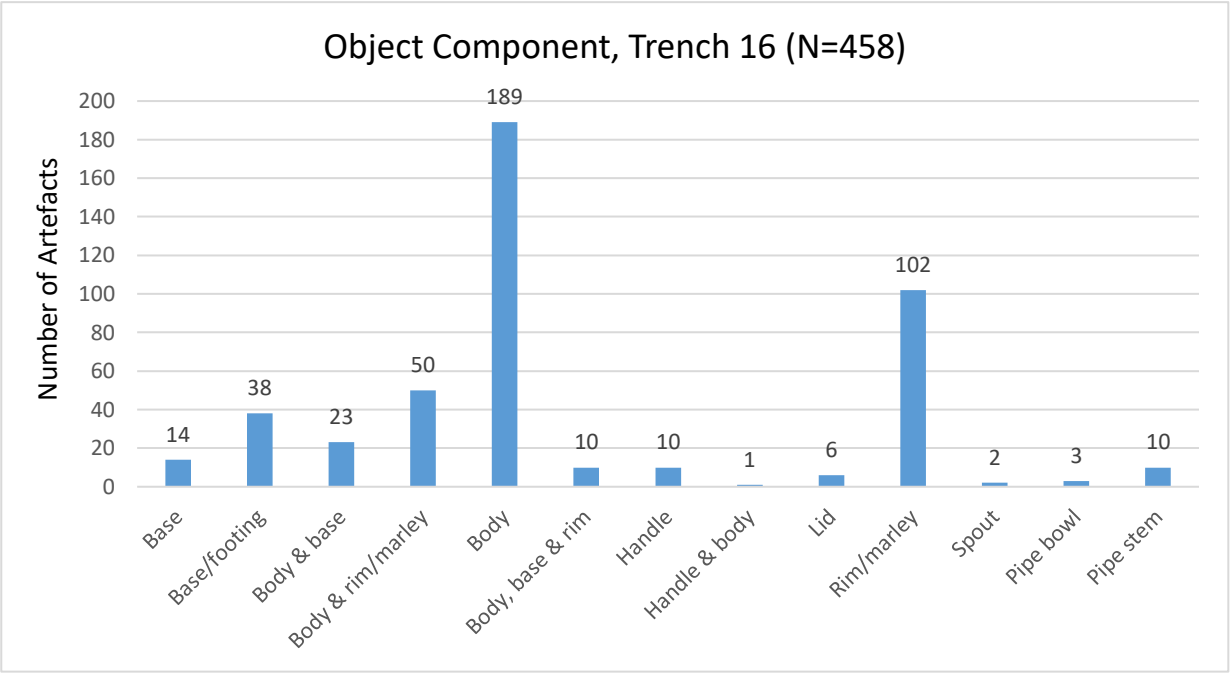


Figure 6. 95 Object component, Trench 16

Figure 6.95 shows that body portions dominated with 189 fragments (41%), followed by rims/marleys (n=102, 22%), then bodies with rim/marley (n=50, 11%). Bases/footings were next (n=38, 8%), then bodies and base (n=23, 5%), and bases (n=14, 3%). Bodes with base and rim, handles and pipe stems comprised 10 items each (2%). Lids represented six items (1%), followed by pipe bowls (n=3, <1%), then spouts (n=2, <1%). Bodies with a handle had the least (n=1, <1%). Figures 6.96 and 6.97 shows handle and spout fragments from a jug found in Trench 16.

6.10.7. Completeness

The majority of fragments were 0-50% of a complete object (n=453). Fragments that were 51-95% complete only numbered two, and three objects were 96-100% complete.

Figures 6. 96 and 6. 97 Earthenware handle and spout fragments from a jug, Trench 16 (Photograph Bateman 2018)

6.10.8 Ceramic NMV, Trench 16

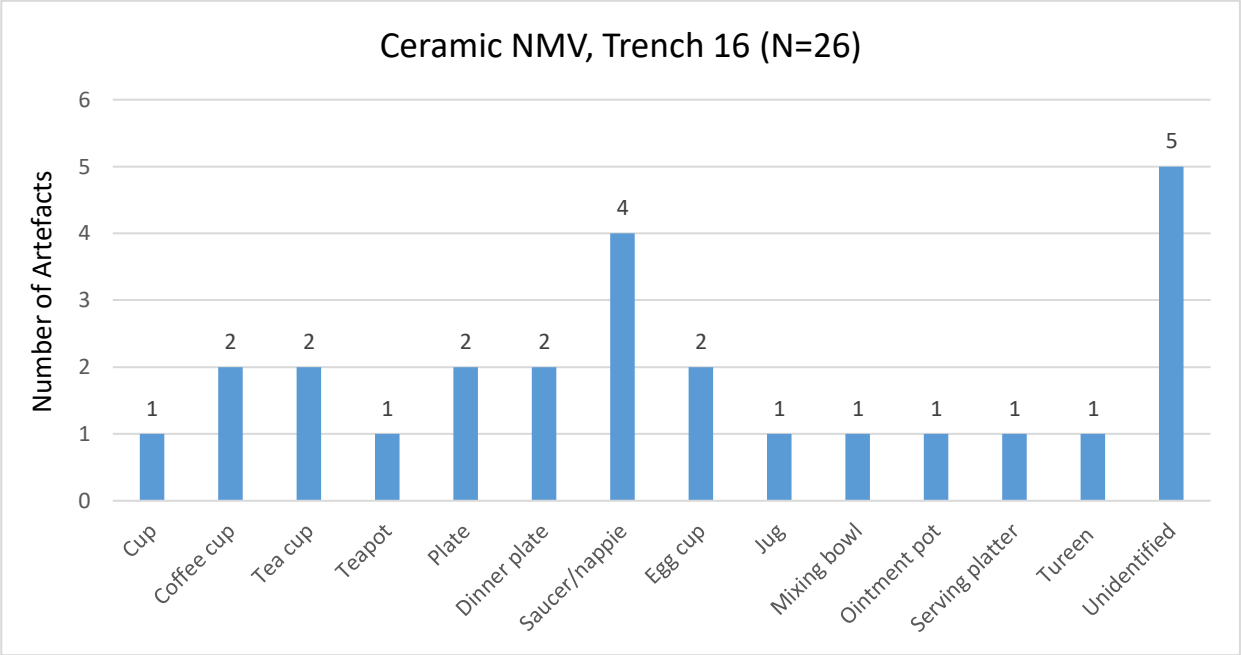


Figure 6. 98 MNV for ceramic, Trench 16

The MNV for ceramic at Trench 16 was 26 objects. As the tureen and serving platter were oblong in shape, the rims could not be measured using the base/rim diameter chart, thus the MNV was qualitatively calculated. Figure 6.98 shows that unidentified objects represented the maximum number (n=5, 19%). Saucers/nappies were next (n=4, 15%), followed by coffee cups, tea cups, plates, dinner plates and egg cups (n=2, 8% each). The remining objects had the minimum number with one item each (4% each): cup, teapot, jug, mixing bowl, ointment pot, serving platter and tureen. Objects from Trench 16 not included in the MNV were clay pipes (see section 6.5.12) and the head and limb of a porcelain doll (Figures 6.99 and 6.100).

Figures 6. 99 Porcelain doll shoulder and head fragment. Figure 6. 100 Limb from a porcelain doll (Photograph Wallis 2018; Bateman 2018)

6.10.9 Identifiable motifs

Table 6. 19 Count of identifiable motifs at Trench 16

Identifiable motifs	Fragment Count	Colour	component	Object
Band and line	1	Blue	Handle	Tureen
	2	Blue	Body, rim and marley	Saucer/nappie
	1	Blue	Rim	Saucer/nappie
	2	Blue	Rim	Cup
	1	Blue	Body and Rim	Cup
	1	Blue	Rim	Coffee Cup
	1	Blue	Body and Rim	Unidentified
	1	Blue	Rim	Unidentified
	1	Blue	Body, rim and marley	Dinner plate
	1	Blue	Rim	Dinner plate
	4	Blue	Rim	Plate
Total	**16**			
Banded	1	Red	Rim	Unidentified
	1	Red	Body and rim	Unidentified
Total	**2**			
Spiral ribbon	4	Blue	Rim and marley	Dinner plate
	1	Blue	Rim	Dinner plate
	1	Blue	Rim	Plate
	1	Blue	Marley	Plate
Total	**7**			
Leaves	2	Green	Body	Unidentified
	1	Brown	Body	Unidentified
Total	**3**			
Chain	1	Blue	Rim	Unidentified
Total	**1**			

Leaves and twigs	1	Brown	Body, base/footing	Unidentified
Total	**1**			
Leaves and flowers	1	Brown	Body	Unidentified
Total	**1**			
Leaves, flowers and birds	1	Brown	Body	Unidentified
Total	**1**			
Asiatic Pheasant	2	Blue	Rim	Serving platter
	1	Blue	Body	Serving platter
Total	**3**			
Overall total	**35**			

Table 6.19 shows that 35 fragments or 8% of Trench 16 was decorated with identifiable motifs (conjoins counted as one fragment). The blue band and line design comprised the maximum number with 16 fragments, followed by the blue spiral ribbon design. Moulded leaves, the Asiatic pheasant design, and transfer print leaves only, were next with three fragments each, followed by two red banded items. A blue transfer print chain design, and brown transfer print leaves and twigs, leaves and flowers, flowers and birds, all had one fragment each.

Figure 6. 101 Conjoined body fragments with brown transfer print of leaves. Unidentified, earthenware object from Trench 16 (Photograph Bateman 2018)

6.10.10 Conjoins

Trench 16 had 54 conjoined sets comprising of 269 fragments in total. The MNV for conjoins was 24 objects (Table 6.20), which are included in the total MNV for Trench 16 shown in Figure 6.97. The technology type with the most conjoins was earthenware (n=205 fragments or 41 sets), followed by porcelain (n=64 fragments or 13 sets). Stoneware had no conjoins. A full summary of conjoins from Trench 16 which includes square, context, objects, ware type, joins, catalogue numbers are outlined in Appendix 9, Table 9.5. Figures 6.102 and 6.103 show two examples of conjoined objects from Trench 16.

Table 6. 20 Conjoin MNV, Trench 16

Vessel	NMV
Coffee cup	2
Tea cup	1
Teapot	1
Plates	2
Dinner plates	2
Saucer/nappie	4
Tureen	1
Ointment pot	1
Jug	1
Egg cup	2
Mixing bowl	1
Serving platter	1
Unidentified	5
Total	**24**

Figure 6. 102 Conjoined Halloway's Ointement pot from Trench 16
(Photograph Bateman 2018)

Figure 6. 103 Conjoined refined earthenware dinner plate with embossing from Trench 16
(Photograph Bateman 2018)

6.11 Results

The ceramic assemblage derived from Boralga contained a total of 1793 artefacts, with the MNV being 86 (121 including clay smoking pipes). The study sample weighed 19774.15 g or 19.77 kg, with 5186 g (26%) derived from the surface, and 14588.15 g (74%) from excavated contexts. Context 002 had the maximum quantity and represented 61% of the total ceramic weight, which was the NMP horizon. As expected, the varying densities of the different ceramic fabrics meant that weights did not correspond with sherd counts. Earthenware had the highest count for technological ware type (n=1047, 58%), but stoneware had the heaviest weight (w=10522.21 g, 53%). Results demonstrated that dinner plates and saucers/nappies were the most common ceramic objects at the site. The assemblage was highly fragmented, with 714 conjoined fragments (176 groups), and only 10 complete objects. In total, 174 (10%) of the objects were decorated using various patterns and colours, with flora in brown transfer print being the most popular, closely followed by blue band and line. Trench 7 contained the highest quantity of smoking pipes and Trench 4 was the most diverse regarding object forms, functional types, and decorated items. Trench 4 also contained the highest quantity of porcelain.

6.12 Discussion

Similar to the glass findings, refuse pits associated with particular buildings yielded the majority of ceramic, which helped to ascertain and substantiate the spatial organisation of the camp, and provide information with regard to the expression of domestic space. The ceramic objects provided rich material for eliciting insights into specific domestic activities and the identities of the individuals who used them. The nature of artefact assemblages at NMP sites reflects ongoing financial constraints imposed upon the NMP, thus much of the assemblage incorporates modest nineteenth century ceramic. Two decorative designs adorning tableware objects, the blue cable transfer print and the hand painted blue band and line design common to Boralga, were also decorated tableware items recovered from NMP camps located at Boulia, Mistake Creek and Eyre's Creek in Queensland, indicating that they may have been cheap, common earthenwares routinely issued to NMP camps. However, it has also been noted by Casey (2005:102), that banded whiteware and the cable design is commonly found at many historical sites around Sydney, and as such, appears to have been a very popular design among many households.

Aspects of the results were analogous to glass outcomes, with the greatest diversity of objects derived from the refuse pit nearest the officers' quarters at Trench 4, with items such as a child's porcelain tea set, tureens, teapots and porcelain tea cups, porcelain tableware and an ink bottle, indicating that a higher rank of individual and his family used these objects. This higher standard of ceramic was almost paralleled by the refuse pit at Trench 16, or the suspected 'constables' quarters', with porcelain egg cups, a jug, mixing bowl, serving platter, porcelain doll, porcelain tableware and embossed earthenware, which denoted a degree of status (Quirk 2007:38).

Despite European material culture being a marker of difference, as well as a necessary accompaniment for imposing European standards on Aboriginal peoples, the ceramic artefact densities at Trench 7 or the Troopers' huts area was relatively low. A small number of dinner plate and saucer fragments, a crock/demijohn, cup, ointment pot, insulator and the face of a Chinese figurine were some of the scarce ceramic objects derived from this area. A small quantity of porcelain was present which was from the rim of one saucer and an insulator. A chamber pot was also recovered, indicating further adherence to European domestic expectations. Of interest was the large quantity of clay tobacco pipes derived from Trench 7. Tobacco was a common, socially sanctioned narcotic and often a ration item for NMP troopers. The habit-forming substance had the potential to insure continued dependency, therefore troopers or any marginalised Aboriginal populations such as labourers, who were often paid in rations rather than money, would have to rely upon their employers to satisfy their habit (Gojak & Stuart 1999:42). This gave employers a strong measure of control and helped to ensure that their employees or charges did not abscond (Gojak & Stuart 1999:42). Table 6.3 supports this notion, and shows that 172.8 g of clay pipe fragments came from Trench 7 or the Troopers' huts area, representing 79% of the overall clay pipe assemblage at Boralga.

Chapter 7 – Fauna

7.1 Introduction

The quantity of faunal remains derived from Boralga was relatively low but diverse in species, with six trenches yielding bone from both native and domestic taxa. Food rations were an important lifeline at NMP camps, but the cost of rations was an ongoing problem for the government, who had to relentlessly justify the existence of the NMP force to the taxpayer. The threat of abandoning food

ration contracts altogether was constant unless suppliers could keep prices low (Richards 2008:128). Therefore rations were a contentious issue, particularly when food rationing extended beyond the Aboriginal troopers to their families, who occasionally resided at the camp. The presence of Aboriginal women at NMP camps is documented in primary sources, such as the 1899 ration cash book for the Cooktown NMP which lists the names of Aboriginal troopers and their partners residing at the Cooktown (Eight Mile) camp at various times. Figure 2.7 in section 2.10 shows a photograph of Aboriginal women and children also living with troopers at the Boralga NMP camp.

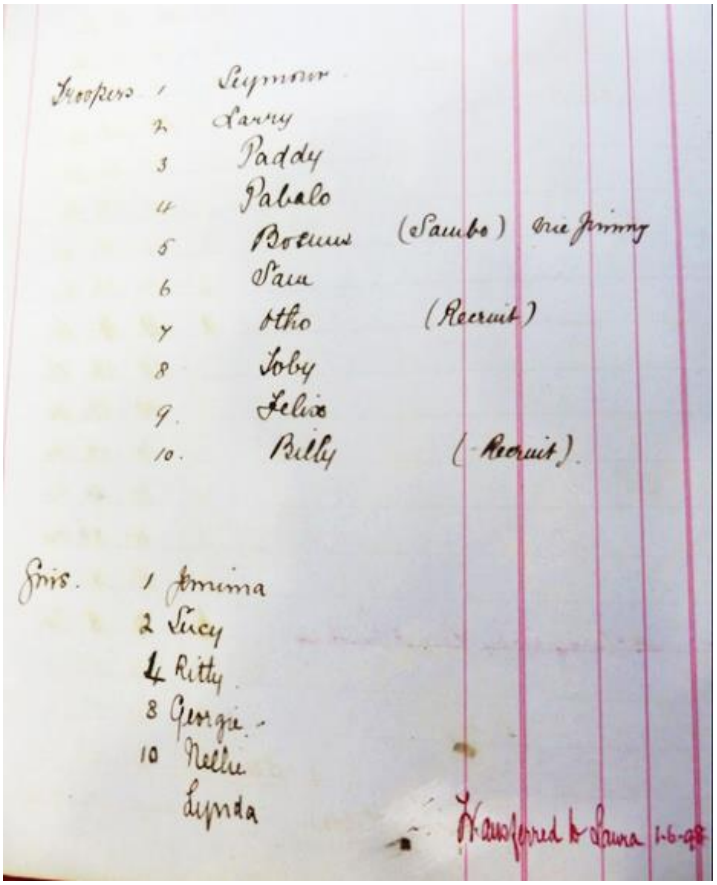


Figure 7. 1 Page from the 1899 ration cash book listing the names of Aboriginal troopers and their partners (Photographs Heather Burke 2016)

Financial constraints placed upon the NMP by the government meant that self-provisioning most likely took place within the majority of NMP camps. Historical documents show that in the 1880s, the standard daily ration for an Aboriginal police trooper was around 1 lb of flour, 4 oz. sugar, 1 oz. tea, 1 oz. tobacco, and 1 oz of soap (*Port Douglas Chronicle 1889*). In addition, meat was also provided which could have been salted beef in a barrel, or most likely fresh meat supplied by pastoralists. Appendix 11 contains a comparison of rations and supplies with other regions. In 1856, Charles Archer stated, before the Select Committee Inquiry into the NMP had taken place, that the majority of Native Police had women who spent much of their time hunting for the troopers and themselves (Skinner 1978:207-208). The contribution of these women to the successful running of NMP camps was undeniable, as expressed in a letter written in 1866 by an officer stationed at the Norman River NMP camp:

> I have the honor to request that this Detachment may be allowed continuous rations for gins. There is no hunting ground for them now that the surrounding country is all occupied by stock. The ration allowed for troopers is inadequate for themselves and gins. I must draw your attention to the fact that this is the only station in the district that has not been allowed continuous rations for gins. The wood and water has to be carried by them some considerable distance and they are constantly employed in keeping up a supply of each (QSA Item ID 290324 Administrative file, police. Police Stations – Norman River)

By identifying the principal taxa, the bone analysis explores the prospect of insufficient food rationing, and the nature of 'supplementary' self-provisioning within the camp.

7.2 Overall faunal analysis, Boralga NMP site

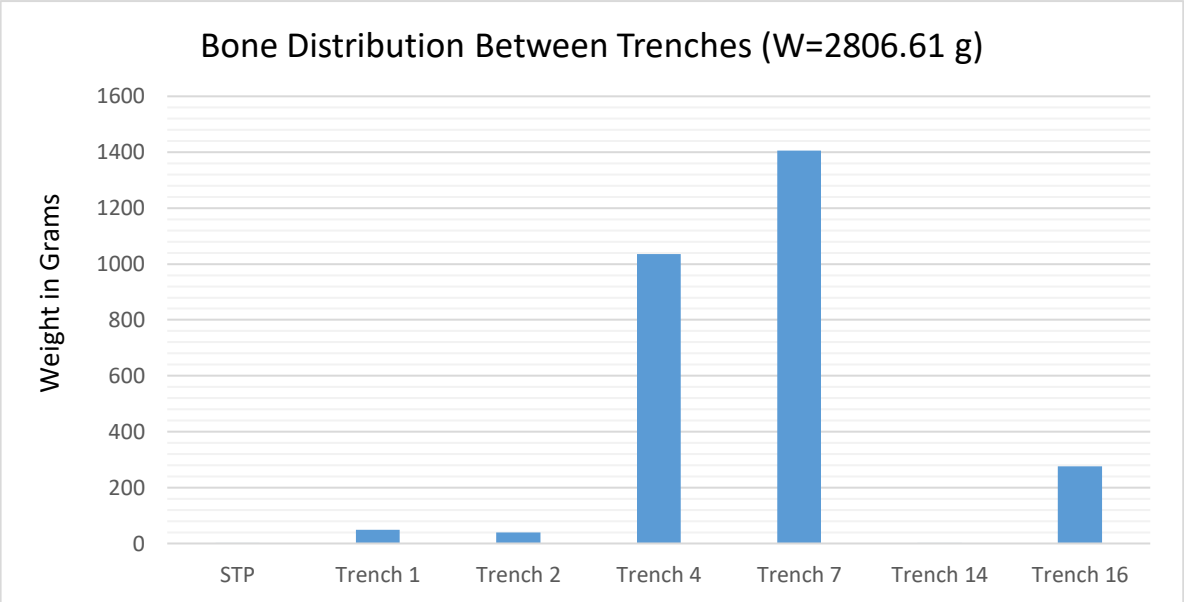


Figure 7. 2 Overall distribution of bone, all trenches

7.2.1 Overall distribution of bone between trenches

Figure 7.2 shows that 2806.61 g of bone was recovered from the site. Trench 7 dominated the assemblage with 1405.51 g (50%). Second in abundance was Trench 4 (w=1035.9 g, 37%), followed by Trench 16 (w=275.6 g, 10%). Bone densities were reduced at the remaining trenches, which contained less than 5% of the overall assemblage, and are listed in order of abundance: Trench 1 (w=49.1 g, 2%); Trench 2 (w=39 g, 1%); STP (w=0.9 g,<1%); and Trench 14 (w=0.6 g, <1%). Of the 20 trenches excavated at Boralga, only six trenches and one shovel test pit (STP) contained bone. As expected, the refuse areas contained the highest quantity.

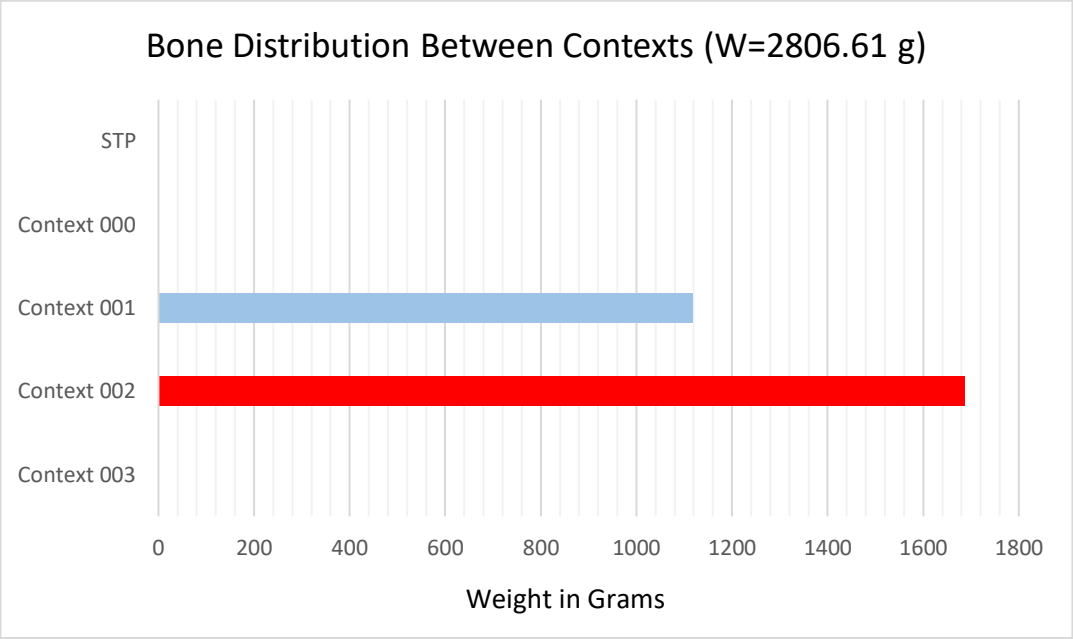


Figure 7. 3 Distribution of bone between contexts, all trenches

7.2.2 Overall distribution between contexts

Figure 7.3 shows that a small quantity of bone was derived from an STP (0.9 g, <1%), and no bone was found at Context 000 or the surface layer. Bone artefact densities increased at Context 001 (1118.11 g, 41%), with a further increase at Context 002 (w=1687.4 g, 60%), which contained the maximum quantity. Context 003 had the fewest, with 0.2 g or <1%. Figure 7.4 shows an example of bone recovered from Context 001.

Figure 7. 4 Possum mandible from Trench 7, Square 3, Context 001
(Photograph Bateman 2018)

7.2.3 Bone weight and frequency

Table 7. 1 Bone weight and frequency per trench, square and context

Trench	Square	STP	Context 001	Context 002	Context 003	Total weight (g)	Relative proportion by weight (%)
1	1	0	0	5.8	0.2	6	<1
1	5	0	0	43.1	0	43.1	2
2	1	0	0	38.9	0	38.9	1
2	3	0	0	0.1	0	0.1	<1
4	1	0	0	65.9	0	65.9	2
4	2	0	0	3.8	0	3.8	<1
4	3	0	0	33.2	0	33.2	1
4	8	0	0	439.7	0	439.7	16
4	9	0	0.2	207.8	0	208	7
4	10	0	285.3	0	0	285.3	10
7	1	0	7.7	6.2	0	13.9	<1
7	2	0	16.5	0.9	0	17.4	<1
7	3	0	352.6	19.8	0	372.4	13
7	5	0	440.61	0	0	440.61	16
7	7	0	15.2	0	0	15.2	<1
7	9	0	0	0.5	0	0.5	<1
7	10	0	0	98	0	98	3
7	11	0	0	25	0	25	<1
7	12	0	0	369.3	0	369.3	13
7	14	0	0	52.8	0	52.8	2
7	18	0	0	0.4	0	0.4	<1
14	1	0	0	0.6	0	0.6	<1
16	1	0	0	6.9	0	6.9	<1
16	2	0	0	74	0	74	3
16	3	0	0	23.6	0	23.6	<1
16	5	0	0	69.3	0	69.3	2

16	6	0	0	73.1	0	73.1	3
16	7	0	0	28.7	0	28.7	1
-	-	0.9	0	0	0	0.9	<1
Total		**0.9**	**1118.11**	**1687.4**	**0.2**	**2806.61**	**100**

Table 7.1 shows that Trench 7, Square 5, Context 001 dominated the assemblage (w=440.61 g, 16%), and Trench 2, Square 3, Context 002 had the minimum weight (w=0.1, <1%). For overall faunal data of bone weight per trench, square, context, class and taxon, see Appendix 10.

Figure 7. 5 Quantity of unidentified bone fragments from Trench 7, Square 5, Context 001 (Photograph Bateman 2018)

7.2.4 Bone class

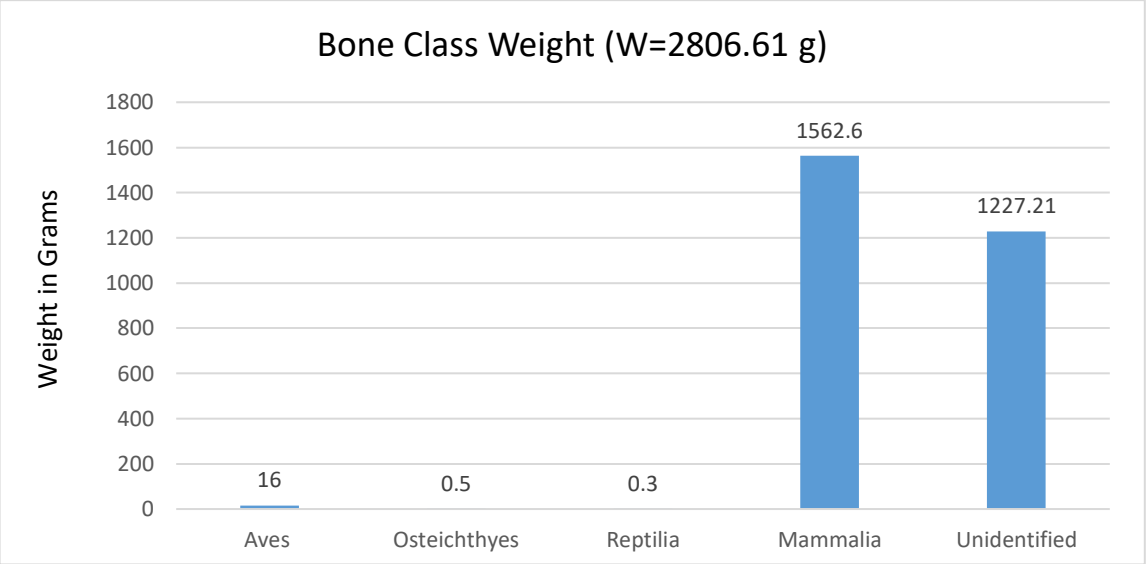


Figure 7. 6 Bone class weight, all trenches

Figure 7.6 shows that the mammalia class represented the majority (1562.6 g, 56%), followed by unidentified bone (1227.21 g, 44%), then aves (16 g, <1%), osteichthyes (0.5 g, <1%), and reptilia (0.3 g or <1%). Figure 7.7 shows that the maximum count was incongruent to weight, with unidentified bone representing the highest number (n=145, 51%), followed by mammalia (n=121, 42%), then aves (12=, 4%), osteichthyes (n=6, 2%) and reptilia (n=2, <1%). This contrast can be explained by the highly fragmented nature of the unidentified bone.

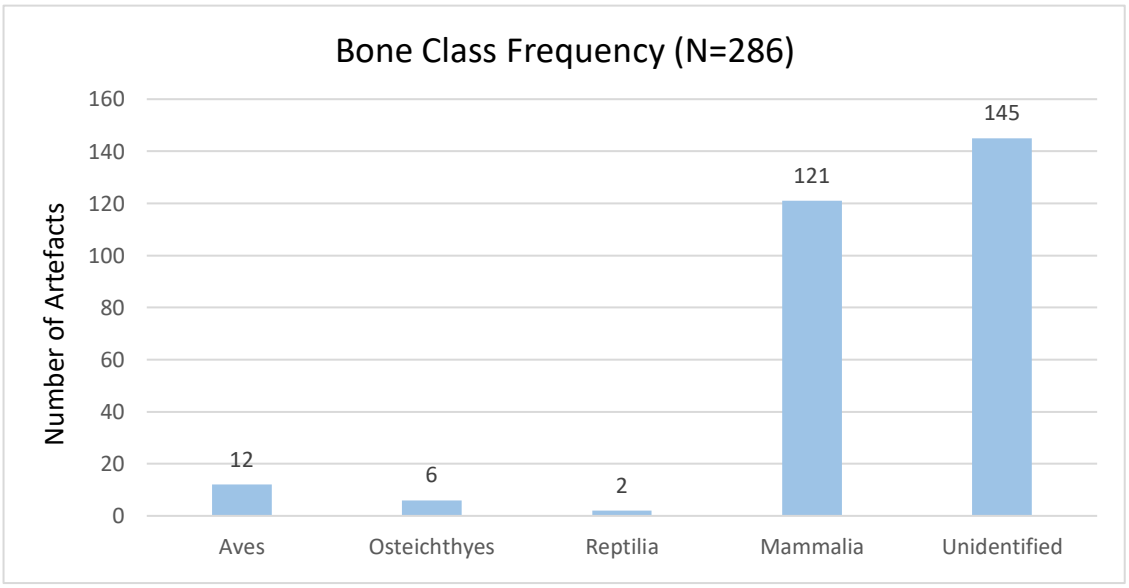


Figure 7. 7 Bone class frequency (NISP), all trenches

7.2.5 Bone taxon

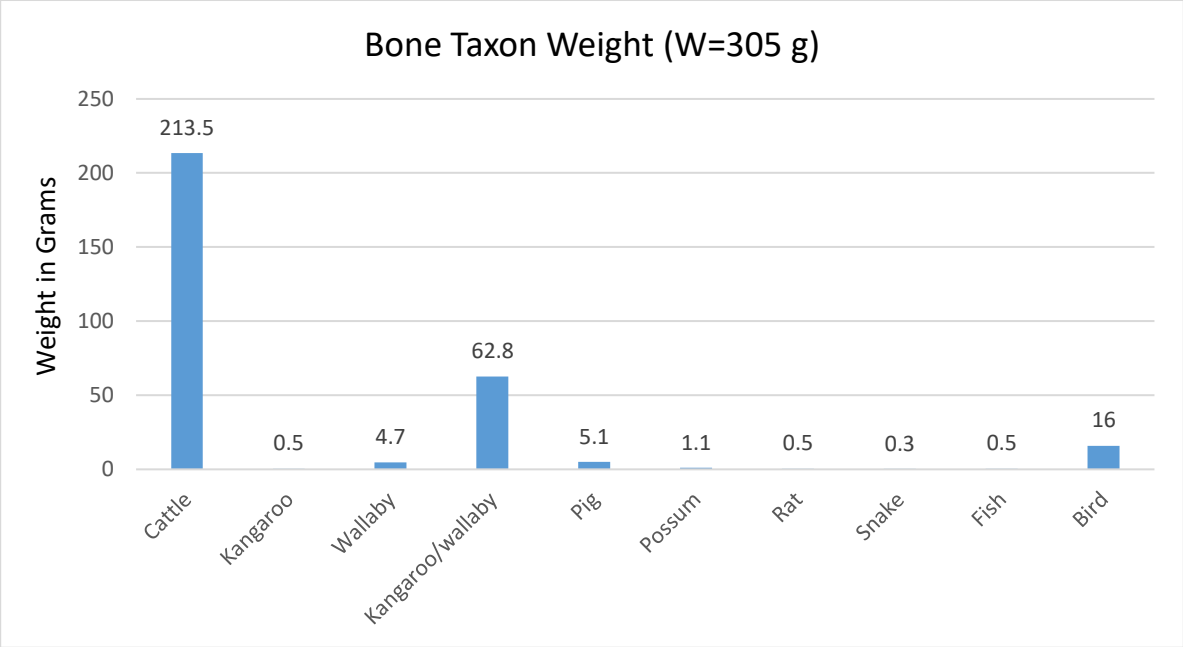


Figure 7. 8 Identified bone taxon weight, all trenches

Figure 7.8 excludes bone that could not be identified for taxon (w=2501.61 g). Overall, 10 principal taxa were identified (w=305 g), which included two domestic taxa, cattle and pig, as well as native fauna, which consisted of mainly marsupial species. Cattle bone dominated the assemblage (213.5 g, 74%), followed by kangaroo/wallaby (62.8 g, 22%), birds (w=16 g, %), pig (5.1 g, 2%), wallaby (4.7 g, 2%), and possum (1.1 g, <1%). Kangaroo, rat and fish were equivalent, with 0.5 g (<1%) each, and snake had the fewest remains (0.3 g, <1). A total of 71% of identifiable taxa was domestic and 29% was native.

Figure 7. 9 Two snake vertabra from Trench 7
(Photograph Bateman 2018)

7.2.6 Bone element, NISP and MNI

Table 7. 2 NISP and MNI, all trenches

Taxon	Element	Tr 4	Tr 7	Tr 14	Tr 16	NISP	MNI
Cattle	ulna	1				1	
	radius	1				1	
	Limb unidentified	3	1			4	
	Total	**5**	**1**			**6**	**2**
Kangaroo	Teeth		1			1	
	Total		**1**			**1**	**1**
Wallaby	Tibia	1				1	
	Radius		1			1	
	Mandible		1			1	
	Teeth		2			2	
	Total	**1**	**4**			**5**	**2**
Kangaroo/ Wallaby	Radius	1	1			2	
	Ulna	2				2	
	Humerus	1	1			2	
	Limb unidentified		3			3	
	Mandible		2			2	
	Teeth		1			1	
	Total	**4**	**8**			**12**	**2**
Pig	Teeth				1	1	
	Total				**1**	**1**	**1**
Possum	Mandible		1			1	
	Total		**1**			**1**	**1**
Bush Rat	Mandible		1			1	
	Total		**1**			**1**	**1**
Snake	Vertebra		2			2	

	Total		**2**			**2**	**1**
Fish	Vertebra		2			2	
	Dorsal spike		2			2	
	Total		**4**			**4**	**1**
Bird	Limb unidentified	2	4		1	7	
	Femur	2		1		3	
	Humerus	1				1	
	Total	**5**	**4**	**1**	**1**	**11**	**5**
	Overall totals	**15**	**25**	**1**	**2**	**44**	**17**

No bone identifiable to a taxon level was recovered from Trenches 1 and 2, or the STPs. Table 7.2 shows that the NISP for taxon was 44, and the MNI was 17. Birds had the highest MNI (n=5, 29%), followed by cattle, wallabies and kangaroo/wallabies, which were equivalent (MNI=2, 12%). The remaining taxa were kangaroo, possum, pig, rat, snake and fish (MNI=1, 6% each). The most common element was unidentified limb fragments (n=13). Table 7.1 shows that kangaroo/wallaby fragments represented the highest number or NISP (n=12, 27%), followed by bird (n=11, 25%), cattle (n=6, 14%), then wallaby (n=5, 11%) and snake (n=2, 4%). Kangaroo, pig, possum, rat and fish had the minimum, with one (2%) each. Overall, the presence of bone at the site was relatively low.

7.2.7 Length and weight

Table 7. 3 Bone length and weight summary, all trenches

Length and Weight	STP	Trench 1	Trench 2	Trench 4	Trench 7	Trench 14	Trench 16
Weight	0.9	49.1	39	1035.9	1405.51	0.6	275.6
Mean weight g	0.9	7.01	19.5	12.79	9.19	0.6	7.66
Mean Bone length mm	16.87	19.01	30.99	32.88	26.60	23.54	37.82
Relative proportion by weight (%)	<1	2	1	37	50	<1	10

7.2.8 Age by class or taxon

Table 7. 4 Age frequency, all trenches

Class	Taxon	Body part	Age	Trench 4	Trench 7	Trench 16	NISP
Mammalia	Kangaroo/ wallaby	Mandible (Teeth)	Worn		1 mandible (4 teeth)		1
Mammalia	Wallaby	Teeth	Worn		2		2
Aves	Bird	Femur	Fused		1		1
Mammalia	Unidentified	Humerus	Fused		1		1
Mammalia	Unidentified	Humerus	Fused		1		1
Mammalia	Wallaby	Radius	Unfused		1		1
Mammalia	Unidentified	Limb (unidentified)	Unfused	1			1
Mammalia	Unidentified	Limb (unidentified)	Unfused	1			1
Mammalia	Unidentified	Unidentified	Unfused			1	1
Mammalia	Unidentified	Limb (unidentified)	Unfused		1		1
Mammalia	Unidentified	Limb (unidentified)	Unfused			1	1
Total				**2**	**8**	**2**	**12**

Table 7.4 shows that bone identifiable by age indicators was equivalent in number for both adult and juvenile animals. Six age profiles were represented by juvenile mammals with unfused epiphyses (50%). This included five mammals not identifiable to a taxon level, and one wallaby. Six adult animals were indicated by two worn wallaby teeth, and one wallaby/kangaroo mandible, which contained four worn teeth (n=3, 25%). Further evidence of mature animals was indicated by the fused epiphyses of a bird femur and two fused humeri belonging to unidentified mammals (n=3, 25%).

7.2.9 Modification

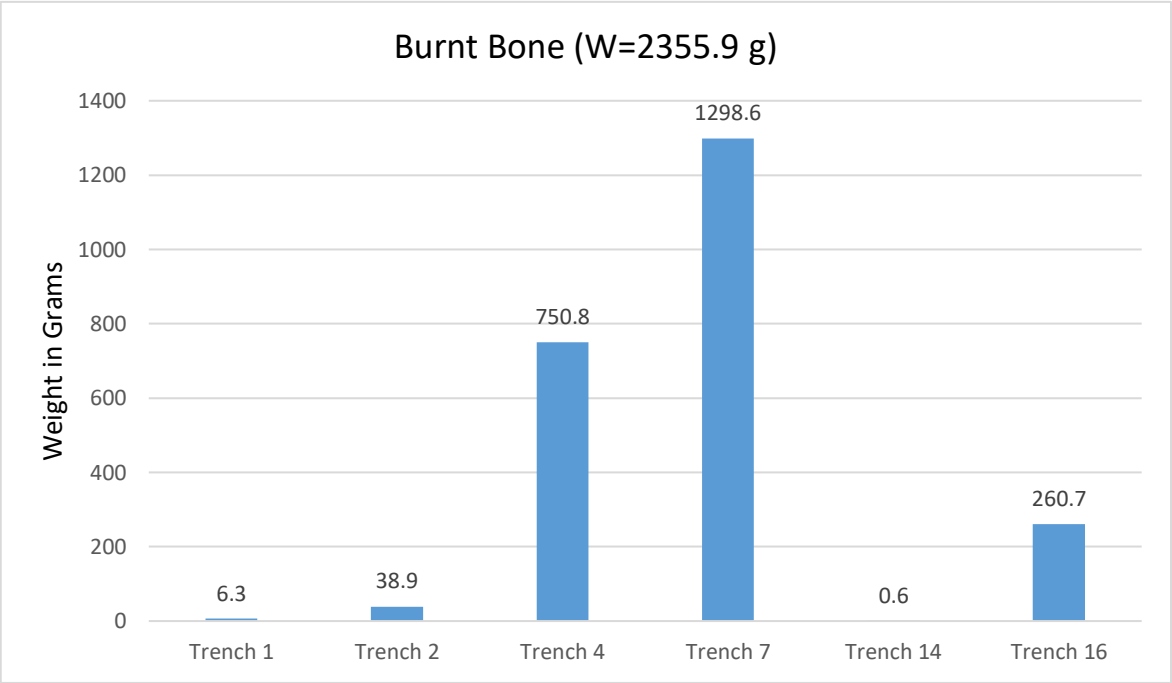


Figure 7. 10 Burnt bone, all trenches

Figure 7.10 shows that Trench 7 contained the majority of burnt bone (w=1298.6 g, 55%). Second in abundance was Trench 4 (w=750.8 g, 32%), followed by Trench 16 (w=260.7 g, 11%), then Trench 2 (w=38.9 g, 2%). Burnt bone from Trench 1 (w=6.3 g) and Trench 14 (w=0.6 g) comprised <1% each of the assemblage. Of the 2355.9 g of burnt bone recovered from the site, 749.1 g (32%) was calcined, most of which came from Trench 7 (w=476.5 g, 20%). Trench 4 was next (w=248.5 g, 11%), then Trench 16 (w=23.2 g, <1%). Trench 1 contained the lowest quantity (w=0.9 g, <1%), and Trenches 2 and 14 contained no calcined bone. Figure 7.11 shows the distribution of calcined bone within trenches, and Figure 7.12 demonstrates the proportion. The only other form of modification was seven grams of bone which had evidence of being cut rather than broken. Trench 4 had three cut bones (w=4.4 g, <1%) and Trench 7 contained five (w=2.6 g, <1%). Appendix 10 contains a full summary of bone modification by trench, square and context.

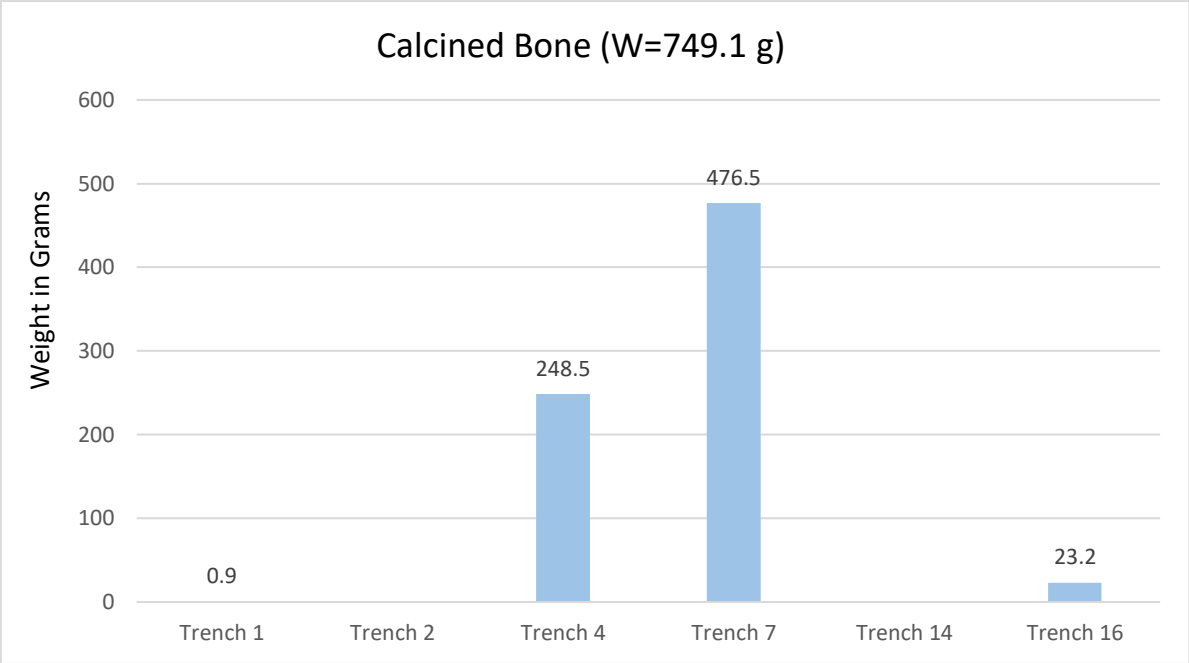


Figure 7. 11 Calcined bone, all trenches

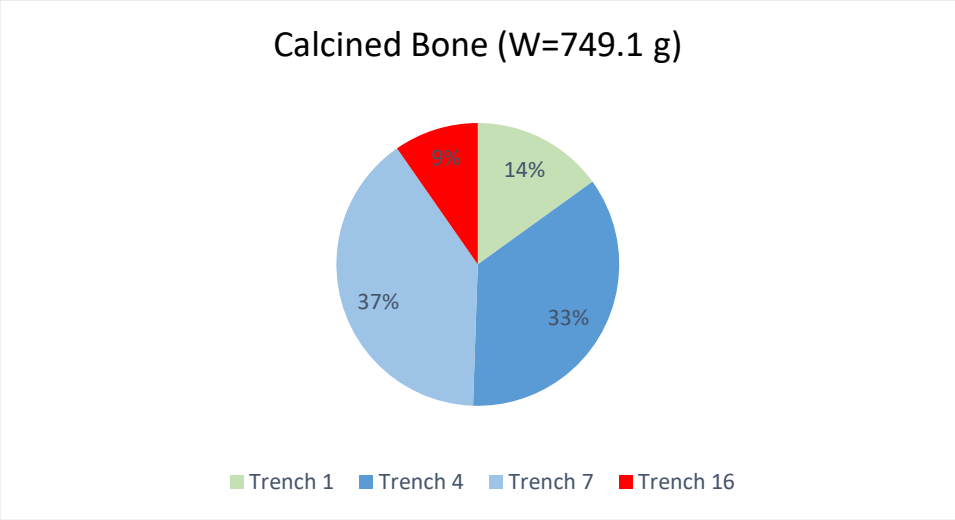


Figure 7. 12 Proportion of calcined bone, within trenches

7.2.10 Shell

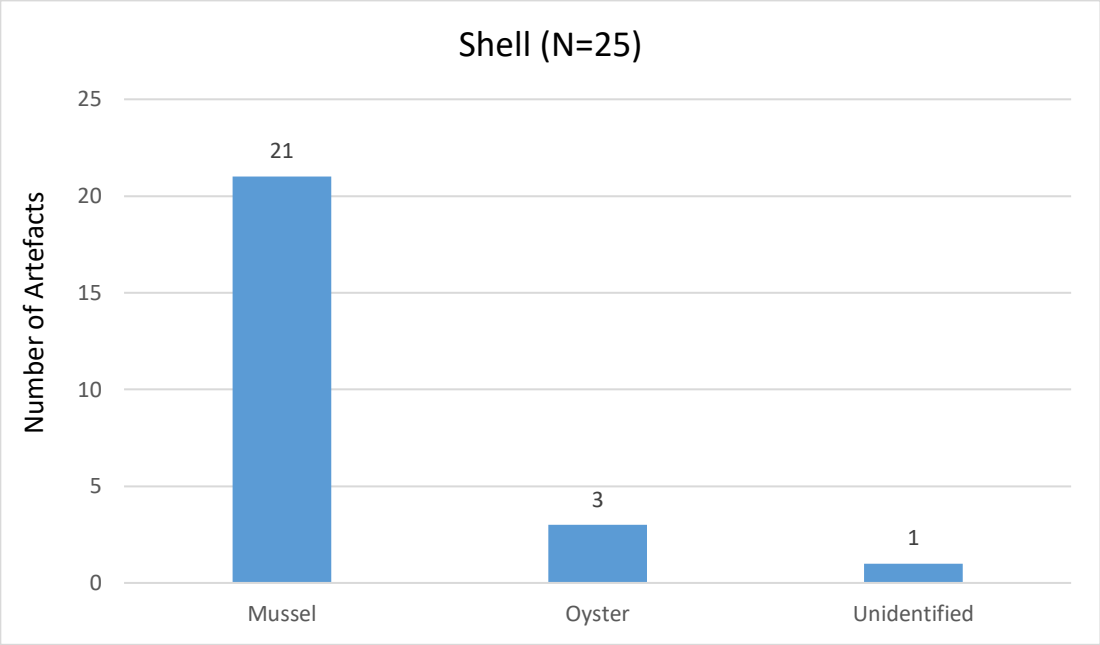


Figure 7. 13 Shell NISP, all trenches

All shells were bivalves, with one unidentified shell being an umbo portion that was too small to identify to species. Figure 7.13 shows that mussel shell fragments dominated the assemblage (n=21, 84%) or 6.5 g (53%), which consisted of two separate groups of fragmented shell from Trench 7, (n=11 calcined; w=1.5 g,) and Trench 4 (n=10; w=5.0 g). Next was oyster shell from Trench 4 (n=3, 12%) or 5.0 g (41%), then unidentified (n=1, 4%) or 0.8 g (7%). The MNI for mussel shell was two, oyster shell was one, and unidentified shell was one. This gave an overall MNI of four bivalves.

Figure 7. 14 Calcined mussel shell fragments from Trench 7 (Photograph Bateman 2018)

7.3 Results

A total of 2818.91 g of faunal remains (2806.61 g of bone and 12.3 g of shell) was recovered from subsurface contexts within Trenches 1, 2, 4, 7, 14 and16. A small quantity of bone was also found in a shovel test pit (w=0.9 g). The MNI was 17 (increasing to 21 when shell is counted), with the majority of identifiable fauna being birds (MNI=5). Context 002 comprised the most bone and Context 003 contained the least. Mammal bone represented the majority by weight (1579.4 g, 66%), with cattle being the heaviest, closely followed by kangaroo/wallaby. Most of the bone identifiable to class was not identifiable to a taxon level. A total of 71% of identifiable taxa was domestic, and 29% was native, with the most common bone element coming from the appendicular skeleton (forelimb, hindlimb fragments), which are typically of lower economic utility. Bone identifiable by age indicators was equivalent in number for both juvenile and adult animals, which demonstrates no particular preference for the maturity of the animal. A total of 2362.9 g of bone was modified, including 2355.9 g of bone which was burnt (84% of the entire bone assemblage), with 749.1 g (32%) being calcined. A very small quantity of bone was cut through transversely (w=7 g, <1%). Overall Trench 7 dominated for bone weight (w=1405.51 g), with native fauna within this trench (mostly marsupials) representing most of the identifiable taxa (63.5 g, 5%). Only 8.4 g (<1%) of domestic taxa (cattle bone) was identified from Trench 7.

7.4 Discussion

The presence of faunal remains was relatively low, considering beef (either barrelled or obtained fresh from pastoralists) was regularly included in the NMP diet. The reason for this could be that barrelled beef may not have contained bone, and beef obtained from pastoralists was usually salted and boned before purchase. The following account was imparted by Binnie who grew up on the Palmer goldfields in the 1870s – 1880s, and explains the processes undertaken before selling beef:

> Although the bullock was only killed at daybreak, most of the carcass was cut up, boned, and sold by midday on Sunday, the balance being salted for customers unable to take delivery on Sunday. Beef was our cheapest commodity; fat cattle were very cheap. Any cut of beef was often sold at threepence per lb. without the bone (Binnie 1944:28)

As expected, the majority of bone was recovered from the primary refuse pits, Trenches 4, 7, and 16. A small quantity was derived from Trench 1, which was located on the edge of an area overlooking the lagoon not far from the troopers' huts. This area had several metal detector hits, but contained very little archaeological material. Trench 2 was located partly inside and outside of a structure believed to be a trooper's hut, with the aim of capturing activities in both sections, but similar to Trench 1, Trench 2 only a small quantity of faunal material. Trench 14 was located in the centre of a mound associated with a shed, which contained the least amount of bone overall. A large proportion of the bone assemblage had evidence of burning and calcining (indicating prolonged high temperatures). One explanation is that the majority of bone was recovered from primary domestic refuse areas where the pits were most likely lit to incinerate waste, or ignited naturally during bushfires. As a result, this repeated burning process has made specific bone modifications such as boiling or cooking, difficult to discern.

The fact that the majority of bone was not well preserved also made positive identification beyond the Class level problematic. Nevertheless, several native fauna could be identified from various limb bones, vertebra, mandibles, and teeth, belonging to macropods, a possum, which was most likely the common brush tail possum (*Trichosurus vulpecular*), a bush rat, which was most likely *Rattus fuscipes*, a snake, and various limb bones belonging to birds. In addition, several small fish bones were recovered, along with freshwater mussel shells, which most likely came from the nearby lagoon. The diversity of fauna present showed that, even though Aboriginal occupants were provided with rationed food, including beef, a portion of their diet consisted of traditional food hunted and gathered for their own consumption. Although agency and the decision to uphold cultural practice should be considered, evidence also supports the hypothesis that Aboriginal troopers and women were self-provisioning in order to survive when rationing at the camp was insufficient (for further discussion see Chapter 13)

Chapter 8 – Metal

8.1 Introduction

Metal artefacts at Boralga were abundant and derived from both the surface and subsurface contexts. Some of the objects recovered from the troopers' huts area were clearly modified, although their intended purpose after modification was not always clear. Harrison (2002) believes that Aboriginal

people often modified metal tools, and in doing so, they neither attempted to mimic western colonialisation, nor pander to it. Harrison (2002:67) states that "these objects were specifically manufactured by and for Aboriginal people in forms which are either a clear post-contact technological development, or in a more traditional 'form', but to meet post-contact need". Other than the modified objects, the majority of metal items were used for the construction of buildings, such as structural fasteners (nails) and wire, which is not surprising given the longevity of the camp, and the evolution of construction and dismantling of living quarters over a period of almost twenty years.

8.2 Overall metal analysis, Boralga NMP site

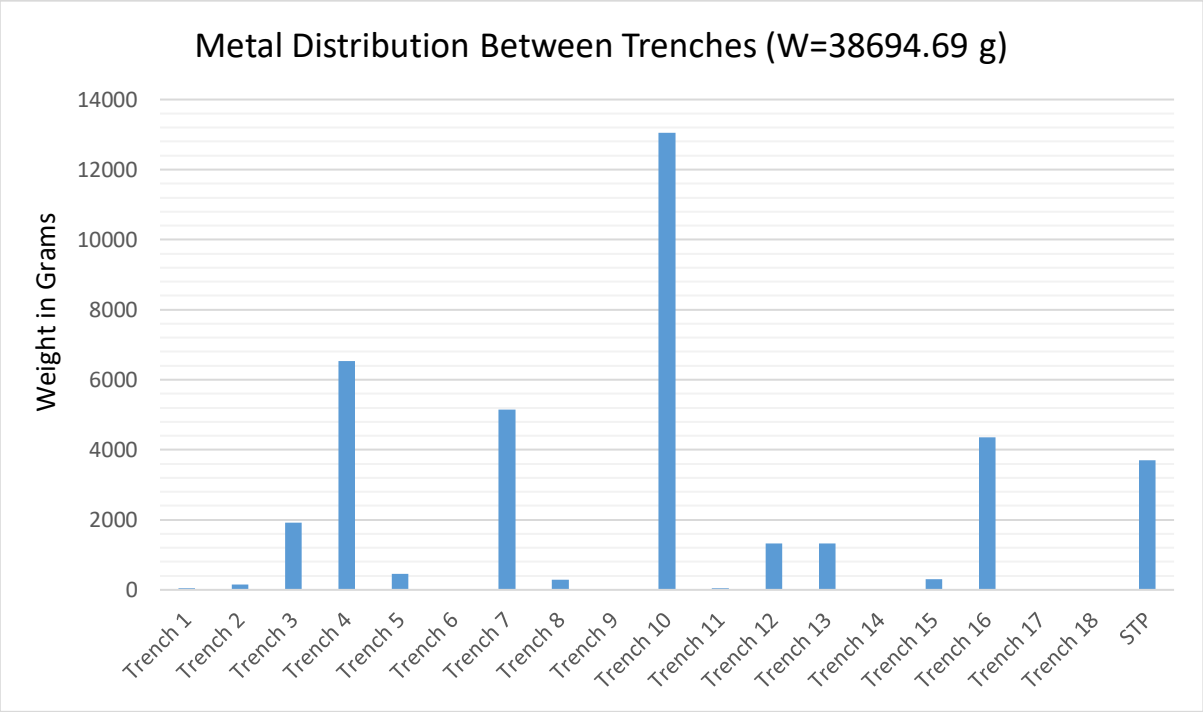


Figure 8. 1 Overall distribution of metal, all trenches

8.2.1 Overall distribution of metal between trenches

Figure 8.1 shows that Trench 10, located in what was interpreted as the blacksmith's/farrier's area, dominated the overall assemblage (w=13045.96 g, 34%). Second in abundance was Trench 4 (w=6539.1 g, 17%), which was a primary refuse area. The third highest weight was in Trench 7 (w=5152.83 g, 13%), associated with the troopers' huts, followed by Trench 16 (w=4352.9 g, 11%), the STP (w=3701.2, 10%), and Trench 3 (w=1919, 5%). The remaining trenches each contained less

than 5% of the overall assemblage and are in order of abundance: Trench 12 (w=1325.8, 3%); Trench 13 (w=1323.2 g, 3%); Trench 5 (w=449.6 g, 1%); Trench 15 (w=312 g, <1%); Trench 8 (w=286.4 g, <1%); Trench 2 (w=148.3 g, <1%); Trench 1 (w=40.7 g, <1%); Trench 11 (w=39.8 g, <1%); Trench 14 (w=21.2 g, <1%); Trench 17 (w=18.6 g, <1%); Trench 18 (w=10.8 g, <1%), Trench 6 (w=5.9 g, <1%) and Trench 9 (w=1.4, <1%). Trenches 19 and 20 contained no metal.

8.2.2 Overall distribution between contexts

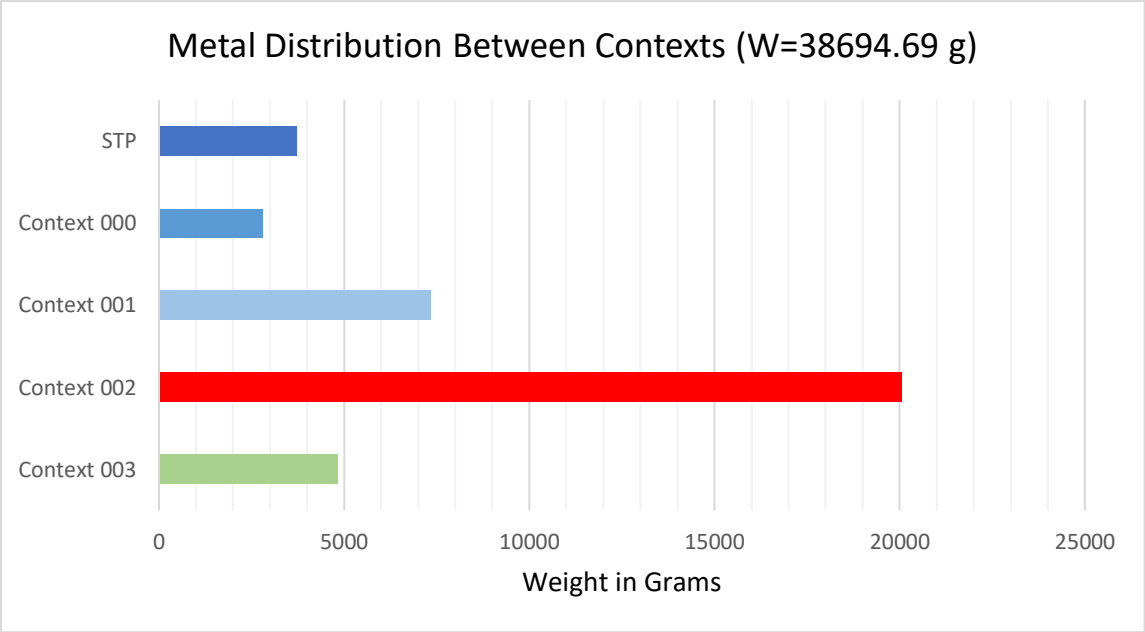


Figure 8. 2 Distribution of metal between contexts, all trenches

Context 002 dominated (w=20042.1 g, 52%), followed by Context 001 (w=7322.13 g, 19%), then Context 003 (w=4826.16 g, 12%). Shovel test pits contained 3701.2 g (10%), and Context 000 or surface finds constituted only 2803.1 g (7%). Figure 8.2 shows the high-density layer of metal artefacts derived from Context 002, which demonstrates the major occupation phase belonging to the NMP camp.

8.2.3 Metal Type

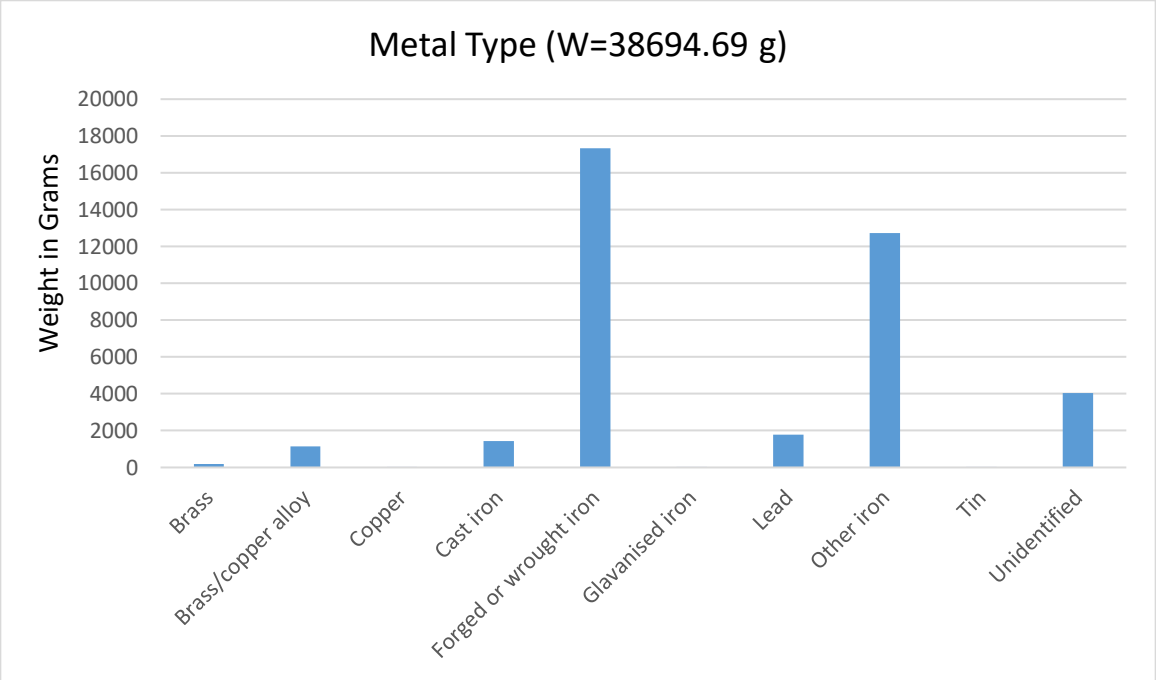


Figure 8. 3 Quantity of metal type, all trenches

Figure 8.3 shows that 10 metal types were identified, with the majority by weight represented by forged or wrought iron (w=17332.76 g, 45%), followed by other iron, which included items such as flat iron and wire (w=12727.13 g, 33%), then unidentified metal (w=4036.4 g, 10%), and lead (w=1767.7 g, 5%), including 715 g that had been melted. The remaining metal types each comprised less than 5% of the overall assemblage and are in order of abundance: Cast iron (w=1439.1 g, 4%); brass/copper alloy (w=1151.1 g, 3%); brass (w=183 g, <1%); copper (w=26.6 g, <1%); tin (w=20.6 g, <1%); and galvanised iron comprised the minimum (w=10.3 g, <1%).

Figure 8. 4 Middle portion of a tin whistle, Trench 7, Square 12, Context 002 (Photograph Bateman 2018)

8.2.4 MNI Identifiable metal objects

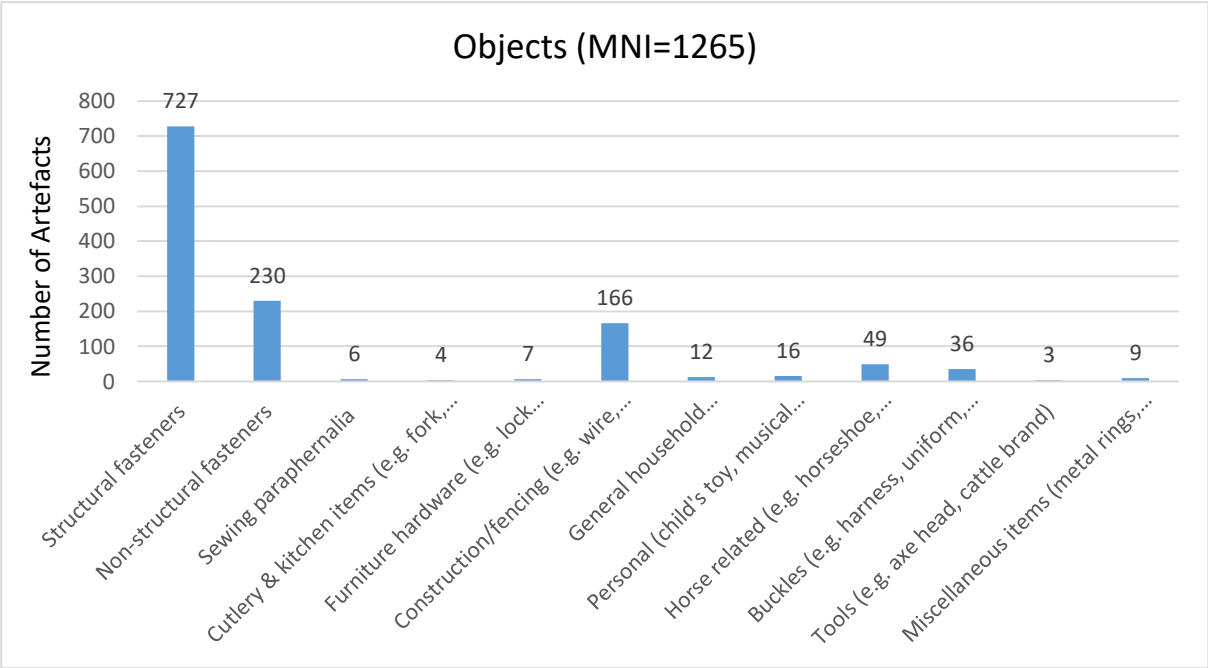


Figure 8. 5 MNI identifieable metal objects, all trenches

Figure 8.5 shows that twelve general object types could be identified, with structural fasteners representing the majority of items, which mostly consisted of nails (n=727, 57%). These were followed by non-structural fasteners (n=230, 18%), then construction and fencing (other than nails), such as wire and hinges (n=166, 13%). The remaining items constituted less than 5% and are listed in order of abundance: horse related items such as horseshoes, bits and hoof rasps (n=49, 4%); buckles, including both harness and uniform (n=36, 3%); personal items, such as children's toys and musical instruments (n=16, 1%); general household accessories and containers, such as kerosene lamps and wax vestas boxes (n=11, <1%); miscellaneous items (n=9, <1%); furniture hardware, such as lock plates and brass hinges (n=7, <1%); sewing paraphernalia (n=6, <1%); cutlery and kitchen items (n=4, <1%); and tools (n=2, <1%). See Appendix 14 for a full summary of metal items recovered.

8.2.5 Completeness

The majority of metal fragments that represented 0-50% of a complete object numbered 523. Objects that were 51-95% complete numbered 216, and 431 objects were 96-100% complete (some nails

were grouped in this category). Highly corroded nails and spikes (some only 0-50% complete) were still counted as one for the MNI if the head or point was present.

Figure 8. 6 Bootlace hooks from Trench 4, Square 10, Context 001 (Photograph Bateman 2018)

Figure 8. 7 British military style snake (or swan) belt buckle from Trench 7, Square 7, Context 001 (Photograph Bateman 2018)

Figure 8. 8 Thimble from Trench 7, Square 1, Context 001 (Photograph Bateman 2018)

8.2.6 Object modification

Table 8. 1 Object modification

Trench	Context	Number	Object	Modification
	000	1	Wire	Billy hook
4	001	1	Spike	Loop
	002	20	Possibly lead headed nails or lead sheeting	Melted lead
5	002	2	Possibly lead headed nails or lead sheeting	Melted lead
7	001	22	Possibly lead headed nails or lead sheeting	Melted lead
	001	5	Wire/nail	Hook
	001	1	Wire	Loop
	001	1	Nail	Twisted loop
	001	2	Nail	Bent S shape
	001	1	Wire	Billy hook
	001	1	Wire	Twisted into a cable then made into a loop
	001	1	Wire/nail	Bent into a U

	001	2	Possibly lead headed nails or lead sheeting	Melted lead
10	002	2	Possibly lead headed nails or lead sheeting	Melted lead
	002	2	Horseshoe	Cut and Straightened possibly intended for a horseshoe spear point
13	002	41	Possibly lead headed nails or lead sheeting	Melted lead
16	001	2	Possibly lead headed nails or lead sheeting	Melted lead
	002	1	Wire	Billy hook
	002	2	Possibly lead headed nails or lead sheeting	Melted lead
	002	1	Nail	Loop
	002	1	Wire	Hook
Total		**112**		

Table 8.1 shows that a total of 112 objects were modified for reuse. Except for the billy hooks, the intended use after modification was not always obvious. A total of 93 modifications related to melted lead, which may have been liquid excess produced during the manufacture of ammunition, such as musket balls, but this is not certain. The melted fragments may also be the result of repeated incineration within the refuse pits where much of the lead was recovered (Trenches 4, 7 and 16). There were various nail and wire modifications from Trench 7 (n=7), with objects evidently intended for an alternative, but unknown purpose.

Figure 8. 9 Six pieces of melted lead from Trench 16, Context 002 (Photograph Bateman 2016)

Figure 8. 10 Billy hook from Context 000 or surface find (Photograph Bateman 2018)

Figure 8. 11 Modified nail from Trench 7, Context 001 (Photogrpah Bateman 2018)

Figure 8. 12 Modified nail from Trench 7, Context 001 (Photograph Bateman 2018)

Figure 8. 13 Wire twisted into a cable and looped
(Photograph Bateman 2018)

Figure 8. 14 One of two straightened horseshoes recovered from Trench 10 (or the blacksmith's/farrier's area), Context 002. Possibly an unfinished spearpoint blank (Phtotograph Bateman 2016)

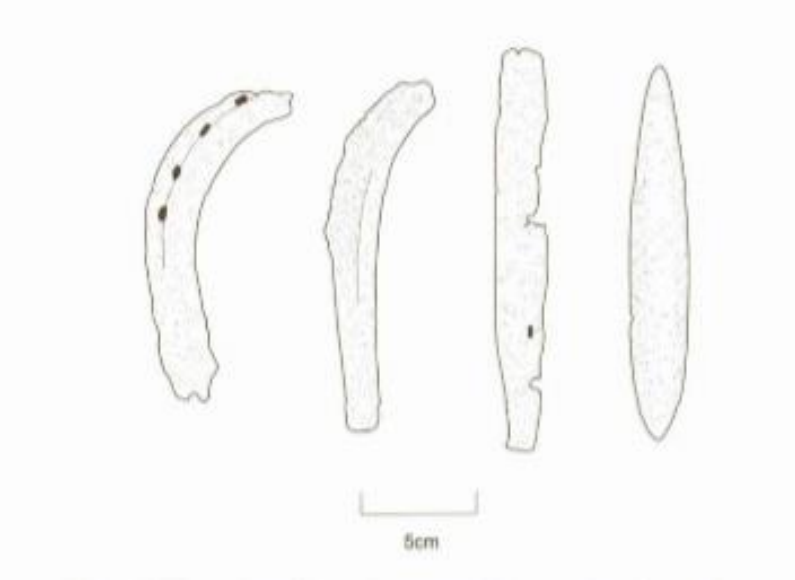


Figure 8. 15 Horseshoe spearpoints in various stages of manufacture from Old Lamboo Station (Harrison 2002:70)

According to Harrison (2002:70), numerous horseshoe spearpoints were recovered from Old Lamboo Station in various stages of manufacture. When the horseshoe wears at the toe and is removed, half of the shoe is beaten and heated to chamfer the edges of the point and close the holes. While beating the edges flat, the bent half-shoe is straightened by applying pressure. These actions are repeated until the horseshoe has been formed into a blank point, which can take several hours.

8.2.7 Horseshoes

Table 8. 2 Summary of horseshoes

Trench	Context	Small 100-300 (g)	Medium 300-400 (g)	Large 400-600 (g)	Worn	Area worn	Possible Function
3	000			439	No		General use
	000	276.4			Yes	Front	Pack horse or pulling load
	000		339.9		Yes	Front	Pack horse or pulling load
Total		**276.4**	**339.0**	**439**			

7	001	255			Yes	Front (off centre)	Pack horse or pulling load
Total		**255**	**0**	**0**	**255**		
10	002		388.6		No		General use
	002			549.5	No		General use
	002		384.8		Yes	Front	Pack horse or pulling load
	002		338.5		Slightly	Front	General use
	002		330.4		Yes	Front (off centre)	Pack horse or pulling load
	002		308.1		No		General use
	002	226.4			Yes	Front (off centre)	Pack horse or pulling load
	002	112.6			Half shoe		Unknown
	002	133			Half shoe		Unknown
	002		333		Slightly	Front	General use
	002	293.4			Slightly	Front	General use
	002			465.6	Slightly	Front	General use
	002	185.4			Yes Half shoe	Front	Pack horse or pulling load
	002	153.6			Cut at front Straightened half shoe		Unknown
	003		303.7		Slightly	Front	General use
	003	270.86			Corroded	Front	Unknown
	003	113			Quarter missing	Front (off centre)	Pack horse or pulling load
	003	286.3			No		Child's pony
	003	153			Straightened half shoe		Unknown
	003		386.8		Slightly	Front	General use
	003		324		Slightly	Front	General use
	003		356.2		Slightly	Front	General use
	003		320.7		Slightly	Front	General use

	003	249.3			Yes	Front	Pack horse or pulling load
	003	160.9			Yes Half shoe	Front	Pack horse or pulling load
	003	299			Yes	Front	Pack horse or pulling load
	003	289.7			Yes	Front	Pack horse or pulling load
	003		389		Yes	Front	Pack horse or pulling load
Total		**2926.46**	**4163.8**	**1015.1**			
16	002	271.4			Yes	Front	Pack horse or pulling load
	002		378.2		Slightly	Front	General use
	002			555.3	Slightly	Front	General use
	002		359.6		No		General use
	002			552	No		General use
Total		**271.4**	**737.8**	**1107.3**			
STP		222.5			Corroded		Unknown
			312.5		Corroded (asymmetrical & may have been made for this horse)		Unknown
Total		**222.5**	**312.5**		**535**		
Overall Total		**3951.76**	**5554**	**2561.4**			

Table 8.2 shows that 37 horseshoes were recovered from the study site, weighing 12067.16 g. The majority came from Trench 10 or the blacksmith/farrier's area (w=8105.36 g, 67%, n=26). Next was Trench 16 (w=2116.5, 18%, n=5), followed by Trench 3 (w=1054.4 g, 9%, n=3), then STP (w=535 g, 4%, n=2), and Trench 7 (w=255 g, 2%, n=1). A total of 14 horseshoes had frontal wear, indicating that they may have been used on pack horses or those pulling loads. The evidence shows that smaller sized horses were preferred as pack animals, with 10 small horseshoes having significant frontal wear (71% of the total horseshoe assemblage). However, one small horseshoe had no wear at all,

therefore may have belonged to a child's pony that was not ridden often, or may have been a recently applied shoe that was thrown. A total of 17 (mostly larger) horseshoes, had only slight wear at the front, and were most likely used for general transportation and patrol horses.

Figure 8. 16 Medium sized, round horseshoe which is wider than it is long from Trench 10, Square 4, Context 003 (Photograph Bateman 2017)

8.2.8 Nails

Along with the various remnant structural wooden posts at Boralga, there were also large quantities of structural fasteners, such as nails. Some of the more commonly found nails were clouts, hand wrought nails, Ewbanks and Varman's (1993) Type 1 and 2. Clouts were used for fastening iron work, metal sheeting or leather to timber, and were extensively used by smiths and wheelwrights. Clout nails had flat circular heads and for some uses were countersunk (smith's work). Many fasteners recovered from Boralga had sharp points (where points were present) that tapered on four sides, though on some, the points tapered on two sides in a chisel-like fashion (Varman 1993:187). Some hand wrought or forged nails recovered were commonly used between 1788 and the1850s (Wells 1998:81). Wrought nails could be both structural and non-structural (e.g. early horseshoe

nails), and are readily identified by their wood-like grain and distinctive taper on all four sides of the shank from head to tip (Wells 1998:80).

Ewbanks were patented cut nails with rose heads and were used for timber framed buildings or fencing. These nails were initially wrought and used during the Victorian era, and were common in Australia until 1939 (Varman, 1993:157). They can be identified by rounded rather than blunt, square ends and had reinforcing ridges (tolerance ridges) along the lateral sides of the shaft for extra strength. Machine wrought Ewbanks had a 'star' trademark on the head after 1869 and were known as 'Starheads' (How & Lewis, 2009:827), although none with this trademark were recovered from Boralga. Ewbanks nails have been documented in Australia since 1837, with many of the earlier nails lacking the distinctive star (How & Lewis, 2009:830).

Varman's Type 1 and Type 2 nails were rose/rosette headed nails consisting of four facets and a flattened pyramid on the top, and were commonly recovered from Boralga in larger sizes. These nails were used for the construction of timber framed buildings or fencing. The various forms of Varman's Type 1 and Type 2 nails (dated between the 1860s-1890s), can be distinguished by the facets on the head and point, as well as perpendicular (Type 1) and diagonal (Type 2) brackets underneath the head (Varman 1993:192). Other types of nail heads include facetted, jolt (bulbous head), which was more common after WW11 (1940s-present); and Rhomboid, which had a raised rose head and was common during the late 1890s-1930s (Varman 1993:184, 211). The most common type found at Boralga was Varman Type 2 nails, dated post 1880s. Only one Varman's Type 1 nail was recovered, dated early 1890s. A full summary of nails can be seen in Appendix 13, Tables 12.1 and 12.2.

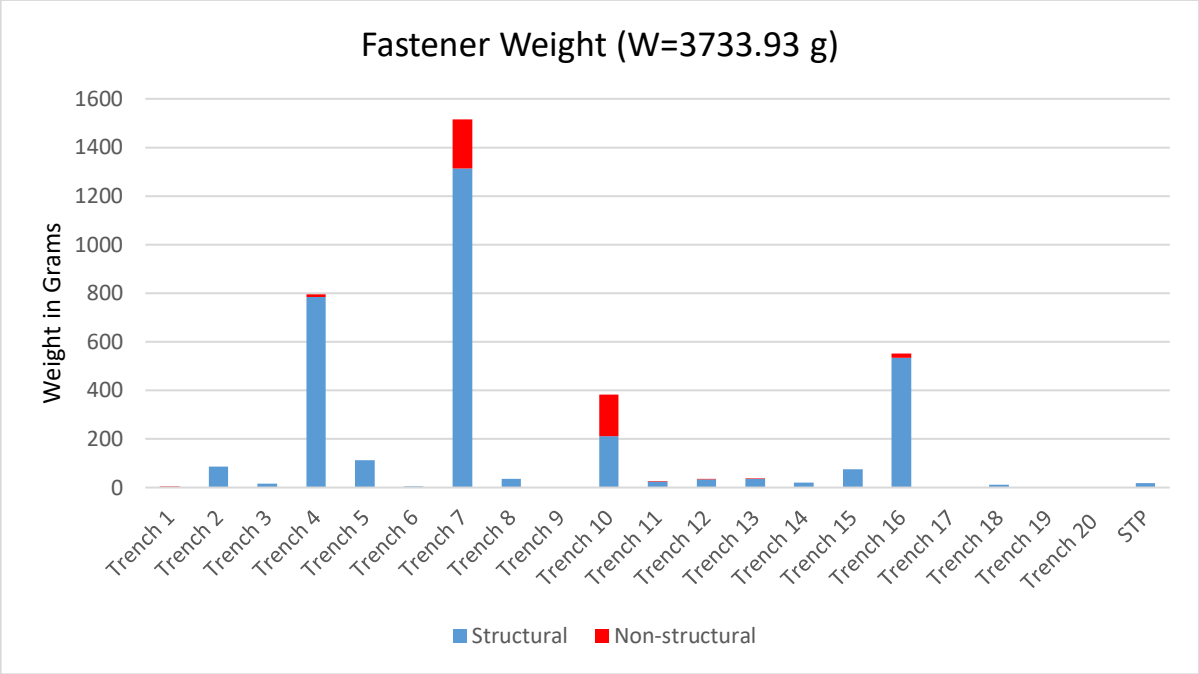


Figure 8. 17 Quantity of structural and non-structural fasteners, all trenches

Figure 8.17 shows that structural fasteners dominated by weight 3323.83 g or (89%), and that non-structural fasteners comprised only 410.1 g (11%) of the assemblage. The combined weight of both fastener types totalled 3733.93 g. Trench 7 dominated the assemblage (w=1516.03 g, 41%), followed by Trench 4 (w=794.9 g, 21%), then Trench 16 (w=552.5 g, 15%) and Trench 10 (w=383.5 g, 10%). The remaining trenches each contained less than 5% of the overall assemblage and are listed in order: Trench 5 (w=112.8 g, 3%); Trench 2 (w=85.6 g, 2%); Trench 15 (w=75.2 g, 2%); Trench 13 (w=37.2 g); Trench 12 (w=35.9 g, <1%); Trench 8 (w=34.8, <1%); Trench 11 (w=26.9 g, <1%); Trench 14 (w=21.2 g, <1%); STP (w=17.7 g, <1%); Trench 3 (w=15.6, <1%); Trench 18 (w=10.8 g, <1%); Trench 1 (w=6 g, <1%); Trench 6 (w=5.9 g, <1%); and the minimum was Trench 9 (w=1.4 g, <1%). Trenches 17, 19 and 20 contained no fasteners.

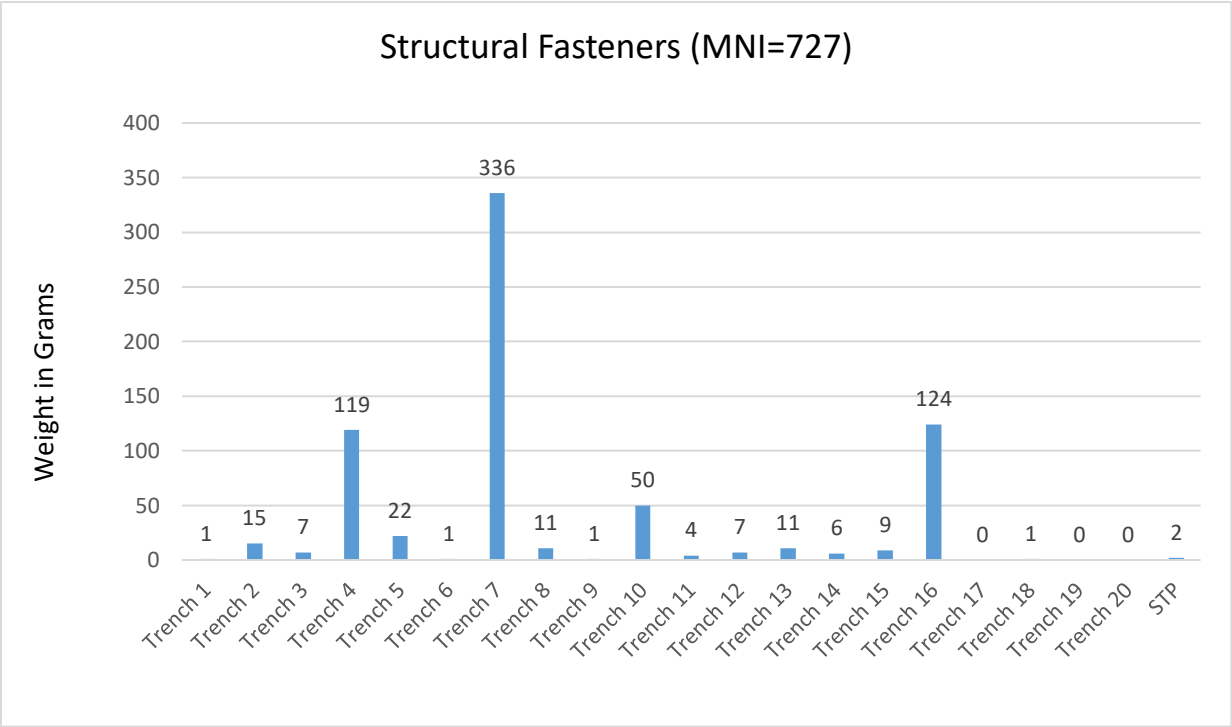


Figure 8. 18 MNI of structural fasteners, all trenches

The total MNI for structural fasteners was 727, which included 362 complete fasteners (spikes were excluded and are covered in section 8.2.8). All structural fasteners were found within sub-surface contexts. Figure 8.7 shows that Trench 7 dominated (n=336, 46%), followed by Trench 16 (n=124, 17%), then Trench 4 (n=119, 16%) and Trench 10 (n=50, 7%). The remaining trenches each contained less than 5% and are listed in order: Trench 5 (n=22, 3%); Trench 2 (n=15, 2%); Trench 8 (n=11, 2%); Trench 13 (n=11, 2%); Trench 15 (n=9, 1%); Trench 3 (n=7, <1%); Trench 12 (n=7, <1%); Trench 14 (n=6, <1%); Trench 11 (n=4, <1%); STP (n=2, <1%); Trenches 1, 6, 9 and 18 all comprised one fastener per trench, each representing less than 1% of the assemblage.

Figure 8. 19 Varman's Type 2 nail from Trench 16, Square 2, Context 002 (Photograph Bateman 2018)

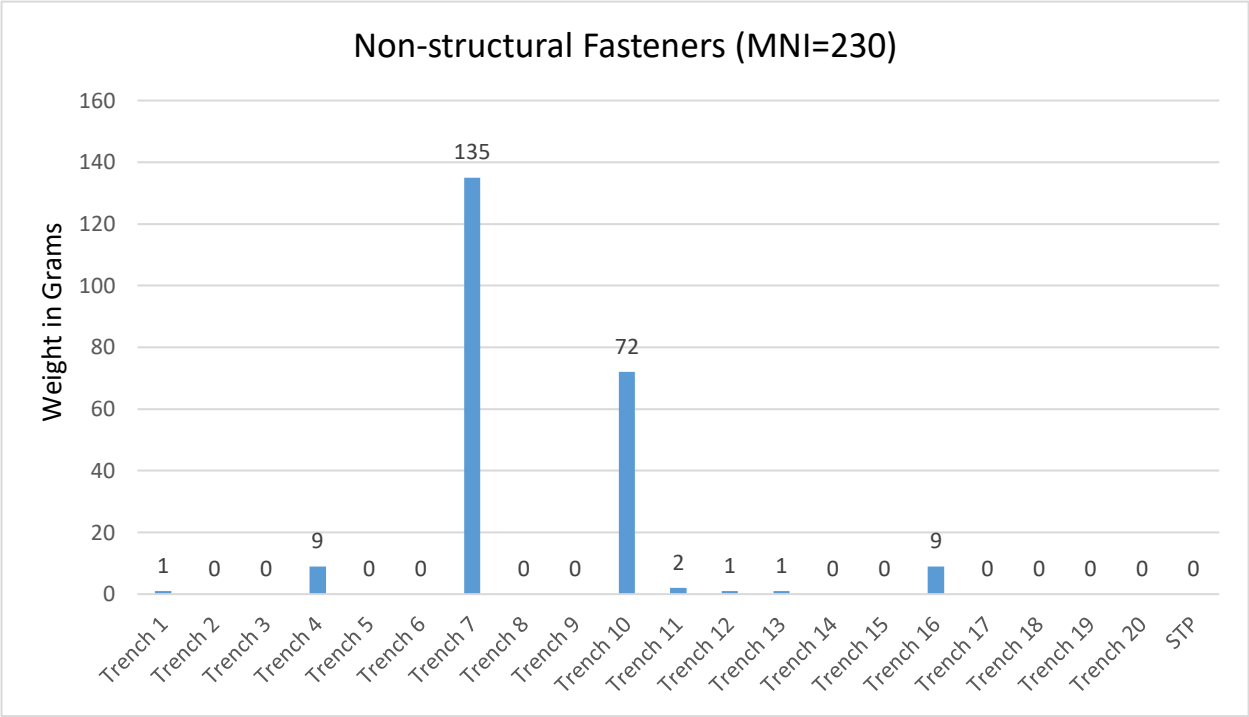


Figure 8. 20 MNI of non-structural fasteners, all trenches

The total MNI for non-structural fasteners was 230, which included 63 complete items. All non-structural fasteners were found within sub-surface contexts. Figure 8.20 shows that Trench 7 again dominated (n=135, 59%), followed by Trench 10 (n=72, 31%), then Trench 16 (n=9, 4%) and Trench 4 (n=9, 4%) which were equivalent. The remaining trenches each contained less than 5%: Trench 11 (n=2, 2%), and Trenches 1, 12 and 13 contained only one fastener each, representing less than 1% of the assemblage.

Figure 8. 21 Two brass boot nails from Trench 16, Square 4, Context 002
(Photograph Bateman 2018)

Table 8. 3 Nail manufacture method, all trenches

Manufacture Method	Count	Relative Proportion (%)
Wrought	17	3
Cast	12	2
Cut	83	15
Wire	433	80
Total	**545**	**100**

Table 8. 4 Head shape and utility, all trenches

Head Shape	**Count**	**Relative Proportion (%)**	**Application**
Facetted	113	20	General Framing/fencing
Flat	133	23	General Roofing Framing/fencing
Bevelled & Tapered - counter sunk	193	34	Horseshoes
Rhomboid	1	<1	Framing/fencing
Rose/rosette	118	21	General Framing/fencing
Domed lead (cast)	12	2	Roofing
Brad	4	<1	Flooring Boot nails (small)
Total	**574**	**100**	

8.2.9 Spikes

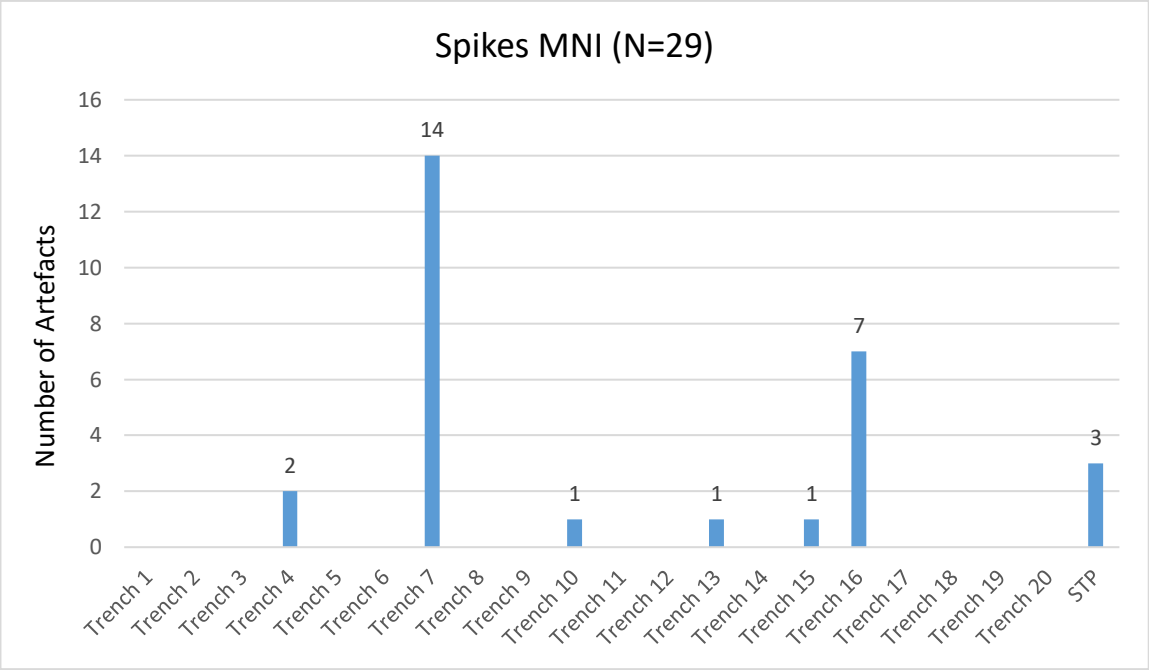


Figure 8. 22 MNI of spikes, all trenches

The total MNI for spikes was 29, including 27 complete specimens. All spikes were found within sub-surface contexts. Figure 8.22 shows that Trench 7 dominated once again (n=14, 48%), followed by Trench 16 (n=7, 24%), then the STP (n=3, 10%), Trench 4 (n=2, 7%) and Trenches 10, 13 and 15, each of which contained one spike, representing 3%. The remaining trenches contained no spikes. A full summary can be seen in Appendix 13, Table 13.3.

Figure 8. 23 Spike from Trench 7, Square 9, Context 002
(Photograph Bateman 2018)

8.3 Results

A total of 38694.69 g or 38.7 kg of metal artefacts were recovered from surface (w=4503.4 g, 12%) and excavated contexts (w=34191.29 g, 88%), within all trenches except 19 and 20. Included in the sub-surface weight was a significant quantity of metal recovered from shovel test pits identified by metal detector (w=3701.2 g, 10%). The total MNI was calculated to be 1265 identifiable metal objects (including spikes, structural and non-structural fasteners, MNI=986, 78%). Context 002 contained the majority of metal artefacts. The bulk of metal weight was derived from the blacksmith's/farrier's area. This was because the average weight of a horseshoe from Boralga was 326.14 g, and of the 37 horseshoes recovered (w=12067.16 g), 26 were derived from Trench 10 (w=8105.36 g). The majority of metal objects came from the troopers' huts areas at Trench 7 (MNI=473), including a high quantity of nails totalling 336 (46%) overall, with 312 (43%) of those derived from Context 001. The nails were represented by four different manufacture methods, with the majority consisting of drawn wire nails intended for general use, framing and fencing (n=433, 80%). A total of 112 items were modified, but most modified items were lumps of melted lead (n=93). This may not have been an intentional modification, as it is not known whether this resulted from repeated refuse incineration, or was a by-product of ammunition production. However, according to (Grguric 2016:1), people heading to isolated places often prepared by bringing extra ammunition manufacturing supplies with them, such as reloading materials in the form of bullet moulds, ingots of lead and bulk gunpowder.

8.4 Discussion

A substantial number of the metal items on the surface may have been stock camp objects, such as camp ovens, shovels, and assorted horse harness items. For this reason, the majority of larger surface artefacts of that nature were documented but not collected. However, excavated items such as nails, horseshoes, clothing fasteners and accessories within Context 002 and 003 were within the NMP horizon, and therefore provided insights into specific domestic and work-related activities, with some modified items indicating the identities of the individuals who may have used them. Much of the metal assemblage comprised practical, commonplace objects used for the construction of buildings, as well as horse-related objects. The advantage of locating metal artefacts is that they can be found using a metal detector, which also enabled spatial patterns to be established, such as interior and exterior boundaries surrounding the troopers' huts. The large quantity of structural fasteners

within the troopers' huts area was most likely the result of more extensive living quarters needed to house at least six troopers and sometimes their kin. Several items such as nails from Trench 7, and horseshoes from the blacksmith's/farrier's area were modified, with two straightened half-horseshoes possibly indicating an abandoned attempt at metal spearpoint manufacture. According to Harrison (2002:70), the use and trade of horseshoe spearpoints is well documented in a number of ethnographic observations across northern Australia, with Davidson (1935:170) identifying spearpoints made of horseshoes by the Wardaman people. Iron spearheads were also noted by Falkenberg (1962:148-150), which were traded for bifacially pressure flaked glass points within the Port Keats area, in the Northern Territory. The fact that metal was durable, hard, pliable and easily sharpened, led to an early and widespread adoption of iron into the toolkit of Aboriginal peoples to be used for spearheads, axes, knives and boomerangs (Reynolds 2006:53).

Of interest was the diversity of items from the troopers' huts area, which included a tin whistle, metal axe head, wax vestas box and a large quantity of buckles for horse harnesses and uniforms, including a snake belt buckle. Sewing paraphernalia was also present in the form of thimbles and sewing pins. The small size of the thimbles would indicate that they were most likely used by women, possibly to sew on uniform buttons or repair tears. Metal items located within the refuse pit associated with the officers' quarters at Trench 4, also contained ordinary domestic objects, such as two kerosene lamps, a thimble, harmonica, kettle spout, knife handle, a lock plate, drawer handles, and horse related paraphernalia, such as a bridle bit and a horseshoe. Similarly, the domestic deposit in Trench 16 was relatively commonplace, comprising a corkscrew, shoe grommets and a stout bottle label. The presence of these everyday items emphasises some of the ordinary domestic and occupational activities carried out by all occupants at Boralga, such as drill, blacksmithing, cooking, drinking, sewing, playing instruments, maintaining animals, building structures and occupying children.

Figure 8. 24 Popgun from Trench 8, Square 4, Context 002 (Photograph Bateman 2018)

Chapter 9 - Buttons

9.1 Introduction

The archaeological record rarely yields clothing, which would greatly assist in the identification of the individuals who wore them, but certain types of buttons withstand taphonomic processes and can give insights into style, role and status (Lindbergh 1999:50). The various buttons recovered from Boralga were classified according to material, form, size, manufacturing techniques and various other distinguishing characteristics, such as colour and decoration.

9.1.1 Common button types and dates

Police uniform jacket buttons – A relatively common button found at the study site were composite police uniform buttons with a Sanders shank on an inserted disc. These metal buttons were typically one piece before 1920 and two piece subsequently, and were engraved, chased or stamped with various designs after 1830 (Hughes and Lester 1993:216). Police uniform buttons were made of gilded brass and highly burnished, with several recovered from the study site trademarked with a backstamp, ‘FINE TREBLE GILT’, indicating a minimum of three coats of gilt. Slogans claiming, ‘high quality’, otherwise known as ‘quality marks’, were added to the rear of military buttons around the early nineteenth century (Allen 2008:100). The NMP buttons feature the Royal Crown and cipher in bold relief, with 'VR' for Queen Victoria (R for Regina) who reigned from 1837 to 1901. They were general service buttons most likely from the NSW military force, and were made in West Midlands, Birmingham, England by Smith and Wright Ltd, and they date post c1870-1880. Similar silver coloured buttons replaced the brass ones in 1887, but no silver buttons were recovered from Boralga.

Figure 9. 1 Metal NMP uniform button from Trench 7, Square 11, Context 002 (Photograph Bateman 2018)

Trouser buttons - Another metal button common to the study site were one piece 'trouser' or 'suspender' buttons, which were usually thin, four hole (occasionally two hole), sew-through style buttons, made of brass or brass/copper alloy. Dates for the initial appearance of suspender buttons are not clear, but braces or suspenders were introduced to America in 1787 (Lindbergh:1999:52). Two-piece, four hole sew-through trouser buttons were common in the US after 1870, with plain one-piece, four hole sew-throughs after 1910 (Olsen 1963:552). One piece, concave, brass sew-through trouser buttons have been recovered from archaeological sites in Australia that date between 1838-1849 (Allen 2008:101). Trouser buttons are usually shallow and dish shaped with a concave centre, and sometimes feature rouletting around the interior rim (Lindbergh:1992:52). They were often gilded or japanned (black), but this coating does not survive well archaeologically (Allen 2008:100-101). The manufacture method for one-piece buttons was often casting in a mould or stamping from large metal sheets to create a very thin, uniform button (Lindbergh:1992:52). Trouser buttons from Boralga feature 'quality assurances' stamped on the face, with slogans such as 'BEST.RING.EDGE' and 'ASK FOR QUEENS'. Quality assurances were promotional devices and were very common by 1880 (Hughes & Lester 2003:686; Ritchie 1986:515).

Figure 9. 2 Metal trouser button from Trench 7, Square 7, Context 001
(Photograph Bateman 2018)

Ceramic buttons - Various white ceramic, 'small china' or 'Prosser' buttons were also common at the study site. They were initially made during the 1830s out of a wet porcelain paste until Englishman Richard Prosser introduced a different method of manufacture which used dry porcelain paste compacted into moulds, making them cheaper to buy and more numerous (Lindbergh:1999:52). Prosser buttons were predominantly used for underwear, work shirts and other plain garments, and date to post-1840 (Grover 2010; Sprague 2002:111). The examples recovered from Boralga were plain white sew-throughs, with two or four holes, and although a variety of versions were available, the most common type at Boralga was the dished style. This was a smooth button with a bevelled rim and distinct dish shape. The smoothness of the button had an advantage over glass as the edges did not cut the thread (Lindbergh: 1999:52).

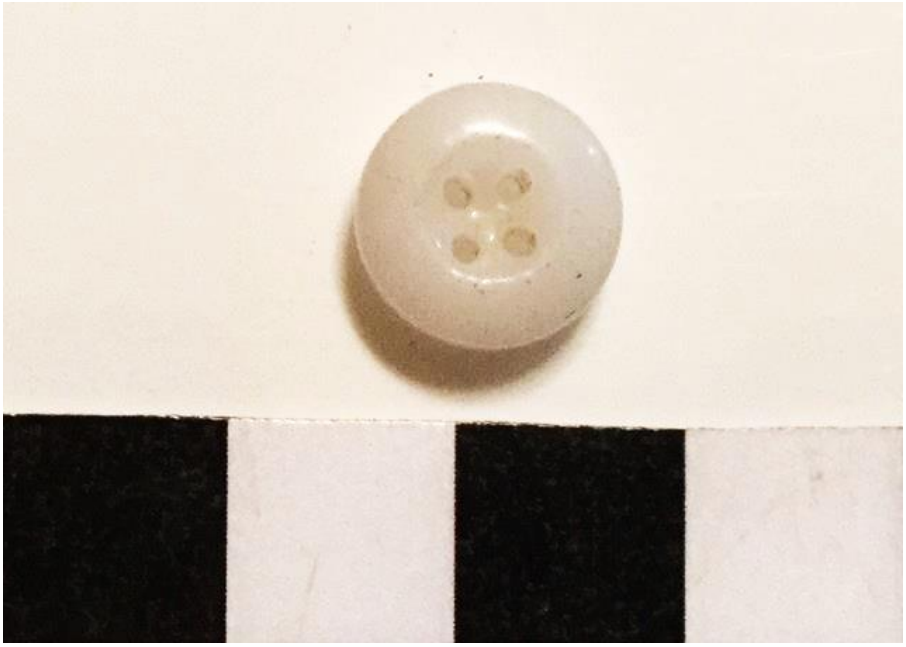


Figure 9. 3 Ceramic 'Prosser" button from Trench 7, Square 18, Context 002 (Photograph Bateman 2018)

9.1.2 Single examples

The only glass button recovered from the study site was from Trench 7, which was an ornate, black glass button (imitation jet) from a skirt, dress or blouse. The button is composite in structure, with a Sanders loop inserted into a small metal disc attached to a domed back. The front has an etched design encircling a slightly concave centre, and a ligne size of 18 or 11.5 mm. These buttons had two peaks in popularity: 1800-1820, then after 1850, particularly after 1861 when Queen Victoria went into mourning after the death of her husband, Prince Albert. The fashion continued until 1914 (Lindbergh 1999:14).

Figure 9. 4 Black glass button found at Trench 7, Square 11, Context 002
(Photograph Bateman 2018)

Only one, very fragile shell button was found at the site, again located at Trench 7. The button was white, quite small, flat and undecorated, with two sew-through eyes. The ligne size was 18 or 11.5 mm.

Figure 9. 5 Shell button from Trench 7, Square 14, Context 002
(Photograph Bateman 2018)

9.2 Overall button analysis

9.2.1. Material type

Table 9. 1 Button material type frequency

Trench	Context	Metal	Ceramic	Glass	Shell	Unidentifiable	Proportion (%)
1	003	3					
	Total	**3**					
4	001	1					
	002	8					
	Total	**9**					11
7	001		3				
	002	45	4	1	1	2	
	003	1					
	Total	**46**	**7**	**1**	**1**	**2**	70
8	001		1				
	Total		**1**				1
10	002	1					
	Total	**1**					1
11	001	1					
	Total	**1**					1
14	002	3					
	Total	**3**					4
16	002	9					
	Total	**9**					11
	Overall total	**72**	**8**	**1**	**1**	**2**	**100%**

A total of 84 buttons were recovered from excavated contexts. Metal buttons dominated (n=72 or 86%), followed by ceramic (n=8, 10%). There were two unidentified buttons (2%), and one each of glass and shell buttons (1% each). The majority of buttons were contained in Context 002 (n=74, 88%), including eight NMP uniform jacket buttons. Context 003 had four buttons (5%), including

three NMP uniform buttons, and Context 001 had six buttons (7%), including four NMP uniform buttons.

9.2.3 Button summary

Table 9. 2 Overall button summary, all trenches

Material	Attachment	Manufacture method	Profile	Ligne	Function	MNI	Proportion (%)
Metal	2 hole	Stamped	Flat (linen)	14-24	Dresses, blouses, skirts	4	5
	2 hole (lenticular)	Cast two piece	Domed	22-27	Unknown	7	9
	4 hole	Stamped	Dished	22-27	Trousers, waistcoats, shirts	39	46
	Shanked	Unknown	Domed	24-30	Unknown	6	7
	Loop Shank	Cast (leaf design)	Domed	30	Unknown	1	1
	Sanders Shank	Composite (Stamped and crimped)	Domed	24	NMP Uniform jacket	15	18
Ceramic	4 hole	Moulded	Dished	18	Underwear, work shirts, plain garments	7	9
	Shanked	Moulded	Domed (linen)	20	Dresses, blouses, skirts	1	1
Glass	Sanders shank	Moulded	Dished	18	Dresses, blouses, skirts	1	1
Shell	2 hole	Cut	Flat	18	Shirt	1	1
Unidentifiable						2	2
Total						**84**	**100**

Table 9.2 shows that metal trouser buttons dominated with 39 (48%). These were derived from Trenches: 4 (n=3); 7 (n=28); 10 (n=1); 11 (n=1); 14 (n=2); and 16 (n=3). Next was metal NMP jacket buttons with 15 (18%), from Trenches 1 (n=3), 4 (n=1), 7 (n=7) and 16 (n=4). Metal stamped and cast sew-throughs (other than trouser) numbered 11 (13%), located in Trenches 4 (n=1), 7 (n=8), and 16 (n=2). Trench 7 contained seven ceramic Prosser buttons (8%), and Trench 8 had one domed ceramic button (1%). Seven, miscellaneous shanked metal buttons with domed profiles were found

in Trench 4 (8%). Two buttons were unidentifiable (2%), and the single glass (1%) and shell (1%) buttons came from Trench 7.

9.2.4 Slogans and backstamps

Table 9. 3 slogans and backstamps on metal trouser buttons

Backstamp	Date	Count
BEST SOLID EYELET	1856+	1
ASK FOR QUEENS	1856+	1
'BRISBANE' and 'WOODCOCK'	1856+	1
BEST RING EDGE	1850	3
ASK FOR CROWNS	1850	2
J.S. MANWARING BRISBANE	-	-
Total		**8**

9.3 Results

All 84 buttons were from excavated contexts and could be identified to four material types: metal, ceramic, shell and glass. The most common material used for buttons was metal (n=72), which mainly comprised stamped trouser buttons and composite NMP uniform jacket buttons. Overall, the majority of buttons came from Trench 7, which encompassed all four material types, including glass and shell. All ceramic Prosser buttons were also found in Trench 7, as well as seven of the 15 NMP uniform buttons.

9.4 Discussion

The evidence shows that the troopers' huts area contained the majority of buttons, which were also the most diverse for material type and use. The high number of NMP uniform and trouser buttons can be explained by the fact that there were more people living in this zone than anywhere else at the camp. The black glass blouse or dress button from Trench 7 further demonstrates that women were residing with the troopers, but the date range for this button is wide, spanning between 1850-1914, and is therefore not helpful for establishing an occupational timeframe relating to the woman who wore it.

Chapter 10 - Ammunition

10.1 Introduction

A variety of different ammunition types were recovered, with the type of ammunition available determined by the kinds of firearms deemed most suitable by the colonial Government at the time. British and Australian authorities had an overwhelming preference for British weapons, therefore it is usually possible to establish which firearms the police were armed with in a particular year (Grguric 2016:2). Government records indicate that when troopers fought Aboriginal people in the 1880s, they were armed with .577 Snider carbines, followed by .577 Martini Henry rifles after 1884, also Royal Irish Constabulary .442 revolvers were issued from 1879 onwards (Skennerton 1975:17-120). Thus, we can expect to encounter the distinctive projectiles and/or cases that were used with these firearms around this time period (Grguric 2016:2).

Dates - Musket balls

Police issue weapons were originally muzzle-loading and percussion rifles, which were later upgraded to Westley and Richards 20-gauge pinfire carbines from 1868 (Skennerton, 1975:17-20). Three musket balls recovered from sub-surface contexts provide evidence of the use of muzzle loading weapons at Boralga. All three projectiles had faults, such as flat spots (possibly caused by firing or deformation occurring in the mould), and/or sprue marks produced during manufacture (Figure 10.1). Spherical projectiles were originally used for flintlock muskets by early settlers until the 1850s, but home-made lead ball manufacture may have continued beyond the 1850s, as it was an easy and accessible way to produce ammunition (Sydney Living Museums 2019). Grguric (2016:6) believes that the percussion smoothbore rifle was arguably the most common firearm used in Australia between 1840-1870. This was a muzzle-loaded, single or double-barrelled rifle. Around the 1850s the Enfield musket, a percussion cap weapon, became the weapon of choice for the police force. The introduction of new breech-loaders moved ammunition away from the powder and ball, to bullets and cartridges that combined the powder and projectile into a single unit (Sydney Living Museums 2019).

Figure 10. 1 Musket ball with a sprue mark found in Trench 7, Context 001. A flat spot is visible at the top. The furrow may be trowel damage or a rifling groove
(Photograph Bateman 2018)

Dates - Snider and Martini-Henry ammunition

Police issue weapons fitting the timeframe of NMP occupation at Boralga were .577 Snider breech-loading carbines which date from 1872 and became officially obsolete by the 1880s (Skennerton 2005). However, Richards (2008:56) suggests that the use of Snider firearms continued within the NMP until the late 1890s. Sniders were updated to the Martini-Henry .577/.450 carbines, which were supplied from 1880 onwards. One hundred Snider/Martini-Henry cartridge cases were recovered from Boralga. Handguns were also supplied, such as Royal Irish Constabulary .442 revolvers which date from 1870, and were issued to officers (Skennerton 1975:17-20). Eighty-five revolver cartridges were found at the study site.

Early Snider cartridges supplied by 'Eley in Birmingham England', were encased in cardboard and had a metallic base disc and primer, with later cartridges being made from drawn brass (Labbett 1993:47). Many of the discernible base discs from Boralga displayed the 'ELEY' headstamp, but some centre-fire bases featured 'KYNOCH No 12 BIRMINGHAM' headstamps (Figure 10.3). 'Kynoch No 12 Birmingham' cartridges and 'Kynoch .450' cartridges were interchangeable with Eley products. The 'KYNOCH' headstamp first appeared in 1882 on a range of gastight shotgun cartridges (Harding 2009:124-139). Eleven, 20-gauge brass foil, pinfire cartridge cases were also recovered. Most of the discernible headstamps read 'ELEY BRO LONDON', with the no. 20 in the centre. These are most likely from a Westley Richards & Co carbine (shotgun) and date between 1851 and 1874 (Harding 2006:149). One smaller pinfire cartridge for a revolver was recovered from Trench 7 (see Figure 10.10).

Figure 10. 2 Example of .577 rolled brass foil catridge case with iron base disc attached, for a Snider or Martini-Henry rifle. From Trench 7, Context 002 (Photograph Bateman 2018)

Figure 10. 3 Example of .577 brass base disc with the 'KYNOCH No 12 BIRMINGHAM' headstamp from Trench 16, Context 002 (photograph Bateman 2019)

Figure 10. 4 Tweny gauge pinfire shotgun cartridge from Trench 16, Context 002 (Photograph Bateman 2019)

Figure 10. 5 Example of .442 centre-fire brass revolver cartridge with base disc from Trench 7, Context 002 (Photograph Bateman 2018)

Conical lead projectiles

A total of 12 conical lead projectiles were found, with one showing evidence of being fired, as it had a flat damaged nose on one side, and two spiralled rifling grooves just above the cannelures. A line of marks along the length of the bullet was also visible just below the flattened region (Figure 10.6). All other lead projectiles appeared unfired, possibly due to faults, as several of the bases were non-uniform, and skirts and cannelures were missing.

Figure 10. 6 Fired .577 lead projectile from Trench 7, Context 002
(Photograph Bateman 2018)

Lead pellets

Other ammunition recovered from the study site were 12 lead shotgun pellets which ranged in size from 3.43 mm (5.07 grains) through to 4.87 mm or BBB Bird shot (10.2 grains). Figure 10.7 shows three almost spherical lead pellets (one slightly smaller than the other two). Their diameter ranged from 3.64 mm to 3.93 mm, suggesting around bird sized shot #2, or 4.40 grains.

Figure 10. 7 Three shotgun pellets from Trench 7, Context 002
(Photograph Bateman 2018)

Percussion caps

Six, larger sized percussion caps were recovered from Trench 7 (two fired), which were commonly referred to as ‘musket’ or ‘top hat’ caps, and date from 1863. These percussion caps were made of copper or brass and feature four or six small 'wings' or ‘flanges’ which make removal of the cap easier (Grguric 2016:9). They were made for single shot, large bore military pistols, military rifles and muskets.

Figure 10. 8 Unfired percussion cap from Trench 7, Context 001
(Photograph Bateman 2018)

An unusual find was a minute gauge (8 mm wide), brass rimfire bullet with the cartridge and lead projectile intact (Figure 10.9). Most likely a Flobert .22 rimfire BB cap made for a revolver. These were designed by Louis Flobert in the early to mid-1800s (rimfirecentral.com 2003). The case has slight damage on one side, and both casing and projectile are quite weathered, making sprue marks or faults difficult to discern. The bullet shows no evidence of being fired. The base has no identifying head stamps.

Figure 10. 9 Flobert .22 rimfire BB cap for a revolver found in Trench 4, Context 002
(Photograph Batman 2016)

10.1.1 Ammunition MNI by type

Table 10. 1 Ammunition type and MNI, all trenches

Type	MNI	Relative proportion (%)
Percussion cap	6	2
Cartridge case	210	87
Conical projectile	12	5
Spherical projectile (musket balls = 3, lead shot=12)	15	6
Total	**243**	**100**

Table 10.1 shows that the total of all ammunition types recovered from the study site (MNI=243). Cartridge cases dominated (MNI=210, 86%). Only cases with discs attached were counted for the MNI, most of which belonged to .577 Snider or Martini-Henry rifles and .442 revolvers.

10.1.2 Spatial distribution and MNI, all trenches

Table 10. 2 Ammunition spatial distribution

Trench	Context	Object Type	Weapon	Count	MNI	Relative proportion (%)
Trench 1	001	Cartridge case (fragment)		1		
	002	Cartridge case	.577 Snider/Martini Henry	1	1	
	002	Cartridge (primer)		1	1	
	003	Cartridge case (fragments)		2		
Total Trench 1				**5**	**2**	**<1**
Trench 4	001	Cartridge case/disc	.577 Snider/Martini Henry	16	16	
	001	Cartridge (primer)		3	3	
	001	Cartridge case (fragments)		11		
	001	Cartridge case/disc	.442 Revolver	7	7	
	001	Pinfire cartridge	20-gauge Shotgun	1	1	

	002	Cartridge case/disc	.577 Snider/Martini Henry	19	19	
	002	Cartridge case/disc/ball Rimfire	.22 Flobert BB cap Revolver	1	1	
	002	Cartridge (disc)		2	2	
	002	Cartridge case (fragments)		14		
	002	Cartridge case/disc	.442 Revolver	41	41	
	002	Conical projectile		1	1	
Total Trench 4				**116**	**91**	**37**
Trench 5	002	Cartridge case/disc	.577 Snider/Martini Henry	1	1	
Total Trench 5				**1**	**1**	**<1**
Trench 7	001	Cartridge case/disc	.577 Snider/Martini Henry	19	19	
	001	Cartridge case/disc	.422 Revolver	23	23	
	001	Conical projectile		6	6	
	001	Cartridge case (fragments)		10		
	001	Pinfire cartridge	Shotgun	1	1	
	001	Pinfire cartridge	Revolver	1	1	
	001	Musket ball		1	1	
	001	Percussion cap		3	3	
	002	Cartridge case/disc	.577 Snider/Martini Henry	26	26	
	002	Cartridge case (fragments)		16		
	002	Musket ball		2	2	
	002	Cartridge case/disc	.422 Revolver	8	8	
	002	Pinfire cartridge	20-gauge Shotgun	2	2	
	002	Conical projectile		4	4	
	002	Cartridge (primer)		2	2	
	002	Percussion cap		3	3	
	002	Lead shot	Shotgun	9	9	
	003	Lead shot	Shotgun	3	3	
	003	Cartridge case/disc	.577 Snider/Martini Henry	1	1	
Total Trench 7				**140**	**114**	**47**
Trench 10	002	Cartridge case/disc	.577 Snider/Martini Henry	2	2	
	003	Cartridge case/disc	.422 Revolver	2	2	
Total Trench 10				**4**	**4**	**2**
Trench 11	001	Cartridge case/disc	.422 Revolver	1	1	

Total Trench 11				**1**	**1**	**<1**
Trench 12	002	Cartridge case/disc	.422 Revolver	1	1	
	002	Cartridge case/disc	.450 Revolver	1	1	
	002	Cartridge case (fragments)		1		
Total Trench 12				**1**	**2**	**<1**
Trench 16	002	Pinfire cartridge	20-gauge Shotgun	7	7	
	002	Cartridge case/disc	.577 Snider/Martini Henry	15	15	
	002	Cartridge case/disc	.442 Carbine revolver	3	3	
	002	Cartridge case/disc	.422 Carbine revolver	1	1	
Total Trench 16				**26**	**26**	**11**
STP		Cartridge case (fragments)		1		
		Conical projectile		1	1	
		Cartridge case/disc		2	2	
Total STP				**2**	**2**	**<1**
Overall total				**292**	**243**	**100**

Figure 10. 10 Pinfire revolver cartridge (9.95 mm) from Trench 7, Context 001 (Photograph Bateman 2018)

10.1.3 Distribution between Trenches

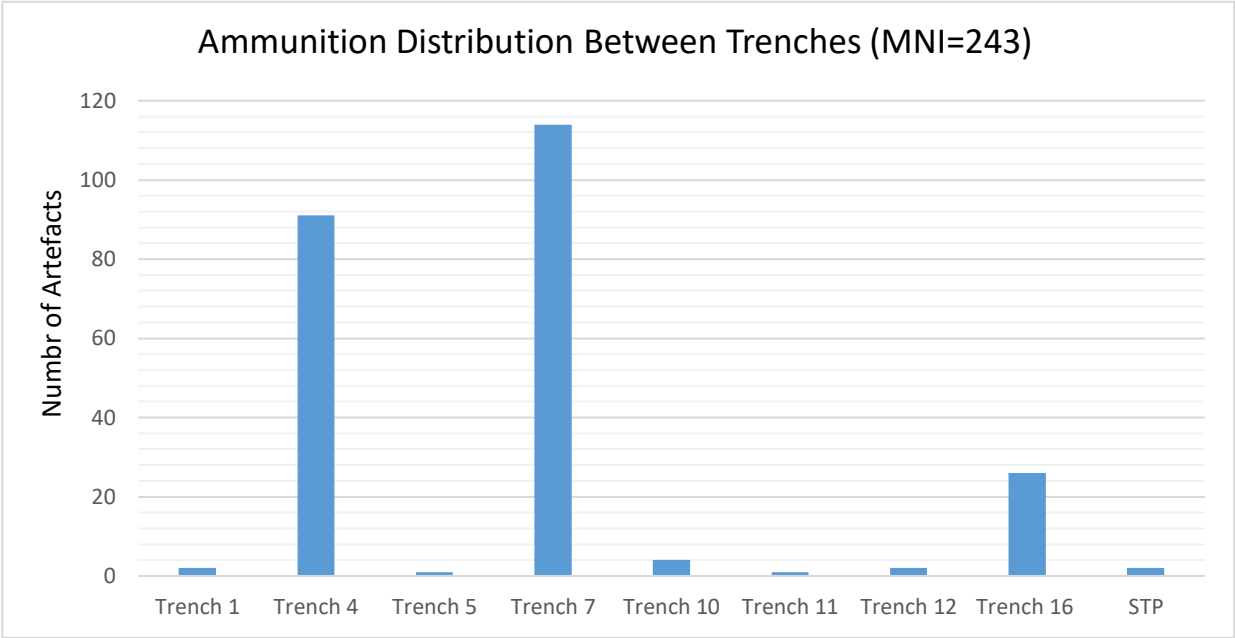


Figure 10. 11 Distribution of ammunition between all trenches

Figure 10.11 shows an overall MNI for ammunition of 243. Trench 7 dominated (n=114, 47%), followed by Trench 4 (n=91, 37%), Trench 16 (n=26, 11%) and Trench 10 (n=4, 2%). The remaining trenches each contained less than 1% of the overall assemblage and are listed in order of abundance: Trench 1 (n=2); Trench 12 (n=2); and STP (n=2). Trench 5 (n=1) and Trench 11 contained the fewest (n=1).

Figure 10. 12 Highly corroded .577 Snider or Martini-Henry bullet with all components present (case was broken near base disc). Found in Trench 7, Context 002 (Photograph Bateman 2018)

10.1.4 Distribution between contexts

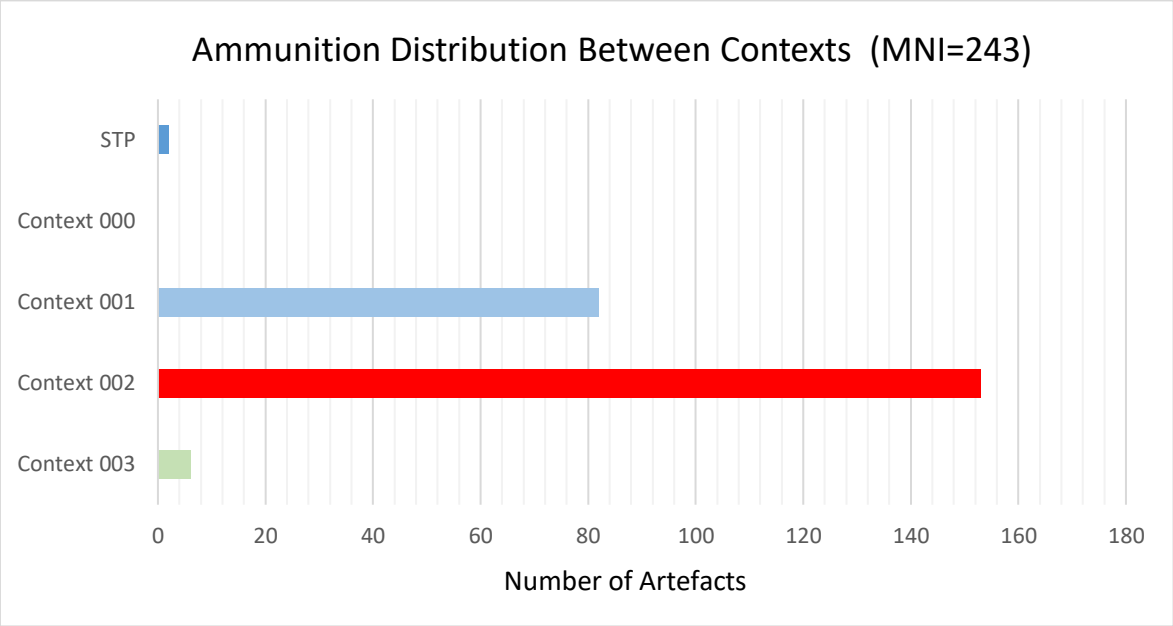


Figure 50.13 Distribution of ammunition between contexts, all trenches

Figure 10.11 shows that the majority of ammunition was recovered from Context 002 (MNI=153, 63%), followed by Context 001 (MNI=82, 14%) and Context 003 (MNI=6, 3%). The STP contained the least with two items (<1%), and Context 000 contained no ammunition.

10.1.5 Headstamps

Table 10. 3 Ammunition headstamps

Ammunition headstamp	weapon type	Date	MNI
ELEY BROS 20 LONDON	20 Gauge pinfire shotgun	1851-1874	7
ELEY BROS 12 LONDON	.577 Snider/Martini-Henry	1874-1920	3
ELEY LONDON GASTIGHT no 12	.577 Snider/Martini-Henry	1874-1920	8
ELEY LONDON	.577 Snider/Martini-Henry	1874-1920	1
KYNOCH BIRMINGHAM LONDON no 12	.577 Snider/Martini-Henry	1882	1
KYNOCHS PATENT no. 12	.577 Snider/Martini-Henry	-	
WINCHESTER ELEY	.450 Revolver	-	1
ELEY BROS LONDON	.442 Revolver	1874-1920	2
ELEY LONDON	.442 Revolver	1874-1920	2
Total			**25**

The majority of base discs were extremely corroded, therefore discerning most of the headstamps was impossible. Only headstamps that could be fully identifiable were used in Table 10.3, thus base discs consisting of partial lettering were excluded. Headstamps containing the wording ‘Eley Bros’ or ‘EB’ were earlier items manufactured by Eley Brothers and date between 1851 and 1874 (Harding 2006:149). All headstamps marked Eley London .442, Eley London .450, Eley No 12 London, Eley London No 12 Gastight, and Eley London No 16 Gastight, appear on cartridges after the formation of Eley Bros Ltd in 1874 and continued to be used until 1920, when the company became Nobel Industries (Harding, 2006: 154). Several iron base, brass foil, centre-fire cartridge cases recovered from Boralga had 'ELEY LONDON' and 'GASTIGHT' 'No 12' stamped on the head. Gastight cases had an iron lining fitted to the inside of the brass head to reinforce the paper tube around the powder chamber to increase the strength of the case as a whole. This design helped to prevent failure of the cartridge case upon firing, and according to Burrard (1931:86-7), first came into manufacture around 1898. Timeframes surrounding the manufacture of gastight cases are conflicting, an earlier date between 1874-1920 is claimed by Harding (2006:154), which is concurrent with the occupational timeframe at Boralga and falls between the time that the Eley brothers became a limited company.

10.2 Results

All 243 ammunition items were from excavated contexts, and of those, the overwhelming majority were cartridge cases belonging to .577 Snider or Martini-Henry rifles and .442 revolvers. Trench 7 contained the bulk of the ammunition assemblage, and encompassed almost all ammunition types including a musket ball, lead shot, conical projectiles, pinfire and centrefire cartridges. Overall, the majority of ammunition was derived from Context 002, and no ammunition was located on the ground surface. A total of nine different headstamp types were identified, with six of those displaying the ‘ELEY’ name, some of which date between 1851-1874 (20-gauge pinfire shotgun cartridges) and others between 1874-1920 (.577 Snider or Martini-Henry and .442 revolver cartridges).

10.3 Discussion

The troopers’ huts area contained the majority of ammunition, which was also the most diverse for type, and included a large quantity of revolver rounds. Figure 10.14 shows a trooper wearing a revolver in a holster. Evidence in the form of fired cartridges demonstrates that Snider or Martini Henry rifles were discharged within the camp boundary, possibly for drill or weapons training.

Furthermore, the presence of lead shot at Trench 7 indicates that shotguns were also used, most likely to supplement food intake by hunting water birds or larger native fauna, such as macropods, which would have frequented the nearby lagoon. Increased quantities of ammunition located at Trench 7 can be explained by the fact that there would have been more people within this zone using weapons than elsewhere in the camp. Although, not all camp keepers issued troopers with guns for personal use during private time (many camp keepers had troopers return their weapons to the store following patrols), the large quantity of ammunition found within the troopers huts area may indicate that this was not the case in this instance.

Primary refuse area Trench 4 (associated with the officer's quarters) also contained a significant quantity of ammunition. The large numbers of ammunition of a variety of types was also recovered from the domestic deposit at Trench 16, but the building and occupants associated with this rubbish pit are unknown. The majority of ammunition was located within primary refuse areas, indicating spent cartridges and associated components may have been collected and disposed of within these pits. The large quantity and variety of ammunition recovered from Boralga was specific to their objective and testament to the firepower and colonial authority enforced by the NMP. According to Richards (2008:56), both the Snider and Martini-Henry were a deadly development in weapons manufacture, as they were efficient, lethal tools that had the capability to kill many people over long distances. An order of 38 000 rounds of Snider ammunition was approved by the Government in 1882, but the references to firearms at the time are ambiguous and did not specifically mention frontier violence (Richards 2008:56).

Figure 10. 13 Example of NMP trooper
with a revolver – undated
(Cairns Cairns Historical Society, Neg. no. P15/P15979)

Chapter 11 – Miscellaneous

11.1 Introduction

A range of miscellaneous objects were recovered which did not fall into a specified category, and various items remain unidentified for function and material. Only identifiable objects were included in Table 11.1. For a full trench, context and object summary, see Appendix 20, Table 20.1.

11.1.1 MNI miscellaneous objects

Table 11. 1 MNI miscellaneous objects

Function	Material	Fragment count	MNI
Stationary			
Writing slate	Stone	135	13
Hygiene			
Toothbrush (Handle)	Bone	13	3
Recreation			
Harmonica reed	Unidentified	5	1
Alcohol bottle stopper	Cut crystal	1	1
Accessories			
Long, turned bead	Unidentified	1	1
Hair comb	Celluloid	1	1
Costume jewellery	Metal/Unidentified	1	1
Tools			
Pocket knife	Metal (non-ferrous)	3	1
Personal			
Human waste (not coprolite as not fossilised)	Faeces	3	3

Coarse material	Fabric	1	1
Kitchen			
Pestle	Stone	2	1
Food			
Nut	Wood	1	1
Camp quarters			
Lamp decoration	Cut crystal	1	1
Lamp decoration (faux diamond)	Cut crystal	1	1
Path/raised area	Concrete/stone	1	1
Total			**31**

11.1.2 Concrete

Figure 11.1 shows a sample taken from an approximately 4 m diameter, circular raised area located near the officers' quarters, which was made of concrete and covered in pebbles to form a conglomerate surface. A path made of similar materials started at the officers' quarters and led to the circular raised area. The raised section may have been a wet area, but this is not certain. To date, no buttons or features have been found to indicate that it was a laundry. The earliest surviving examples of concrete in Australia date from the 1860s (Hunt 2000:2).

Figure 11. 1 Sample of circular raised area made of stone and concrete from Trench 9 (officers' quarters), Context 000 (Photograph Bateman 2016)

11.1.3 Writing slate

Figure 11.2 shows fragments of writing slate which were relatively common at Boralga. Slate board and pencil fragments were derived from six different trenches, including refuse pits associated with the officers' quarters as well as the troopers' huts. Writing slates were made from a fine-grained clay with frequent mica and quartz inclusions (Davies 2005:63). The main period of production was between 1770 and 1900, although calls to remove them within schoolrooms persisted after 1900, as they were deemed unhygienic (Davies 2005:63). Nonetheless, the use of writing slates continued well into the twentieth century due to their economy and convenience, lack of paper supplies, and the continuance of older models of classroom teaching (Davies 2005:63).

Figure 11. 2 Writing slate with ruled lines visible on the two largest pieces, from Trench 4, Context 001 (Photograph Bateman 2016)

11.1.4 Slate pencils

Figure 11.3 shows examples of slate pencils, which were usually made of a softer grade slate than the writing board, and were formed by cutting and turning sticks of soft slate before forcing the length of square section through a series of reducing tubes (Davies 2005:63-4).

Figure 11. 3 Three fragments of broken slate pencils from Trench 8, Context 001 (Photograph Bateman 2016)

11.1.5. Bone toothbrush

Three toothbrushes made of bone (most likely cattle) were recovered from Trenches 16, 7 and 4. The English began producing bone tooth-brushes in 1770, with William Addis making one while in jail, although they were originally invented in China (Rayson 2014). The majority of brushes made of bone were sold by the English between 1845-1926 (Beverton 2012). No complete brushes were found at Boralga. Figure 11.4 shows a fragmented toothbrush in four pieces, consisting of a conjoined rounded handle and broken head, with approximately 27 holes for cow or pig bristles to be attached using small wires. Grooves run length-ways along the back of the head so the attachment wires are recessed.

Figure 11. 4 Fragmented bone toothbrush from Trench 4, Context 001 (Photograph Bateman 2016)

11.2 Results

A total of 31 identifiable miscellaneous objects comprising 15 different object types were located within excavated contexts. The majority of objects were contained in Context 002 (n=19), with most of these items comprising slate board and slate pencil fragments.

11.3 Discussion

The variety of miscellaneous objects were informative with regard to function, status and the daily domestic activities carried out by the individuals who used them. Slate boards, usually used for teaching purposes, were distributed across the camp, including in the troopers' huts area, which indicates that educating children residing at the camp was most likely a common activity. The fact that a bone toothbrush was located within the troopers' huts area is further testament to expectations of Aboriginal conformity to European civilisation ideals. A harmonica at Trench 16 demonstrates musical activities may have been carried out, and a home-made tin whistle from Trench 7 (see Figure 8.3 metal section) also supports this suggestion. The refuse pit associated with the officers' quarters (Trench 4) contained two cut crystal lamp decorations, an ornate cut crystal decanter stopper, and a green imitation emerald item from costume jewellery, which is consistent with the earlier evidence outlined in the glass and ceramic discussion sections, which suggested that Trench 4 contained higher status objects associated with higher ranking individuals.

Figure 11. 5 Amethyst coloured, cut crystal decanter stopper from Trench 4, Context 002 (Photograph Bateman 2016)

Chapter 12 – Lithics and other traditional artefacts

12.1 Introduction

Aboriginal artefacts recovered from Boralga demonstrate finds typical of historical contact archaeology, with the study site encompassing adapted, post-European contact technology made from materials such as glass and metal, as well as traditional technology in the form of knapped stone artefacts, which are outlined in the following section. Other traditional Aboriginal items and cultural features at Boralga include ochre, grinding stones and scarred trees. Several worked stone pieces were visible on the ground surface within the eroded area adjacent to the lagoon, which may have been pre-European items, or knapped by Aboriginal occupants from the NMP camp, but only knapped items from excavated contexts were included in Table 12.1. Numerous attributes can be documented when conducting a technological analysis on lithics, many of which are beyond the scope of this thesis. General attributes outlined here are artefact type (flake, flaked piece and core), material type, colour, completeness, platform and termination.

12.1.1 Spatial distribution

Table 12. 1 Spatial distribution and MNI lithics, all trenches

Artefact Type	Trench	Context	Material type	Colour	Completeness	Platform	Termination
Flakes	4	001	Unidentified	Mid-grey	Broken LBF-medial	-	-
Overall Total T4		**1**					
	7	001	Unidentified	Red	Complete	Wide	Feather
		001	Chert	Red	Complete	Wide	Feather
		001	Chert	Light brown	Broken LBF	-	-
		001	Chert	Mid-brown	Broken TBF & LBF	-	Feather
		001	Quartz grained quartzite	White	Broken LBF-medial	-	-
		001	Crystal quartz	White	Broken TBF & LBF	-	Feather
Total 001 T7		**6**					
		002	Chert	Light brown	Complete	Wide	Feather
		002	Chert	Light brown	Complete	Wide	Feather
		002	Chert	Red	Complete	Wide	Plunging
		002	Quartz	White	Complete	Wide	Feather

		002	Quartz	White	Complete	Wide	Hinge
		002	Quartz grained quartzite	White	Complete	Wide	Feather
		002	Fine grained quartzite	Mid-grey	Broken LBF-medial	-	-
		002	Crystal quartz	White/red/mottled	Complete	Wide	Feather
Total 002 T7		**8**					
Overall Total T7		**14**					
	8	001	Quartz	Colourless	Complete	Wide	Feather
Overall Total T8		**1**					
	16	002	Unidentified	Dark brown	Complete	Wide	Feather
Overall Total T16		**1**					
Flaked pieces	7	001	Chert	Red	Broken	-	-
		001	Chert	Red	Broken	-	-
		001	Chert	Red	Broken	-	-
		001	Chert	Mid-brown	Broken	-	-
		001	Chert	Red	Broken	-	-
		001	Unidentified	Light/dark brown	Broken	-	-
		001	Unidentified	Black	Broken	-	-
		001	Crystal quartz	White	Broken		
Total 001 T7		**8**					
		002 **4**	Quartz grained quartzite	White	4 Debitage flakes	-	-
		002	Fine grained quartzite	White	Broken	-	-
		002	Quartz	White	Broken	-	-
		002	Crystal quartz	White	Broken	-	-
		002	Chert	Mid-brown banded	Broken	-	-
		002	Chert	Mid-brown	Broken	-	-
		002	Chert	Red	Broken	-	-
Total 002 T7		**10**					
Overall Total T7		**18**					
Cores	7	001	Sandstone	Light brown	5 scars		
Total 001 T7		**1**					
		002	Chert	Mid-brown	6 scars	-	-

		002	Chert	Mid-brown	6 scars		
Total 002 T7		**2**					
Overall Total T7		**3**					
MNI Trenches		**38**					

Table 12.1 shows that the overall MNI totalled 38 knapped items, which included four debitage pieces counted individually. Figure 12.2 shows that flaked pieces comprised the majority of the lithic assemblage (n=18, 47%), followed by flakes (n=17, 45%), then cores (n=3, 8%). The bulk of the lithic assemblage was derived from Trench 7 (n=35, 92%). Context 002 contained the majority (n=21, 55%), and Context 001 comprised 17 items (45%). Figure 12.1 shows and example of a chert core with six negative flake scars (two complete).

Figure 12. 1 Chert core from Trench 7, Context 002 (Photograph Bateman 2018)

12.1.2. Proportion of knapped stone

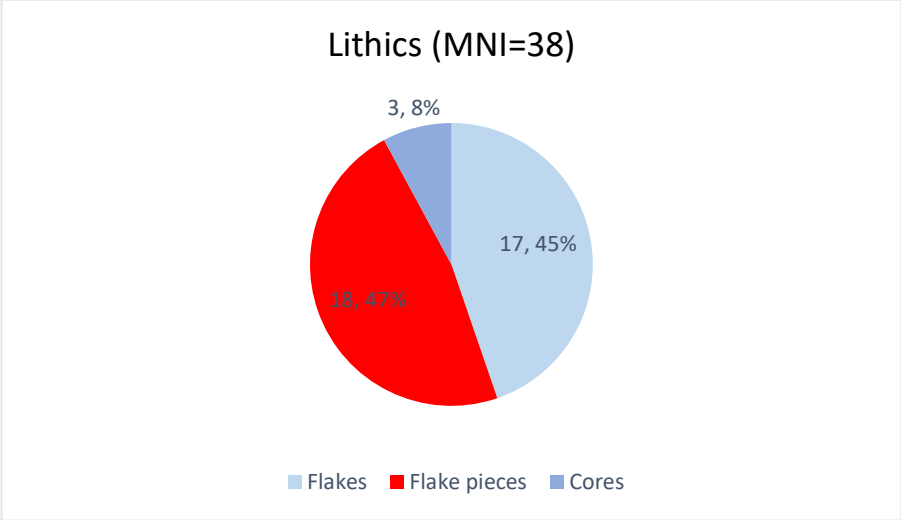


Figure 12. 2 Proportion of knapped stone, all trenches

12.1.3 Distribution of Knapped stone between trenches

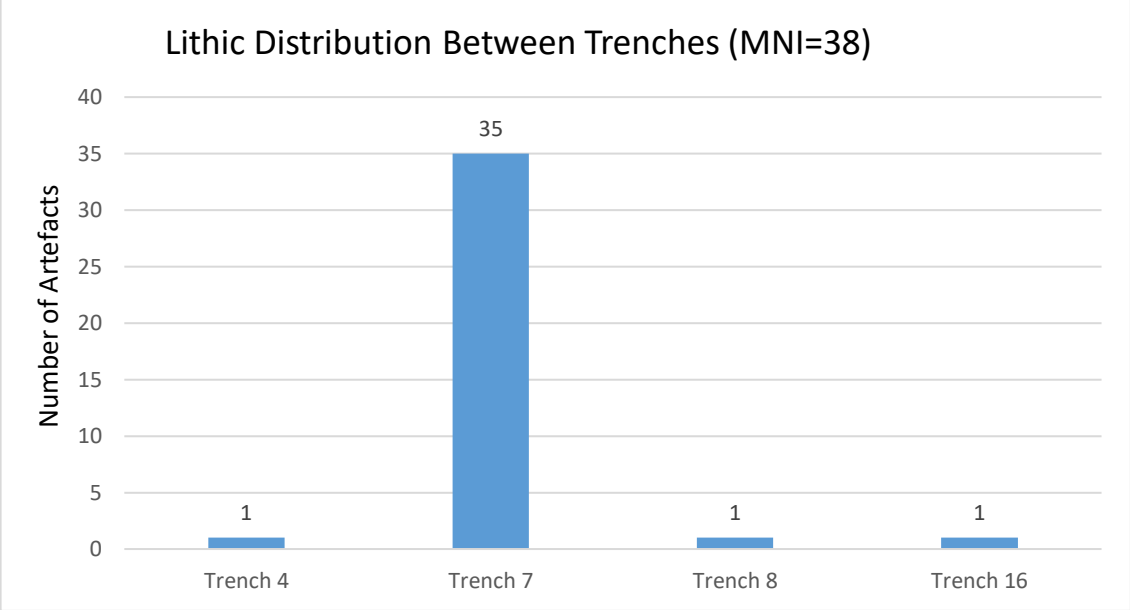


Figure 12. 3 Distribution of lithics between trenches

Trench 7 dominated the lithic assemblage with 35 knapped stone objects (92%). The remaining trenches contained only one item (3% each), one flake from Trench 4, one flaked piece from Trench 8, and one flaked piece from Trench 16 (Figure 12.3). Figure 12.4 is the only flake recovered with evidence of retouch.

Figure 12. 4 A broken flake (LBF-medial) with retouch on the distal margin from Trench 4, Context 001. Material type is unidentified (Photograph Bateman 2016)

12.1.4 Lithic material

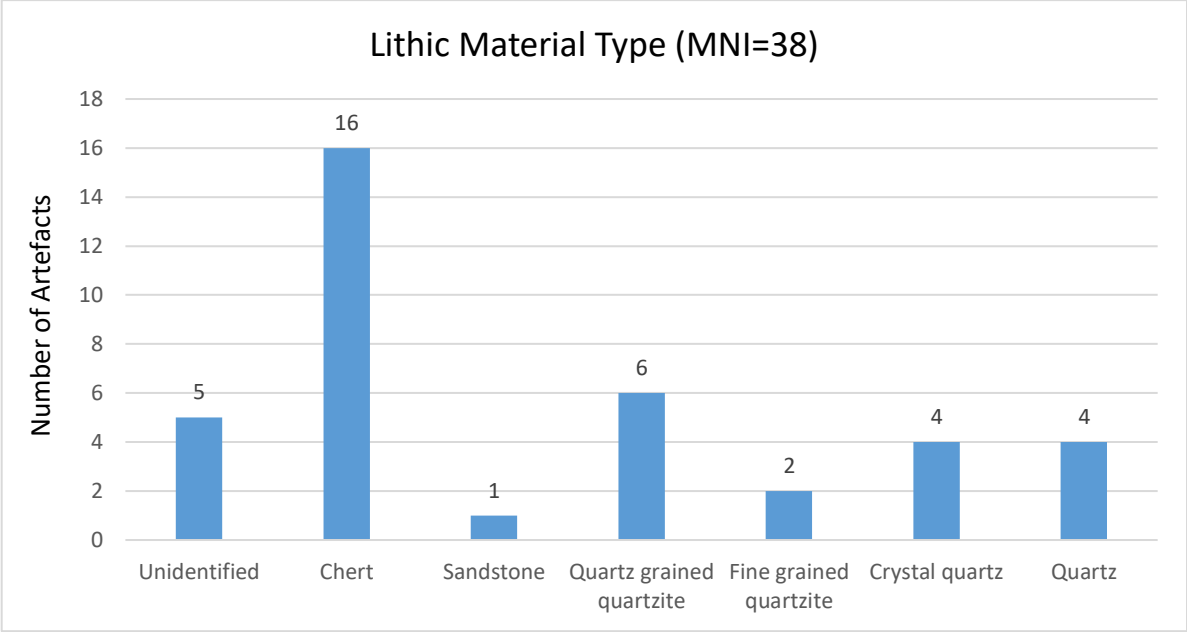


Figure 12. 5 MNI of lithic material

Figure 12.3 shows that chert dominated the assemblage for material type (n=16, 42%), followed by quartz grained quartzite (n=6, 16%), then unidentified material (n=5, 13%). Quartz and crystal quartz were equivalent with four items (11% each). Next was fine grained quartzite (n=2, 5%) and sandstone, which only comprised one item which was a core (3%).

12.1.5 Other traditional items and cultural features

Ochre

Two pieces of red coloured stone were recovered from Trench 7. The material type of the larger stone is unidentified (hard composition), whereas the smaller piece is most likely red ochre, as it is soft in texture and draws a mark without difficulty. The smaller piece only weighs 1 g and has no apparent striations. Although red ochre dominates the Quinkan rock art sites near Laura, this was the only fragment resembling ochre recovered from Boralga, and does not appear readily available within the immediate area; thus if it was used by the troopers it may be a manuport from a neighbouring area.

Figure 12. 6 Example of ochre on the right, found at Trench 7, Context 001 (Photograph Bateman 2018)

Grinding stones

Two grinding stones consisting of a millstone and a muller, were collected from the current ground surface, but were not directly associated with excavated trenches and therefore not included in Table 12.1. These grinding stones most likely pre-date the Boralga NMP camp (Figures 12.7 & 12.8). The material type is not known but is most likely a course type of sandstone. The grinding stones may be manuports, albeit from a nearby area as they are quite heavy.

Figure 12. 7 Millstone with slightly worn surface. Boralga NMP camp, surface find (Photograph Bateman 2016)

Figure 12. 8 Muller with wear on distal edge, surface find at Boralga NMP camp (Photograph Bateman 2016)

Scarred trees

Within and beyond the camp boundary is an assemblage of culturally modified Cooktown ironwood trees. Analysis of the trees by Noelene Cole has revealed that the scars were created using a variety of technologies both modern and traditional. The bark was most likely removed for building materials and manufacturing Aboriginal implements (Cole *et al*, 2020:7, 13). Further analysis of these trees is beyond the scope of this thesis.

Figure 12. 9 Tree with an oval scar (possibly woomera scar) with a steele axe cut across the centre (Photograph N. Cole 2016)

12.2 Results

Of the 38 knapped stone items recovered from excavated contexts, 35 came from Trench 7 (92%). A total of 16 objects were manufactured from chert (42%), which consisted of eight flaked pieces, six flakes and two cores. Knapped objects made from various forms of quartz numbered 16 (42%), including eight flakes and eight flaked pieces. Only one core was sandstone (3%), and five items were unidentified for material type (13%). The majority of lithic artefacts came from Context 002 (n=21, 55%) and mostly consisted of knapped flake pieces (n=18, 47%).

12.3 Discussion

The lithics recovered from excavated contexts consisted of knapped flakes, flaked pieces and cores, but the sample size was small. Many of the flaked pieces were anomalous in nature, and only one broken flake from Trench 4 had evidence of retouch. Even though the majority of lithics were recovered from refuse pits associated with living quarters (particularly the troopers' huts), it is impossible to know whether all excavated lithics were post-European contact items or not. Given the relatively high quantity of knapped glass recovered from Trench 7 presumably produced by Aboriginal occupants at the NMP camp, it is not surprising that knapped stone flakes were also present in relatively high numbers within this trench.

Much of the worked material was chert, outcrops of which can be found around Kings Plains, which is an east-west chain of connected alleviated basins around 24 km long, linking the Annan and Normanby Rivers (Lucas 1962:7). Ridges around the Palmer-Hodgkinsons uplands within the Cooktown area also have high hillcrests formed from chert (Lucas 1962:8), fragments of which may be carried along associated rivers. Significant quartz veins are also present within the Hodgkinson formation including the quartz-vein hosted gold mineralisation and derived alluvial deposits of the Hodgkinson and Palmer goldfields (Withnall & Cranfield 2013:22).

Chapter 13 - Interpretation

13.1 Introduction

This chapter will discuss implications of the analysis of cultural material recovered from the Boralga NMP camp. The aims were to locate and confirm the structure and organisation of the camp, and provide a more nuanced and detailed picture of how individuals lived within its confines, with a focus on the negotiation and expression of the domestic space. Thus, the objective of this thesis was to examine the material signature at Boralga and compare the results to the historical record to explore how the expression and negotiation of the domestic space carried out by former occupants at Boralga reinforced social and cultural identity. The framework of 'place' was used as a lens to evaluate aspects of daily practices, which informed cultural identity and the social and domestic relationships of the Aboriginal troopers. Along with oral history and archival documentation, the analysis of cultural material from archaeological excavations at the study site has given a deeper understanding with regard to specific activities relating to native police life through tangible, definitive artefacts. This chapter will endeavour to evaluate the outcomes in order to establish the most plausible interpretation of daily, domestic life at Boralga.

13.2 Ascertaining and confirming the structure and organisation of Boralga

13.2.1 Layout and features of Boralga NMP Camp

Early plans drawn by Sub-Inspector Stanhope O'Connor in 1877 (Figure 13.1) show the Police Reserve on the Laura River to be covering an area of 238.5 acres (96.5 hectares). The plan encompasses most of Boralga swamp and extends slightly north of the Telegraph line to the Laura River (Cole 2004:163; Cole *et al*, 2002:139) and includes a complex of six buildings that have changed and evolved in layout over time (Lowe *et al*. 2018:689). According to a report by the travelling Inspector, Hervey Fitzgerald, to the Commissioner of Police in 1894, there were seven buildings on site at camp closure, although the archaeology revealed eight. The building arrangements adhered to a fairly standard layout typical of most police camps, as they usually encompassed replicable, essential elements (Lowe *et al.* 2018:688).

The Inspector's report stated that the buildings consisted of the officer's quarters, the constable's quarters, an office, a store, a saddle and forage room, a shed used as a forge and for cart storage and the troopers' quarters. Although the original plans drawn by O'Connor in 1877 show the camp to be in a quadrangle design, this formation appeared to evolve into a more ad hoc layout later on. It is likely that the varying number of buildings observed over time (Figure 13.2) is a result of equipment and materials changing in accordance with resources, staffing and seasons during the extended life of the camp (Lowe *et al.* 2018:689). Some of the inconsistencies may be explained by the fact that officers occasionally built their own quarters, such as Joseph Judge, who built his own quarters in 1881 (Laura Police Station File, 2 May 1881). Orders and discussions pertaining to timber and iron documented in correspondence by subsequent officers at Boralga indicate that there was possibly more than one building phase, however the replacement of building materials may also explain this line of communication.

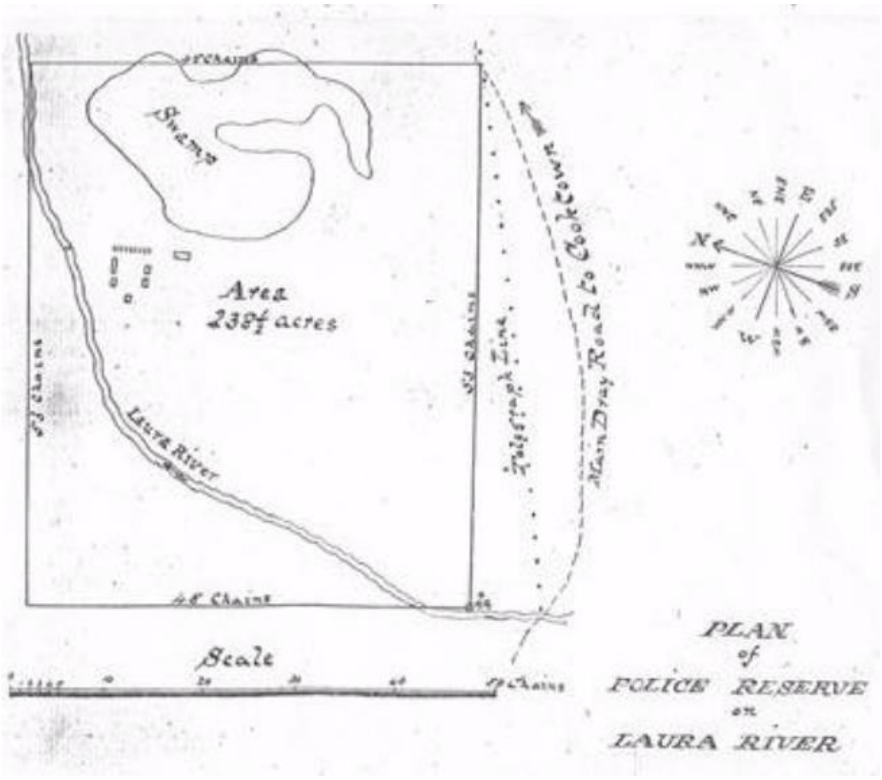


Figure 13. 1 O'Connor's plan of the police reserve on the Laura River, 1877. Queensland State Archives A/40117 (Cole 2004:163)

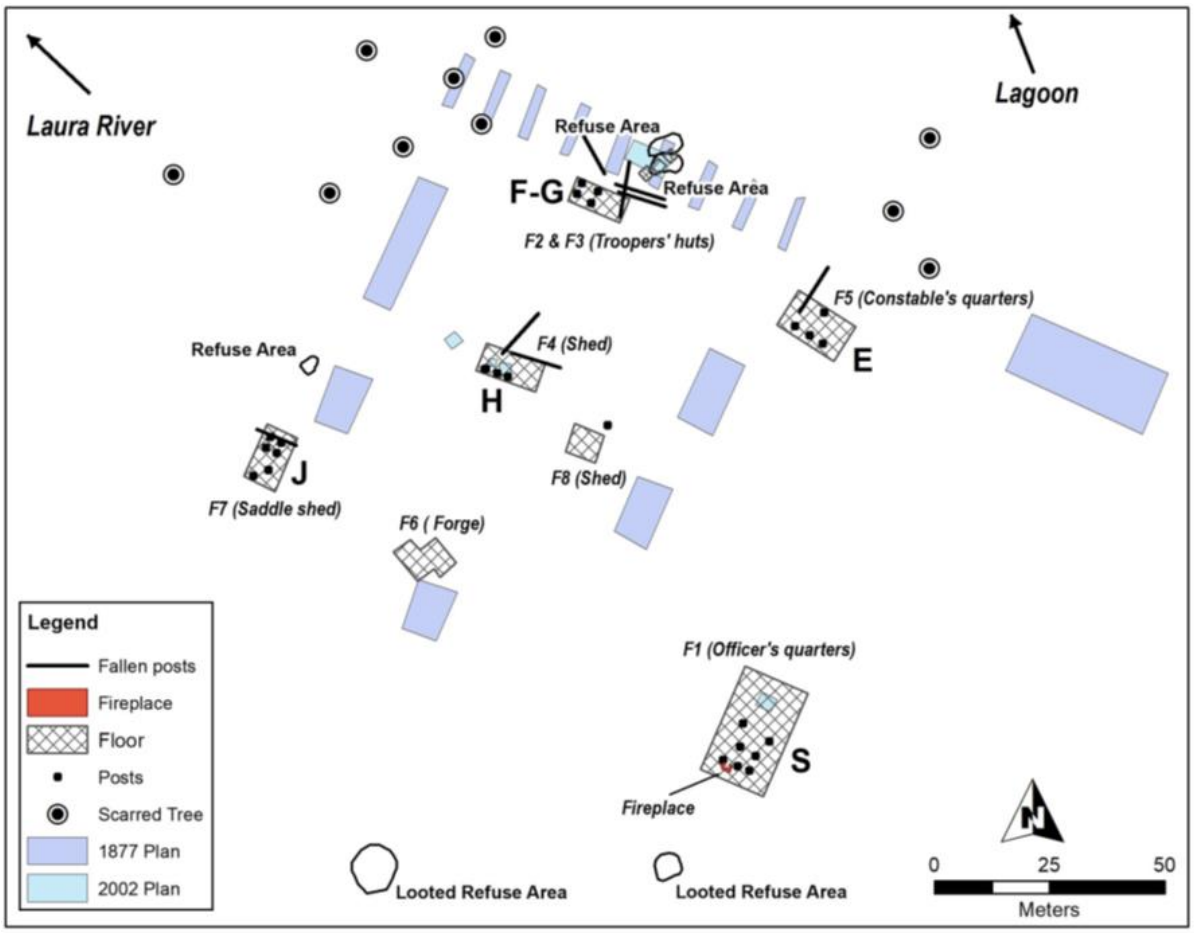


Figure 13. 2 Site map of the Boralga NMP camp superimposed over O'Connor's 1877 'Plan of Police Reserve on the Laura River', which shows six large buildings (QSA A/40117). Also, Cole *et al's*, (2002) site plan with five clusters of structural remains: E – constable's quarters; F-G -Trooper's huts; H-shed, possibly blacksmiths forge; J-saddle shed; and S-officer's quarters (Lowe et al, 2018:689)

Another historic map drawn in 1883 (Figure 13.3 below), shows several structures and features comprising the settlement of Boralga, such as Jones' Public House (Boralga Homestead), the Police paddock, the NMP camp, the Laura River, and tracks to the Palmer (Cole 2004:161-162). However, the map does not depict the location of individual structures within the NMP camp.

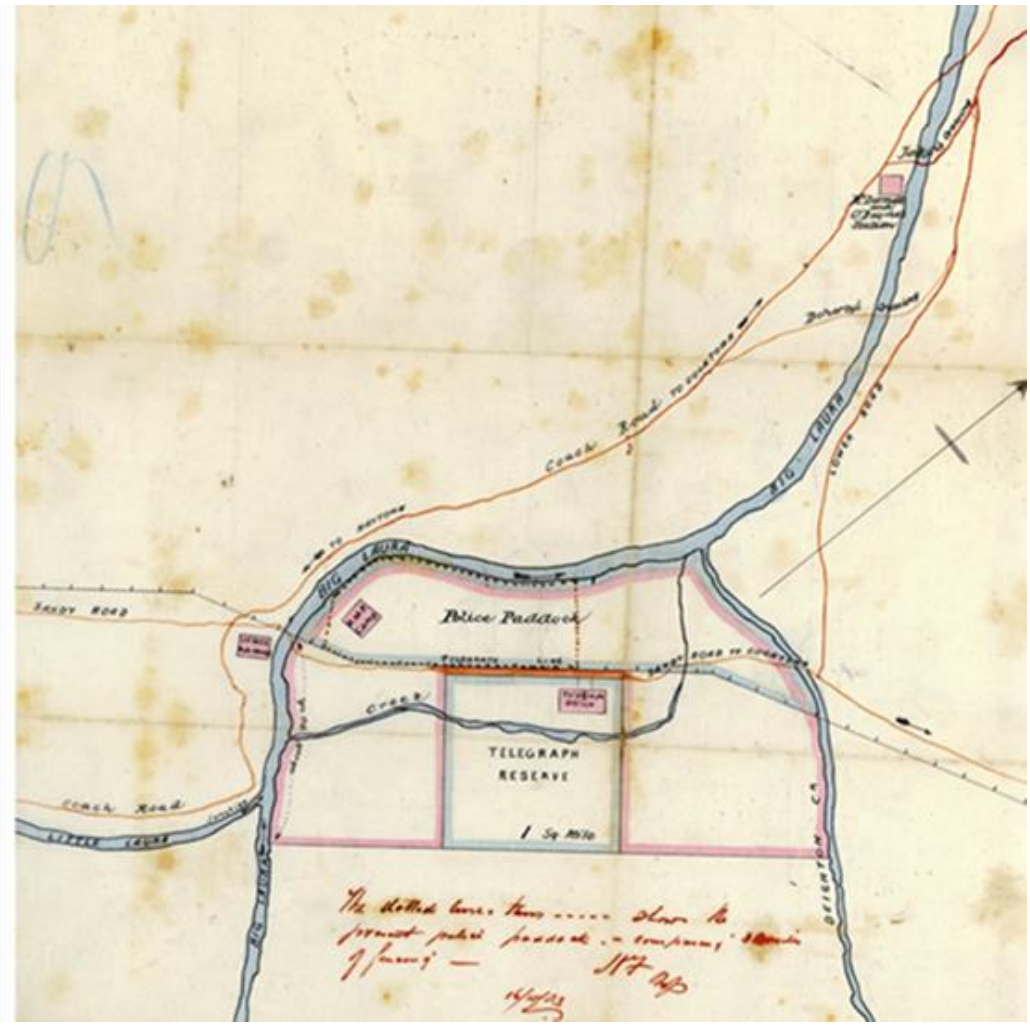


Figure 13. 3 Historic plan of Cook district showing Laura, Little Laura, Deighton Rivers, Police Paddock, telegraph reserve, McDermott and O'Beirne's station (Laura station) and various tracks to Cooktown, 1883, Queensland State Archives, A/41364 (Cole 2004:164)

3.2.2 Buildings at Boralga NMP camp

Materials used to construct the buildings at NMP camps reflected their ephemeral nature. Some of the more makeshift camps were constructed of little more than one-sided bough shelters or canvas tents that could be quickly moved and re-erected as needed (Barker *et al*, 2019b:9). Even the longer lasting camps such as Boralga often had very inexpensive, expedient structures that could be easily dismantled, sold or reconstructed elsewhere (Lowe *et al*. 2018:686). Figure 13.4 is a photograph of Sub-Inspector Charles Marrett's quarters at Boralga in 1884, and shows that the original structure

was made from locally available raw materials such as split slabs of bush timber for the walls and a bark roof. Many of the structures at Boralga had ant bed flooring, which had been in use in Queensland from as early as the 1850s and became very well known in northern Queensland by the 1880s (Lewis 2014, cited in Lowe 2018:687).

Figure 13. 4 Sub-Inspector Charles Marrett, his wife Eugenie and an unknown officer ouside the officers quarters at Boralga NMP camp, 1884 (Qld Police Museum 0059)

The senior officer's quarters were always the largest and most substantial building at NMP camps, and usually consisted of several rooms surrounded by a verandah; many had detached kitchens with stone fireplaces (Barker *et al*, 2019b:10). A slightly smaller building which usually comprised one or two rooms, was constructed for the constable or camp keeper's quarters. Both structures were generally separate from the rudimentary troopers' huts, which were typically no more than a single room constructed of bark attached to a wooden frame, with a bark thatched roof (see Figure 2.6). The various buildings at Boralga underwent several changes during its lengthy existence, and archival descriptions in 1896 noted substantial upgrades in the infrastructure. These included the officer's quarters, which had been increased to six rooms, a kitchen made of slabs with galvanised iron roofing, and the constable's quarters, which had two spare rooms other than the main living space, a shed used as a forge and for storing carts, a saddle and forage room, and several trackers' quarters constructed of round bush timber with iron roofing (Barker *et al*, 2019b:10).

13.2.3 Archaeological investigation of camp layout at Boralga

Various definitive artefacts derived from the excavations have confirmed that the layout at Boralga encompassed the expected replicable and essential components that encapsulated the successful implementation of an NMP camp. Of the identifiable vessels and objects (MNV & MNI = 2168) excavated from the 20 trenches, many items assisted in verifying several structures within the camp layout. The geophysics findings and archaeological excavations confirmed that the current building locations did not correspond with the original plan drawn by O'Connor, however the archaeological evidence is consistent with the location of at least three of the buildings indicated in Cole *et al's*, (2002) site plan (see Figure 13.2): such as the officers' quarters, forge and troopers' huts, which were also mentioned in the archival descriptions regarding upgrades to infrastructure in 1896. The current locations of these three buildings were originally surveyed and mapped by a team including Aboriginal community members Tommy George and George Musgrave and project team archaeologist, Noelene Cole in 2000.

Officer's quarters

Trench 5 was located over the officer's quarters, which comprised a stone hearth, several remnant structural posts and a concrete-pebble conglomerate path that led to a raised area made of the same material, a feature that would have taken some time and effort to create. This raised area was excavated using a 50 x 50 cm square located on the approximately 4 m diameter raised circle, the surface of which was covered with pebbles around 5-10 cm in size and sections of concrete. However, this excavation did not reveal its function, as no artefacts were uncovered. It is possible that this was a wet area used for bathing or laundry, but no structural post holes associated with the mound were apparent. Excavations within the officer's quarters were abandoned due to a lack of artefacts, and exploratory excavations in proximity to the officer's quarters at Trenches 8, 9 and 11, and secondary refuse pit Trench 12, also revealed low artefact densities. However, the primary refuse pits at Trench 3 (looted) situated a short distance away, and Trench 4, located on the slope of the hill just below the officer's quarters, were rich with a wide range of objects.

The relatively close proximity, in addition to artefact diversity and type, confirmed that these pits were associated with higher ranked individuals, such as an officer (Eichelberger 2019:103; Quirk 2007:38). Greater numbers of transfer printed ceramic forms in different patterns were recovered, with the majority derived from the NMP horizon at Trench 4, Context 002 (91%). These included

serving items such as tureens, porcelain teaware and matching tableware sets, which were often linked to displays of more formal dining behaviour (Miller 2000:10, 16). Also recovered from Trench 4 was a child's porcelain tea set (mostly from Context 002, but some fragments came from Context 001), an ointment pot from Context 002, and three stoneware utilitarian storage vessels, also from Context 002. Trench 3 contained a small quantity of higher quality vitreous white granite, representing 10% of the total ceramic assemblage at Trench 3, compared to the more porous refined earthenware which represented <1%. Stoneware made up the bulk of the ceramic assemblage for Trench 3 (84%), indicating the storage of food or drink.

Trench 4 contained glass items with a greater diversity of tableware types, such as pressed and cut glass objects, including an amethyst (solarised) frosted bowl with a matching lid from Context 002, a blue hobnail style glass vessel and a handle belonging to a pitcher or decanter from Context 002, and an ornate cut crystal stopper from an alcohol decanter, also from the NMP layer. Identifiable glass items from Trench 3 mainly comprised a wide array of alcohol bottle fragments (90%), with a small quantity of vinegar (3%), non-alcoholic drink (1%) and sauce bottle glass (2%). However, the majority of glass by weight from Trench 3 was derived from Context 000, as a result of a heavy gin bottle base and an almost complete wine or champagne bottle recovered from the contemporary ground surface which represented 80% of the overall assemblage by weight. Context 001 contained 10% of the glass items found, and Context 002 only comprised 7%. The majority of identifiable glass objects from Trench 4 came from the NMP layer at Context 002, which included luxury items such as vinegar bottle fragments (6%), sauce (4%), perfume (<1%), medicine bottles (3%), and alcohol bottle fragments representing 73% of the assemblage at Context 002, with 65% being wine or champagne bottle fragments. Several items from these two refuse pits, particularly Trench 4, were consistent with objects recovered from higher-status officer assemblages from forts in the United States, which also contained serving vessels, and alcohol decanters (Andrews & Mullins 1989; Scott 1989).

Only seven structural fasteners were found in Trench 3, Context 002, but the metal assemblage from the NMP layer at Trench 4 contained a combination of ordinary domestic and practical items, such as a lock plate, three drawer handles (one ornate), a thimble, harmonica, knife handle, kettle spout, 70 structural fasteners, as well as horse paraphernalia and a uniform jacket button. The small faunal assemblage revealed that the bone was mainly from the appendicular skeleton (forelimb, hindlimb

fragments) which are typically lower economic utility parts of the animal from both cattle and macropods. This is in contrast to what was expected, as the other higher status artefacts located in Trenches 3 and 4 would indicate a penchant for the superior portions of the animal. This may reflect deficits in ration funding, which possibly affected both officers and troopers. However, the overall dearth of cattle bone at the site could also be attributed to the fact that barrelled beef may not have contained bone, and that beef obtained from contractors was often salted and boned before it was purchased (Binnie 1944:28).

No bone was recovered from Trench 3, but a small quantity of both domestic and native fauna, including cattle (NISP=4, NMI=1), macropods (NISP=5, NMI=2) and bird bone (NISP=5, NMI=1), was recovered from Trench 4, Context 002. Again, the presence of native fauna within the NMP occupation layer suggests possible food rationing shortfalls. A small quantity of mussel shell (MNI=1, 5 g) was recovered from Context 002, which may have been collected from the nearby lagoon for consumption. Oyster shell was also recovered (MNI=2, 5 g) from Trench 4, however it was found in Context 001, and therefore may not have belonged to the NMP camp occupants. Nevertheless, oyster was not regarded as a luxury food during early settlement and was sold cheaply to people of all socio-economic backgrounds (Australian Food History Timeline 2019:1). A total of 91 bullets were found in Trench 4 (which is associated with the officer's quarters), with 64 recovered from Context 002, further indicating that this pit was not directly associated with a utility building such as a forge or storage shed, but housed armed police personnel. Other objects recovered from the NMP layer at Trench 4 included: writing slate and pencil fragments (77 g); a pestle; a bone toothbrush; a faux emerald item of costume jewellery; a cut crystal lamp decoration; and two lamp components.

Figure 13. 5 The team excavating the officers' quarters at Trench 5. Remnant structural posts are visible in the background and stone hearth is in the foreground (Photograph Bateman 2016)

Troopers' huts

Several exploratory trenches were excavated in proximity to the troopers' huts area at Trench 7: Trenches 6, 13, 14, and 15, which all turned out to be low in artefact density. Trench 2 was located partly inside and outside of a possible troopers' hut structure to capture activity in both areas, and was sited immediately flush with the western posts (presumed western wall) to capture the edges of the interior, whereupon very few artefacts were located. Trench 18 was also sited over a possible hut to the south of Trench 16 in order to sample the ant bed flooring associated with the structure. Trench 18 was sited east of two rows of posts that indicated at least part of a structure. The row of westernmost posts were lower than the row of easternmost posts, suggesting a possible skillion verandah, but Trench 18 was sited inside the structure proper. Trench 7 was located in an open, grassy area beside the lagoon, and although there were no visible surface artefacts, the geophysics suggested a large subsurface anomaly indicated by the magnetometer and there were also many metal detector hits. A section in the southern wall of Square 1 showed a possible post hole in the south western corner, with a noticeable pit or depression surrounding it, which was also identified in the adjoining Squares 2 and 3. A second post hole was identified in the eastern wall of Square 5.

igure 13. 6 Bryce Barker using a metal detector to establish spatial patterns at the troopers' huts area (Photograph Bateman 2016)

A B

Figures 13. 7 A. Trench 7, Square 1, southern wall showing cut and fill with a post hole on the right. B. Trench 7, Square 5 eastern baulk showing a posthole (Photographs Barker 2016)

The primary refuse pit within this area revealed a rich array of artefacts, including a large number of knapped glass items manufactured from thick wine or champagne bottle bases (n=140), with the bulk of the knapped glass objects located in Context 002 (n=80), thus confirming that the remnant structures and features associated with this refused pit belonged to the troopers' area. Even though most of the glass assemblage consisted of alcohol bottle glass used for knapping, the evidence shows that a small portion of the troopers' wages was spent on gustatory foods not issued in their daily rations. For example, eight J. T. Morton vinegar bottle body fragments (equal to one bottle), and a shoulder fragment from a soda bottle was recovered, which would not have been useful for knapping (see Appendix 11 for a list of troopers' rations and supplies). Although these items would have been additional to their daily rations, they equated to only two luxury items, or 7% of the overall glass count from Trench 7, compared to 19% recovered from the officers' assemblage at Trench 4.

Also included in the glass assemblage were various glass beads, including four seed beads from the NMP occupation layer at Context 002 and one deeper at Context 003 (see glass discussion section 5.12 outlining the significance of glass seed beads). A total of 45% of the faunal assemblage at Trench 7 came from Context 002. The faunal assemblage comprised a small quantity of cattle bone (NISP=1, MNI=1), but the majority derived from native fauna (NISP=22, MNI=9) such as: macropods (NISP=13, MNI=3); birds (NISP=4, MNI=1); fish (NISP=2, MNI=1); a bush rat (NISP=1, MNI=1), possum (NISP=1, MNI=1) and a snake (NISP=2, MNI=1). Metal structural

fasteners were in abundance within this area (MNI=336), representing 46% of all structural fasteners recovered from the site, suggesting the dismantling of multiple buildings within this area or perhaps destruction was a result of decay. The large quantity of nails suggests that the hut was assembled using European rather than traditional methods, which would not have used nails at all. Additionally, various police-related items were recovered, such as seven uniform jacket buttons (four from Context 001 and three from Context 002), a military snake belt buckle from Context 001 and 114 items of ammunition (56 recovered from Context 002 and 54 from Context 001), further confirming that these huts belonged to armed police personnel, such as troopers.

The lack of ceramics and luxury domestic items associated with these buildings is suggestive of lower ranking individuals residing in this location. Very few tableware and teaware ceramic items were recovered except for dinner plate fragments from Context 002 (MNV=1), one small rim of a saucer from Context 001, and one cup fragment also from Context 001. Interestingly, the remaining ceramic objects included a chamber pot from Context 002, a porcelain telegraph insulator from Context 001, a crock or demijohn from Context 002, an ointment pot from Context 002 and small Chinese figurine from Context 003. The vast quantity of clay tobacco pipes derived from both Contexts 001 and 002 at Trench 7 supported the notion that a larger number of people were smoking within this zone. In total, 172.8 g of clay pipe fragments came from this area, representing 79% of the clay pipe assemblage at Boralga. See Appendix 11 for tobacco rations issued to the NMP which was usually around ½ - 1 oz of tobacco per day. Lastly, most of the stone lithic assemblage was derived from Context 001 (n=6), and Context 002 (n=8) at Trench 7, totalling 92% of knapped stone artefacts recovered from the study site.

Maintenance of horse's hooves was also carried out within this area, since the majority of horseshoe nails were recovered from Trench 7. A total of 101 horseshoe nails were discarded into the refuse pits, demonstrating that it is highly likely that the troopers were taught to remove horseshoes in order to trim hooves, which outgrow the shoe around every six weeks (RSPCA 2019). If this work was not carried out the internal workings of the hoof, as well as the tendons and ligaments, would become damaged, causing the horse to become lame (RSPCA 2019). Four shoes on six horses stationed at Boralga equate to the removal of 24 horseshoes every six weeks in order to trim hooves, and according to Terri Drennan, farrier at the Cobb and Co museum (*pers. comms.* 24/02/2019), the same shoes may have been refitted several times. Section 44 of the 'rules and discipline for the

NMP' (*Government Gazette vol. VII*, dated 10 March 1866), states that 'each officer is permitted to employ a trooper as a groom when not interfering with duty', adding weight to the argument that the troopers were disciplined in horse care. Although hoof trimming may have been carried out at the troopers' huts area, the horseshoeing process would have been carried out by the camp keeper at the forge shed, as this process required blacksmithing to ensure a correct fit. Changing the horseshoes for new ones would have been necessary every three to four months, depending on the type of ground travelled, and how often the horses were used (Terri Drennan, *pers. comms.* 24/02/2019). A total of 14 horseshoes displayed frontal wear (some in a highly worn state), which according to Drennan, would indicate that vast distances were travelled before the shoes were changed, and that the same shoes may have been reused several times. This frugality was probably a result of financial constraints and the availability of shoes. Only one horseshoe was found at Trench 7.

Figure 13. 8 Bryce Barker excavating the Troopers' huts area at Trench 7 (Photograph Bateman 2016)

Forge

Trench 10 was located within the blacksmith's forge or farrier's area, originally indicated by a large geophysics anomaly, and contained the majority of metal objects recovered from Boralga. Various metal items were visible on the ground surface surrounding the trench, including several horseshoes and a thick coil of wire. Excavations at Trench 10 uncovered 26 horseshoes from Contexts 002 and 003, which equated to 70% of all horseshoes found at the study site. Also recovered from Trench 10 were 65 horseshoe nails (comprising 34% of all horseshoe nails recovered), only eight of which

were complete. The process of changing shoes was most likely undertaken by the constable or camp keeper, and according to section 59 of the rules and discipline for the NMP (*Government Gazette* 1866), 'when horses are taken to the forge, an officer is always to accompany them', indicating that authorities did not trust the troopers alone with the horses, possibly because a trooper deserting on horseback would prove difficult to catch, or they did not have confidence in the troopers' blacksmithing skills. Other metal artefacts derived from Trench 10 included three pieces of wire from Context 001 and 002, horse harness buckles from Context 002 (n=1) and Context 003 (n=2), a gate hinge from Context 002, two hoof rasps (one from Context 002 and one from 003), a stirrup from Context 003, a trouser button from Context 002 and structural fasteners from Context 002 and 003 (n=51, 7%), including a spike from Context 003. A small quantity of non-diagnostic glass fragments and melted glass from Context 002 and 003 (w=97.6 g, <1%), as well as one porcelain plate fragment from Context 002 and few unidentified ceramic fragments from Context 002 and 003 (mostly small earthenware pieces) were recovered (w=10.4 g, <1%). Four items of ammunition were also found in Contexts 002 and 003: two .577 Snider or Martini-Henry cartridges and two .422 revolver cartridges. No bone was located in Trench 10.

Figure 13. 9 Small horseshoe which is very worn at the front and to the side, from Trench 10, Context 002 (Photograph Bateman 2016)

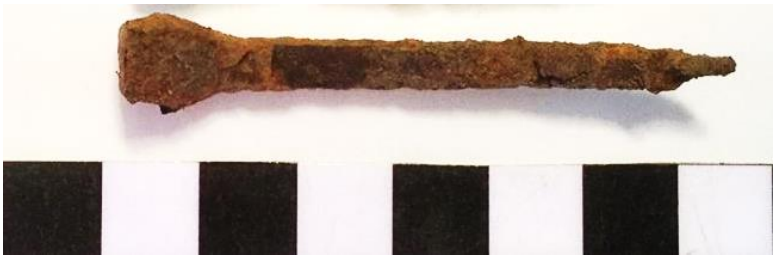


Figure 13. 10 Example of a horseshoe nail from Trench 10, Context 003 (Photograph Bateman 2016)

Constables' quarters?

Trench 16 was closest to what was identified as a possible saddle shed according to Cole *et al's*, (2002) site plan, however the contents of this Trench would indicate that it was a domestic deposit belonging to the quarters of an individual with some degree of rank, such as a constable or camp keeper (another constable's quarters is shown at F5 on Cole *et al's*, 2002 site plan, see Figure 13.2). Trench 16 was sited over a geophysics anomaly on the north western margin of the site. The distribution of the artefacts revealed that they were probably scattered on the original ground surface rather than dug into a pit, as all artefacts were sitting at the base of Context 002, and at the interface with 003, and most likely sitting in depressions in the original ground surface. Further exploration revealed possible ant bed flooring approximately 10 m north west of Trench 16. The building that this deposit was associated with is unknown, but the types of artefacts recovered indicate a range of domestic activities, including more formal dining behaviour.

The glass items mainly consisted of bottle fragments from Context 002 (n=134), the majority of which derived from alcohol bottles (n=100), including wine or champagne, schnapps and gin. Also from Context 002 were non-alcoholic drink bottle fragments (n=4, 3%) as well as luxury items such as sauce (n=1, <1%), vinegar (n=19, 4%), and medicine bottle fragments (n=11, 8%), which were relatively abundant within this trench. Three glass fragments from a frosted bowl or vase were also recovered from the NMP layer. Fifteen different ceramic object types were identified, including two transfer printed dinner plates from Context 002, two tea cups, four saucers and a teapot from Context 002, as well as two coffee cups (one from Context 001). The technological ware types were a combination of white granite (1318.4 g, 34%), refined earthenware or whiteware (1992.8 g, 51%) and porcelain (479.6 g, 12%). In particular, the serving items from Context 002: two porcelain egg cups, a tureen and a serving platter with an Asiatic pheasant design can be associated with displays of more formal dining behaviour (Miller 2000:10, 16). Other domestic ceramic items from the NMP layer included a jug, mixing bowl and clay smoking pipes (MNI=5).

Only two bones were identifiable within Trench 16, Context 002: teeth from a pig and a bird bone, which offer little information regarding either social status or diet. All identifiable metal objects within Trench 16 were from Context 002, and comprised practical items such as a cork screw, thimble, 16 shoe grommets, a fork, a brass hinge and a wax vestas box. Other metal items from Context 002 relating to the policing objective included four metal NMP jacket buttons and

ammunition that comprised seven 20-gauge shotgun cartridges, 15 Snider or Martini-Henry rifle cartridges and four revolver cartridges. The quantity of ammunition recovered from deposits relating to living quarters belonging to higher ranking individuals is 117 compared to 114 items found within the troopers' huts area, a relatively similar quantity. Two miscellaneous objects located in Trench 16, Context 002, included a bone toothbrush, indicating that personal hygiene activities took place at this location, and a harmonica reed, suggesting participation in leisure activities. A porcelain doll's head and limb recovered from the NMP layer indicated that children also occupied this zone. Further evidence supporting this was a glass marble and writing slate fragments, also recovered from Context 002.

13.3 Living within the confines of the camp - negotiation and expression of domestic space

13.3.1 Hegemony and the domestic space

Hegemony and the enforcement of discipline by NMP officers would have been an ever-present restriction on the expression of domestic space negotiated by the Aboriginal troopers. An inescapable aspect of the NMP was hierarchy. In 1872, the NMP had a command structure ranging from higher officials, such as the Commissioner and Chief inspector, to Inspectors, sub-inspectors, acting sub-inspectors, camp sergeants and constables, with the troopers positioned last in the chain of command (Richards 2008:213). A common objective within all military ranks revolved around enforcing discipline amongst subordinates, and maintaining control of the troopers was always an important priority for NMP officers, and ultimately influenced the military style nature of the police force in colonial Queensland (Richards 2008:153). Procedures outlined in Section 8, in 'rules and discipline for the NMP' state that:

> Every subordinate is to receive the lawful commands of his superior with deference and respect, and to execute them to the best of his power; and every superior in his turn is to give his orders in the language of moderation and of regard to the feelings of those under his command (*Government Gazette vol. VII*, dated 10 March 1866).

Procedures for enforced discipline were similar to those implemented on the American frontier, with the United States Army regulations stipulating that, 'all inferiors are required to obey strictly, and to execute with alacrity, and good faith, the lawful orders of the superiors appointed over them' (United States War Department 1861). This parallels the Queensland NMP system with regard to

the military style nature of sanctioned, institutional inequality through the hierarchy of rank and command, which was exacerbated by existing social inequalities. Discipline aimed towards troopers was often enforced furtively by officers in NMP camps using varying techniques, which ranged from cruel abuse such as floggings, mental manipulation and extra-judicial executions (see Appendix 24 regarding troopers shot dead), through to rewards such as cricket bats and balls, and money prizes for shooting competitions amongst the troopers, provided by Sub-Inspector Stanhope O'Connor from his own private income (Richards 2008:153).

The artefacts derived from Boralga offer insights into the cultural convergence between the Aboriginal troopers and white officers occupying the same domestic space. The presence of clay smoking pipes, writing slates, a marble, tin whistle, medicine bottle, bone toothbrush and ceramic chamber pot recovered from the troopers' huts area, are all markers of white civilisation. Whether the Aboriginal troopers at Boralga willingly or reluctantly conformed to using these European goods is ambiguous, as almost all negotiation and expression of domestic space was infused with relations of power. Nonetheless, once confined to the boundaries of the camp, troopers (and their families) would have found it difficult to reject the various daily supplies associated with recruitment, such as food rations, medicine and tobacco, if not wages.

13.3.2 The troopers' negotiation of the domestic space

Conforming to European military and civilisational standards within the domestic space at NMP camps was inevitable for troopers, and the two contrasting cultures were in many ways homogenised, although Raibmon (2003:85) claims that Aboriginal people did not express themselves in the same way as non-Aboriginal people within these settings. According to European ideals, some of these domestic objects represent an "assumed reflection of the individual's inner moral state". However, negotiation of domestic space and the adjustments Aboriginal people made to nineteenth century colonialism suggest a narrative in contrast to any straight forward relationship between 'outward form' and 'inner nature' (Raibmon 2003:85), since sometimes conforming to European standards within new locations was literally a façade concealing traditional practices (Raibmon 2003:85). The development of emotional and sentimental bonds between people and place (or perhaps what the place formerly was) is ever-present and ultimately brings together the material formations at a geographic site, along with the meanings we invest in them (Altman & Low 1992; Gupta & Ferguson 1997). This notion was evident in part at Boralga, demonstrated by the troopers'

utilisation of European technology to carry out traditional cultural practices, which included knapping glass flakes from bottle bases, and the possible modification of metal objects such as horseshoes, intended for spear points. As there were very few European domestic items recovered from this area, it could be argued that the troopers and their families may have spent more of their time outside of their huts. Aboriginal peoples negotiated and expressed the domestic space differently to Europeans, and the form and content of these locations did not expose the interior of the occupant's sense of self (Raibmon 2003:89).

Information gathered from archival documents, combined with evidence provided by artefacts from the troopers' huts area at Boralga, assisted with understanding the daily activities carried out by the troopers. As addressed in the excavation context overview in section 3.5, the majority of NMP artefacts recovered from Trench 7 or the troopers' huts area were found within the first 10 cm below the current ground surface (Context 001 and 002). The information gathered showed that military and domestic activities included patrols (NMP Rules Section 17:259, 47:260 & 51:260; archaeological evidence in the form of 114 ammunition related items for military issue rifles from Trench 7); drill (NMP Rules Section 14:257, supported by archaeological evidence from Trench 7 comprising a military snake buckle, two uniform buckles, and seven military jacket buttons); horse related activities and care (NMP Rules Section 30:260 & 46:260; supported by archaeological evidence comprising 123 horseshoe nails, 12 harness buckles and various harness parts); target practice (NMP Rules Section 38:260; also archaeological evidence comprising 114 cartridge cases and projectiles); assisting with yard and building maintenance (NMP Rules Section 14/3:260 & 53:260; and archaeological evidence in the form of 336 structural nails, 14 spikes, wire and cables); tending to personal care and hygiene (archaeological evidence comprising a bone toothbrush, a chamber pot and a lid fragment from an ointment pot); and the upkeep of uniforms (NMP Rules Section 13:259; and archaeological evidence in the form of 3 thimbles).

Other activities undertaken by the troopers included: hunting native fauna for food consumption for themselves and possibly their families, as well as supplying food for officers when out on patrol (Carr 1861; and archaeological evidence in the form of a variety of native faunal remains and lead shot); chopping wood for the campfire (archaeological evidence comprising a metal axe head, and charcoal dispersed between a variety of burnt faunal remains near the troopers' huts); smoking tobacco (rations for troopers always included tobacco - see Appendix 11; supported by

archaeological evidence in the form of 44 smoking pipes) and knapping glass and stone (140 knapped glass artefacts and 14 stone lithics). Evidence including patrols, drill and target practice has shown that the negotiation and expression of the domestic space for the troopers may have been greatly restricted by hegemony and military duties, as well as tasks necessary for survival, however the preservation of some cultural practices was maintained through turning non-traditional objects into traditional forms and hunting native fauna, thus maintaining a connection to their culture and creating a sense of place that has more value and meaning.

Figure 13. 11 An NMP officer and troopers on parade, camp and date unknown. The small size of the troopers and their horses would indicate that many were boys rather than full grown men (State Library of Queensland, Neg. 31246; Accession No. 9677014)

13.3.3 Aboriginal women and domestic space

Very little has been recorded with regard to Aboriginal women and their negotiation of the domestic space within NMP camps, with the only information gathered often from European accounts. Therefore, investigating the roles of Aboriginal women residing at other frontier settlements in Australia can provide further insights into their daily lives. Interesting comparisons emerge when examining the impact Aboriginal women had on the domestic space within NMP camps, and those residing at early sealing stations. Lynette Russell's (2007) research into associations between

Aboriginal women and newcomer men within the sealing industry off southern Australia after the 1800s emphasised that Aboriginal women's negotiation and expression of the domestic space destabilised the colonial process, which enabled the women to maintain their traditional culture (Russell 2007:19). This is an example of where the meaning and value of 'place' is malleable when experienced by different cultures (and in this case genders), and how places are changeable over time and ultimately contested (Gieryn 2000:465). These women succeeded in maintaining aspects of their cultural identity and a sense of place that was meaningful to them, which endured as an essential component of social life within the sealing industry. Within this location, the merging of two cultures also initiated historical change through creolisation, therefore cultures took on innovative forms by adopting what was relevant from the new ethos whilst retaining many elements of earlier forms (Birmingham 2000:362).

However, not all interactions were positive, and there was also a degree of violence between Aboriginal women and newcomer men within the sealing industry (Russell 2007:19). Many sealers took Aboriginal women as wives, who then worked alongside their husbands hunting seals using traditional clubs, and their labour became an integral part of the sealing industry (Russell 2007:20). This parallels the domestic role of some Aboriginal women within NMP camps, who hunted native fauna for themselves and their families using traditional means, only in this instance it was most likely to supplement insufficient food rations (QSA Item ID 290324, Administrative file, Police Stations – Norman River). For example, before the Select Committee Inquiry into the NMP, Charles Archer stated that:

> most of the Native Police had women of their own which he considered desirable. These women hunted for themselves and when the police were not on duty they were always hunting. When the men on the force were transferred from one district to another their females always accompanied them, riding horses and sometimes dressed in trousers and a blue shirt (Skinner 1975:207-208).

Just as Aboriginal women residing at NMP camps were expert hunter-gatherers, southern Australian Aboriginal women were expert sealers, and similarly these skills were honed through tradition and exploited within settler societies (Russell 2007:20). In exploring the women's motivation for entering into marriages with sealing men, Russell (2007:19) considers subjectivity and agency,

suggesting that some degree of choice was involved in establishing these domestic arrangements. When examining 'how' and 'why' women interacted with new ideologies throughout history, many archaeologists now emphasise human agency and action, using more socially oriented archaeological explanations, rather than dwelling upon the effects of environment or economic forces (Quirk 2007:4; Beaudry *et al.* 1991:151). This recognises the centrality of human nature and the various characteristics of class, gender, ethnicity and identity as factors influencing inter-cultural interactions and the integration of new ideologies (Hodder 1986:8). However, choice and action can often be removed or vastly moderated in some cases, due to external forces beyond the control of the individual. For example, agency for Aboriginal women at NMP camps was vastly diminished, whether married to the troopers or not, as it is likely that they were willing to suffer the hardship and abuses of officers and troopers rather than stay with their own people and risk being killed by those very same men (Richards 2008:156).

Within powered landscapes, Suzanne Spencer-Wood (2010:503) describes the term 'power' as having different forms of social agency, such as using "powers over" others. This can range from physical force and psychological coercion to hegemony, and taking advantage of others using aspects of social identity, such as sexuality, gender, ethnicity, class, religion and age, as well as culturally excepted and legitimated legal authority. The researcher defines "powers under" as subordinate groups which use approaches ranging from flattering pleas for protection, manipulation, adaptation, compliance, accommodation and malingering, through to resistance and rebellion (Spencer-Wood 2010:503). Lastly, "powers with" other people, ranges from persuading, inspiring, influencing, empowering or enabling others, negotiation, collaboration and cooperation, to forming alliances and organising group action (Spencer-Wood 1999:179). Individuals often use all three forms of social agency simultaneously (Spencer-Wood 2010:503), with an obvious example being the officers stationed at Boralga who were subordinate to those above them in the command structure (powers under), and were the dominant authority over the constables, troopers and their wives (powers over), as well as being empowered by the colonial authorities to carry out sanctioned violence on Aboriginal peoples (powers with). It would appear that Aboriginal women within the domestic space at Boralga were limited to "powers under" and possibly used many of the above mentioned subordinate forms of manipulation to survive within such a powered cultural landscape (Spenser-Wood 2010:503). However, it is possible that a certain degree of "powers over" the troopers (and possibly officers) may have occurred if sexuality is taken into consideration, perhaps

leading to “powers with” others if persuasion, influence and collaboration was also used to achieve a degree of social agency within the domestic space (Spenser-Wood 2010:503). Nonetheless, as the subordinate group in this setting, any “power” achieved by Aboriginal women at NMP camps would have been precarious and unstable at best.

A major issue faced by Aboriginal women residing at NMP camps was that their occupancy was often under duress, and almost all negotiation and expression of the domestic space was dominated by both male and female authorities (officers’ wives), and compliance within the camp was essential. Thus, in this instance ‘place’ for the Aboriginal women living and working here would have been aptly perceived and interpreted as precarious, oppressive and unpredictable. Historic photographs taken at Boralga of Aboriginal troopers and their families (see Figure 2.9), and archaeological evidence in the form of small thimbles, sewing pins, glass beads, an ornate black glass button, chamber pot, marble, porcelain doll, popgun and writing slate, recovered from the troopers’ huts area, all verify that both women and children lived at the camp. Although historic documentation rarely refers to the presence of children within NMP camps, the Cooktown ration cash book mentions the various names of women and children residing at the Cooktown camp who were issued with rations, and records that Jemima and Lucy (who were most likely wives of the troopers) had children named Hector and Willie.

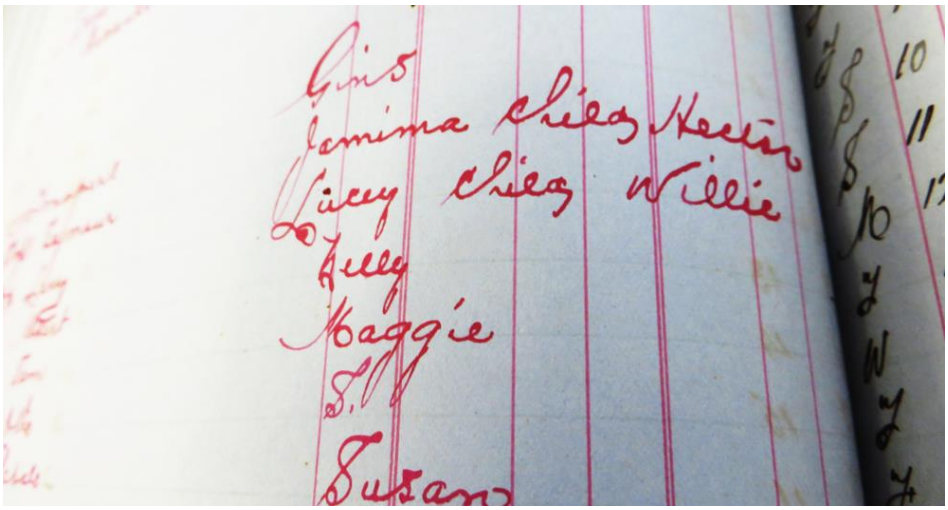


Figure 13. 12 Image from the Cooktown ration cash book listing the names of two children living with the NMP (Photograph by Heather Burke 2017)

No archival records or oral testimony has revealed how the women at Boralga came to be at the camp, and some may have been legitimate wives of the troopers, and others may have been abducted during patrols. Regardless of how the women came to be there, archival documents show that most Aboriginal women residing at NMP camps were often put to work as servants for the constable (married or single) for no wages or form of payment for their keep (W.E. Roth, 1903, Letter to the Under Secretary Home Department, 05/02/1903, QSA item ID87382). Historical and archaeological evidence from the troopers' huts area at Boralga has demonstrated that domestic life for an Aboriginal woman would have entailed hunting native fauna to supplement food rations for themselves, the troopers and their families (QSA Item ID 290324, Administrative file, Police Stations – Norman River; Skinner 1975:207-208; and archaeological evidence comprising native faunal remains interspersed with charcoal within the troopers' huts area) and carting water and wood which would have been needed for cooking and washing (QSA item ID 290324 Administrative file, police. Police Stations Norman River: and archaeological evidence comprising burnt wood and charcoal located within the cooking area at the troopers' huts area).

Other domestic duties would have included caring for children, both their own and the officers (see Figure 13.14, Queensland State Library Neg. no. 151978), repairing uniforms and clothing for troopers, officers and their families (supported by archaeological evidence in the form of small thimbles and brass sewing pins recovered from troopers' huts area, see Figure 13.13). Kitchen duties (Figure 13.15, Queensland State Library Neg. 151976; and archaeological evidence comprising serving items recovered from refuse pits associated with the officers' quarters and possible constables' quarters such as tureens and a serving platter). Although the negotiation and expression of domestic space undertaken by Aboriginal women residing at NMP camps would have been repressed by the dominance of the officers, their wives and the troopers, they may have maintained some cultural identity and a sense of place by participating in knapping glass and stone, as well as hunting and gathering foods using traditional methods.

Figure 13. 13 Two sewing pins from the troopers' huts area (Photograph Bateman 2018)

Figure 13. 14 Mary at the Laura terminus with Policeman Daniel Fitzgibbon's children, Constance and Ned, who is just in the photograph on the left (Queensland State Library, Neg. 151978)

Figure 13. 15 Mary, who was a servant girl with Rosy and Mr Kennedy (possibly an inspector) at the Laura terminus in the 1899s (Queensland State Archives, Neg. 151976)

13.3.4 Officers and the negotiation and expression of the domestic space

Leaving the domestic comforts of home to embark on a career in harsh conditions in extreme isolation would have been an unappealing prospect for most people. Reasons for European men joining the NMP to become officers varied. For some it was a last resort rather than starvation (QSA2969633 - Letter from Samuel James Crummer Irving to Colonial Secretary, January 16, 1850), and for others it offered a rare opportunity for promotion, as expressed in a letter by Frederick Urquhart in 1881:

> The reasons that make me anxious to exchange from the Telegraph into the Police are firstly because this department is overcrowded and promotion slow and difficult to obtain. Secondly, when a man has risen to the position of Station Master, he can get no farther (QSA567139 – Letter from Frederick Urquhart to general Fielding, Frederick Urquhart Police Staff file, Mfilm 8369).

Similar to officers stationed at forts in America (Eichelberger 2019:103), and missionaries based in remote locations in Australia (Flexner & Ball 2016:728), officers at NMP camps played a role in the liminal environments which create a backdrop for displaying European ideologies of social class expressed through material culture. According to Young (2003:5, 137), ascendency was the display of refinement, and such mobility required an expansion of material wealth and the consumption and deployment of appropriate material objects. Research conducted on artefact assemblages from American forts such as Fort Yamhill and Fort Hoskins, revealed that army officers expressed and negotiated the domestic space by adopting norms of materialism within these remote places, and in doing so, affirmed and maintained their identities as colonisers and affiliates of the social elite (Eichelberger 2019:103). Social and professional stratification enabled by military rank, amplified social and economic differences between military individuals, therefore officers stationed within American forts were often concerned with defining and differentiating their social status through ritual behaviours such as drinking, entertaining and normalising domesticity (Eichelberger 2019:105).

In contrast, material displays of social class between officers and constables/camp keepers stationed at NMP camps was somewhat diminished due to financial constraints, extreme isolation, as well as the vast social disparities dividing the upper and the lower ranks of the police hierarchy. Nonetheless, some displays of 'domestic social norms' were expressed by the officers at Boralga as a way of maintaining their 'civilised' European identity in a very non-European environment (and possibly as a way of legitimizing the acts they were carrying out), demonstrated by artefact diversity and type which contrasted with the limited material items used by the troopers. These more diverse objects may also have assisted in increasing place attachment, which refers to the emotional bonds created between an individual and a geographic location by endowing rooms or building with objects imbued with emotional meaning (Raymond *et al*. 2017:1). Figure 13.16 shows a photograph of NMP officers with their troopers, and illustrates that stratification is not only demonstrated through material culture, but is also displayed through uniform embellishments and symbols, which emphasised inequalities in rank. Additionally, troopers were often made to sit at the feet of officers during photographs, thus ensuring they knew their place within the hierarchy.

Figure 13. 16 Officer George Murray (in the back second from the left), and his detachment of Native Mounted Police, Rockhampton (State Library of Queensland, Neg no. 10686)

Military and domestic activities for the officers included: organising, and participating in patrols (Rules Section 17:259, 47:260 & 51:260; also supported by archaeological evidence in the form of 118 ammunition related items for military issue rifles); initiating and carrying out drill with the troopers (Rules Section 14:257; Queensland State Library Neg no. 66439; and archaeological evidence comprising five military jacket buttons); horse related activities and care (Rules Section 46:260; supported by archaeological evidence comprising a bridle bit, harness buckles, Hames collar rings and a horseshoe); supervising yard and building maintenance (NMP Rules Section 53:260); keeping diaries, accounts, and maintaining written and telegraphic communication with higher ranking authorities (NMP Rules Section 16:259, 20:259 & 54:260; supported by archaeological evidence comprising ceramic ink bottles and a porcelain telegraph insulator); upkeep of their uniforms and equipment, as well as ensuring the troopers maintained theirs (NMP Rules Section 13:259, 34:260 & 63:261).

Other general activities undertaken by the officers and their families demonstrated by domestic items recovered include: tending to personal care and hygiene (archaeological evidence comprising two bone toothbrushes, ointment pots, medicine bottles and a wash basin); leisure activities such as playing an instrument and smoking tobacco pipes (supported by the recovery of a harmonica and 16 smoking pipes); indulging in various luxury consumables (archaeological evidence in the form of condiment bottles, including sauce and vinegar, as well as non-alcoholic drink bottles); consuming a variety of different alcohol types which included wine or champagne, gin, schnapps, beer and stout (supported archaeologically by fragments from all of these alcohol bottle types, stout bottle label, a cut crystal decanter stopper and a cork screw).

The presence of general household items such as a jug, mixing bowl, food storage vessels, kerosene lamps (some which originally featured cut crystal hanging decorations), and furniture such as drawers with a brass lock plate, handle and hinges, all propose normalisation of domesticity. Although the ability to express upper class ideologies at Boralga would have been challenging given the location and frugal nature of the NMP, several items such as the cut crystal decanter stopper and perfume bottles represent other elements of identity such as gentility (Quirk 2007:4). People of the Victorian era intentionally divided the material world into those items which were genteel and those which were not, with most items having specific symbolic meaning (Young 2003:153-88). The presence of certain types of ceramic objects, such as matched tableware and serving items such as platters, tureens and porcelain egg cups, which suggested more formal dining rituals were performed by the officers and their families. The recovery of a metal kettle spout, matching teas sets and ceramic tea pots, may suggest formal rituals undertaken for light suppers such as afternoon tea, which was a tradition that started among upper class women in England in the 1880s (Johnson 2019:1), and central to these displays were the teaware objects (Wall 1994:143).

Figure 13. 17 Brass lock plate and handles recovered from the refuse pit (Trench 4) associated with officer's quarters (Photograph Bateman 2016)

13.3.5 Officers' wives and families within NMP camps

Artefacts from Boralga useful as proxy signatures for complex behaviours such as gender roles was very limited. For the officer's wives, the negotiation and expression of the domestic space involved some genteel ideology, demonstrated by the presence of a few luxury items such as perfume and costume jewellery. A small thimble found in the refuse pit associated with the officer's quarters suggests needlework such as embroidery, which was a valued skill undertaken by women of genteel society (Ilmakunnas 2016:1), or perhaps the thimble may have been used by the officers' wives to mend clothing, or to teach the Aboriginal women how to sew on buttons or mend uniforms (as small thimbles were also recovered from the troopers' huts area). Officers' wives would have most likely undertaken a supervisory role, and monitored the daily activities and duties carried out by the Aboriginal women at the camp. Their role also most likely included educating both their own children and possibly the Aboriginal children, while the men were out on patrol.

While it is impossible to attribute ownership of toys to individual children, they appear suggestive of the kind of heavily gendered role play encouraged among children at the time, such as toy guns which incited 'action' for boys, and dolls that inspired quieter, 'domestic' play for girls (Coleman *et al.* 1986:241). Exactly how much interaction Aboriginal children had with the officers' families is not certain, however historic photographs (see Figure 13.18) suggest that Aboriginal children were well integrated and taught to conform to European expectations, which most likely included a European education (demonstrated archaeologically by the recovery of writing slates in areas associated with both the officers' quarters and the trooper's huts area). Although Susan Lawrence (2000:135) argues that slate and slate pencils cannot be definitively associated with children, as they were occasionally used by adults as well. These slates were recovered from areas known to have housed children, and the wide scored lines are suggestive of children learning to write (Prangnell & Quirk 2009:43). Nevertheless, as Lawrence suggests, it is possible that adults may have used writing slates, particularly if European education standards were expected of the troopers as well. This makes these archaeological finds all the more complex, as historical documents indicate that even the names of troopers were deemed unimportant and were often not documented, thus teaching them to write seems unlikely. Therefore, the presence of writing slates within this area is intriguing. Figure 13.18 shows a photograph of Ned Fitzgibbon (born in 1902) and Constance Fitzgibbon (born in 1906), Billy, Maudie and a Tracker, taken in 1908. Daniel Fitzgibbon was a policeman stationed at

the Laura terminus, and Ned and Constance were his children. It is not known who the parents of the Aboriginal children were, or how the children came to be there. This photograph demonstrates Aboriginal children residing at the Laura terminus conforming to European standards as well.

Figure 13. 18 Children including those of Laura Policeman, Daniel Fitzgibben (State Library of Queensland, Neg. no. 151974)

Numerous historical documents mention the abduction of children by the NMP during 'dispersals' to be raised by Europeans as labourers and domestic servants for pastoral stations, or for enlistment into the NMP, such as Bungaree, who had a long-term familiarity with white systems acquired though European education and years of servitude, and who later became an NMP trooper (Collins 2000). A boy called Tommy from Tchanning Station on the Condamine, 'was seized for Native Police Service while on his was way back to Ferrett's Station from a Bora' (John Ferrett to Frederick Wheeler, undated, Records of the Colonial and Home Secretaries Office 1859-1896, QSA SA846747 61/1712, M/film Z5602). Another example was a boy named Oscar, who was most likely kidnapped following a 'dispersal', as he was handed over to Rocklands Station near Camooweal by the police at around the age of 10. The manager of Rocklands, Augustus Henry Glissan, sent a sketch book filled with 40 drawings by Oscar to a friend in Melbourne in 1899, later to be discovered by staff at the National Museum of Australia in 1990. Oscar had sketched scenes depicting life in colonial northern Queensland, which included Chinese, Aboriginal and European people engaged in different aspects of daily life, with some of the most poignant sketches depicting police carrying out 'dispersals', thus indicating Oscar's familiarity with police and their activities, brutality and violence (Figure 13.19).

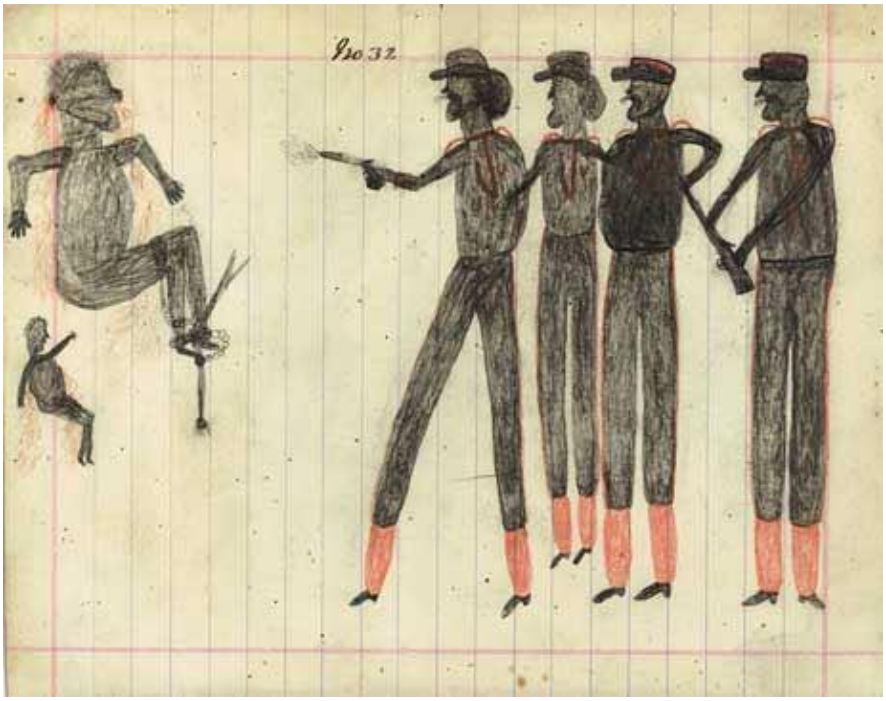


Figure 13. 19 Sketch numbered 32 in Oscars notebook, c1899, which was titled 'Murdered hobbled to tree Troopers 'dispatching' (National Museum of Australia, 1990)

In 1901, Walter E. Roth, Queensland's Northern Protector of Aborigines, expressed his concerns about kidnapping, which he labelled the 'one special abuse' of children (Bottoms 2013:94). Several years later the serving Native Police Inspector at Normanton, Percy Galbraith, also acknowledged the common practice of kidnapping Aboriginal children to be used as domestic servants and labourers for settlers, and claimed that:

> A number of private families, also stations, have gins. Most of these gins have been given to their owners when about seven or eight years of age. The gins are not allowed to mix with other Aboriginals. After a time, this enforced separation is strengthened by the girl's surroundings. She gets attracted to white men and looks down upon males of her own race….A large number of individuals have an idea that they can trade an Aboriginal as they would a horse, or a bullock - some of these people are good church-goers. One lady informed me that an Aboriginal had been left to her by will. She did not however, mention if probation had been granted (Inspector P. D. Galbraith, 30 January 1904, QSA, A/44680/04/226)

13.4 The cultural identity of the Aboriginal troopers – social and domestic relationships

13.4.1 Cultural identity

In order to better understand the cultural identity of the troopers, it is important to consider the events and circumstances within the broader context which lead to 'recruitment'. The many complexities resulting from the destruction of traditional Aboriginal lifeways following sanctioned racial violence throughout the frontier must be considered if the cultural identity of the Aboriginal troopers is to be fully explored. The very category and use of the word 'Aborigine' assisted in the colonisation process (Stokes 1997:158). Attwood (1989:iii) states that, "by categorising Aboriginal people as a 'primordial or primitive other', whites asserted the superiority of their own collective European identity". European colonisation meant that Aboriginal men were in a liminal state, disconnected from their own traditional way of life, and unable to assimilate equally within colonial society (Barker *et al*. 2019a:5). Their powerlessness was all encompassing and extended beyond dispossession, enslavement and poverty, to the cruel treatment of their female kin by Europeans. (Barker *et al*. 2019a:5). In 1899, a local constable from Camooweal on the Northern territory border submitted the following information as evidence for a Select Committee:

> …if half of the young lubras now being detained (I won't call it kept, for I know most of them would clear away if they could) were approached on the subject, they would say that they were run down by station blackguards on horseback, and taken to the stations for licentious purposes, and kept there more like slaves than anything else. I have heard it said that these same lubras have been locked up for weeks at a time…anyway, whilst their heartless persecutors have been mustering cattle on the respective runs. Some, I have heard, take these lubras with them, but take the precautions to tie them up securely for the night to prevent them escaping ('Select Committee on the Aborigines Bill', Minutes of Evidence, South Australian Parliamentary Papers, 1899, vol. 2, no. 77, pp. 113-114).

The arrival of European men intensified the already tumultuous circumstances surrounding women and the sexual competition between Aboriginal men, as the control and bestowal of women had often caused conflict between clans before and after the arrival of Europeans (Reynolds 2006:136). Several aspects of traditional society contributed to disputes and sexual competition between

Aboriginal men, including the practice of polygamy and the control by old men over the bestowal of women (Reynolds 2006:136). Already high tensions were greatly exacerbated by the sudden intrusion of an almost 'all male' newcomer population, with Aboriginal-European interactions often resulting in the abduction of Aboriginal women by the colonisers for extended periods of time (Reynolds 2006:136). However, this disruption from traditional lifeways caused by European and Chinese settlers, provided opportunities for young Aboriginal men to gain control of women, and escape retribution within the sanctuary of the colonisers (Reynolds 2006:137). In 1901, the West Australian Inspector of Aboriginals on the north-west coast described the situation:

> The tribal laws and customs have been annulled through the natives coming into constant contact with Asiatics; where in former days old men had the young women, who supported them through hunting, today most women are in the hands of young men and boys (who by tribal law are not entitled to them), having stolen them from their rightful owners by brute force, leaving the old to fossick for themselves, whilst the young men, with their so-precured women, follow up the pearling boats or go to Broome (G.S. Oliver, Le Grange Bay, 14 may 1901, West Australia parliamentary papers, vol. 2, no. 26, p. 50).

Just as traditional marriage lore was systematically destroyed, so too was the process of initiation which also played a large part in establishing an individual's identity. This transition rite was a way of displaying to others that the initiate has achieved adulthood, and permits the person knowledge of the past, and to share the embodiment of their ancestors (Lommel 2019:4). European settler, F. J. Gillen described the situation of a young central Australian Aboriginal man who had lived with Europeans from an early age, and had missed out on the initiation process and related operations of circumcision and subincision:

> One day he came to me and said, 'I think I will go and get cut'…and I said, 'look here, Jim, you are a fool to submit to that'. He said in reply 'Well, I can't put up with the cheek of the women and children. They will not let me have a lubra, and the old men will not let me know anything about my country men' (Journal of Royal Geographical Society of Australasia 1898-1901:27).

Acculturation into dominant European 'civilisation' subsequent to displacement, meant that becoming a fringe dweller to white society was the new reality, and cultural identities were transformed. The loss of place has devastating implications for individual and collective memory, identity, history and general psychological well-being, and in some cases is almost equivalent to feeling non-existent (Fullilove 1996:1518). For Aboriginal men, regaining social standing and striving for equality among colonial society (and their own language groups if raised in white society), meant that certain prospects such as joining the NMP may have appeared better than the alternative: a life of nonacceptance, hard labour, servitude or imprisonment. John Wilkie, the manager of Darrdine Station in 1852, provided his assessment of what he conceived were the incentives for Aboriginal men to join the NMP:

> The gay dress – the constant itinerancy – the lazy life – the independence of the elders of the tribe – and last tho' not least, the ability to make love to a choice of lubras in every tribe they visit, with perfect impunity (J. P. Wilkie to Henry Hughes, 25 October 1852, State Library of New South Wales, Dixon Library, D14)

Nevertheless, historical records and oral testimony handed down among descendants of Aboriginal troopers suggest that, although some new recruits 'voluntarily enlisted', various insidious methods were also implemented during 'recruitment drives' by NMP authorities, including coercion, inducement and kidnapping. 'Recruitment' was not always an orderly process of calmly signing up the impoverished, as some oral testimonies from troopers' descendants claim that families were threatened with, or suffered actual physical violence if the men did not enlist, however there is no direct evidence of this from any troopers themselves (Wallis *et al*. 2019). Constable Daniel Whelan, the officer in charge of the Palmer River camp in the early 20th century, continued threats of violence against Aboriginal people from the Mitchell River as late as 1903 to ensure the enlistment of new recruits (Richards 2005:154). According to the Archaeology of the NMP project's data base, the average age of troopers who enlisted was 25 years (where age is known), but many were just boys whom colonial authorities would have considered 'fit young men', and were probably viewed as the most dangerous demographic in need of control (Wallis *et al*. 2019). The young age of recruits shown in several archival photographs (e.g. Figures 13.11 & 13.20) offers further testament to the view that enlistment was not always willing. Once the troopers were stationed at NMP camps,

retaining the new recruits following bad treatment and keeping them supplied with sufficient stores to prevent mass desertion was an ongoing concern for Queensland colonial officials (Richards 2008:121-122).

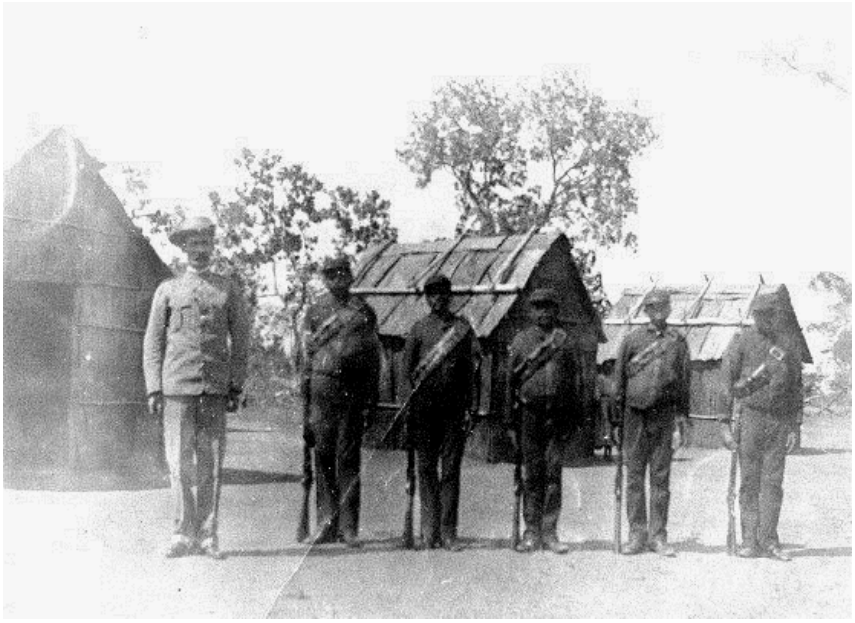


Figure 13. 20 Constable Daniel Fitzgibbon at an NMP camp at Cape York Peninsula in 1906, with his five young troopers (Queensland Police Museum, Image PM0189)

The military style setting of NMP camps was a backdrop for European and Aboriginal cultural identities to be challenged, negotiated and enacted, which occasionally resulted in the merging of cultural identities, demonstrated by the photograph taken in 1880 of the Boralga troopers wearing lap-laps and uniform hats or Kepis (Figure 13.21). However, identity changes were mostly carried out by the Aboriginal troopers rather than European officers who did not adopt Aboriginal elements of identity, other than occasionally eating bush tucker usually out of necessity. Thus, the meaning and value of place is flexible and changeable over time, and the way in which place is interpreted and understood depends on the different people and cultures living there (Soja 1996:10). It is not surprising that aspects of identity converged when life within a strict European controlled setting took place from an early age, and is evidenced by some former troopers continuing to wear their hats and uniforms even after leaving the NMP (Wallis *et al.* 2019). It should be noted however, that wearing NMP uniform hats, (especially when not in full uniform) was also necessary for self-preservation, and this embedded custom may have continued psychologically long after serving with the NMP.

The uniform hats enabled over-zealous officers and troopers to differentiate between NMP troopers and other Aboriginal men, as accidental shootings through mistaken identity have been documented, such as Brandy who was shot dead by constable Hedges by mistake in 1880 (Richards 2008:171). A close incident that occurred at the Laura River in 1876 was recalled by W. H. Corfield (1921:70), when, approaching the river to wash before dinner, he came across a mob of Aboriginal men bathing and witnessed one man running towards the bank. Corfield hastily ran back to his camp yelling to his contingent to arm themselves. The group of men at the river turned out to be Sub-inspector Edwin Townsend's detachment from Boralga, also bathing before dinner. The man Corfield witnessed running towards the bank was retrieving his uniform cap, presumably to denote that he was a trooper and avoid being shot. Corfield noted that the troopers always wore their hats when on patrol to avoid mistaken identity.

> It was a weird procession when we wended our way along the river, five naked blacks in single file in the lead, their only dress consisted of a cartridge belt around the waste, and cap in hand. The latter they were most particular in wearing on their head when going into action, otherwise they would have difficulty in recognising each other (Corfield 1921:64)

Figure 13. 21 Seven troopers from Boralga dressed in traditional lap-laps, but still wearing their kepi uniform hats, 1880 (Cairns Historical Society Neg. PM0651).

Wearing the NMP uniform had various functions and meanings for the troopers, as it not only improved safety when on patrol, but the visual components and symbols were also intended to send a clear message of colonial power, authority and allegiance to European ideals to those outside of the force, particularly the Aboriginal people they were policing (Wallis *et al.* 2019). According to Agius and Keep (2018:15), "identity is a relational process that is shaped by its relationship to other meanings". Thus, identities can be influenced by the meaning of place, which can be the object of collective identities and initiate collective action, particularly when people are brought together in bodily co-presence within a single location (Gieryn 2000:476, 479). For the troopers stationed at NMP camps, their cultural identity was also informed by a broader European constitution that entailed dispossession, enforcing 'civilisation' standards and military rule. Even though the constitution was responsible for both forming and maintaining identities by defining others' rights (Aguis & Keep 2018:15), the troopers at Boralga managed to uphold some of their cultural identity and sense of place by continuing aspects of cultural practice, such as stone and glass knapping, hunting and eating native fauna, and most likely passing on traditional stories and songs to children and others within the camp.

The archaeology at Boralga outlined in section 13.2.4 'troopers' huts', suggests that the troopers did not possess domestic material culture that communicated displays of social identity or ideologies of social class. Items mostly comprised broken bottles (often as a result of knapping), faunal remains, clay smoking pipes, structural fasteners, cartridge cases, seed beads, a few ceramic fragments and a chamber pot. The paucity of European domestic cultural material within the troopers' huts area may have been a conscious choice, as it is likely that most of the European domestic objects held little meaning for them, however hegemony, socio-economic circumstances and a lack of opportunity may also have been major considerations. Nevertheless, Tonkinson (1990:191-92) argues that Aboriginal identity was associated more with traditional cultural practice, genealogical ties and place. For example, to the Wiradjuri people of Central West, New South Wales, place is defined by the arc of a river, a flower appearing multiple times, the peculiar flatness of a rock and even the sunlight casting deeper shadows in the afternoon which entices the appearance of certain animals (Lovett 2018, cited in Hambrett, 2018). The large quantity of domestic material culture owned by European officers and their families may have been novel to the troopers, but the evidence shows that European domestic objects did not greatly influence Aboriginal cultural identity at Boralga.

13.4.2 Social and domestic relationships

Relationships between officers and troopers

Archival evidence documenting affectionate relationships between officers and troopers is very rare, although much exists pertaining to distrust and animosity (Richards 2008:154). H.G. Lamond (1949:32) stated that the NMP were 'probably the only military unit in the Empire in which the officers did not lead their men', implying the officers' distrust of their troopers. However, troopers out of uniform and armed with rifles posing for photographs at Boralga, demonstrates a degree of trust between the officers and their men within this setting (Figures 2.8 & 13.21). It should also be considered that European officers were not renowned for their proficient navigation skills in the Australian bush, nor their expert tracking ability, thus it made more sense for the troopers to take the lead when on patrol. Nonetheless, according to Lamond, the distrust of Aboriginal troopers was generally accepted by Europeans, however his baseless and biased view was most likely motivated by the fact that he was the son of an NMP officer:

> The thin veneer of civilization in the Aboriginal troopers was a flimsy thing, semi-dormant, and the hunting strain which was instinctive in the black could not allow an unarmed and unsuspecting white man to ride in front of him, his back turned, without the hunter taking advantage of it (H.G. Lamond 1949:32)

The archival records regarding relationships between officers and troopers are mostly European accounts, with interactions varying depending on the dispositions and histories of the men involved (Burke 2019). However, it would appear unlikely that any 'friendship' could be equivalent with someone who is in charge of rations (including addictive substances like tobacco), access to women, and punishment when deemed necessary. Nevertheless, one officer, Frederick Walker (Figure 13.22), was documented as having a particularly close bond with his troopers, to the point of treating them 'almost as friends' (William Forster 1858:10).

Figure 13. 22 An undated studio portrait of Frederick Walker (James Gratton Pattison Collection)

Walker was one of the rare exceptions with regard to affable relationships between officers and troopers. Rather than building a friendly rapport, the more commonly accepted view was described by an anonymous NMP officer, "it is very difficult to manage these boys. They must be made to fear you, then they will do anything for you" (*The Queenslander* 27 January 1877). The accepted way of instilling fear was floggings, being placed in irons or extra judicial executions (Richards 2008:171). This manner of discipline, combined with the other injustices and hardships endured by the troopers, led to dissatisfaction and mass desertions, and at times troopers fled the force faster than they could be recruited (Richards 2008:161). Most relationships between officers and their troopers were primarily based on reciprocal need, as once under the control of the NMP, troopers and their families were reliant on various daily supplies, such as food rations, medicine and tobacco, if not wages. The officers relied upon the troopers for their tracking skills, navigation and overall ability to survive in the bush whilst on patrol, especially when rations were depleted (Richards 2008:120). When questioned about rations by the Select Committee into the Native Police in 1861, Frederick Carr recounted:

> …being without rations for several days, on one occasion.
> 85. How do you subsist generally? By the trooper's providing me with food.
> 86. You and your men fare alike? Yes on those occasions we live on roots and a few opossums. On one occasion we were very badly off, when after blacks who had committed a very serious outrage; we could not act as on occasion, and shoot game.

No archival evidence or oral accounts describing the social relationships between the officers and troopers at Boralga have been discovered, and demonstrating relationships archaeologically has proven difficult. Only the distinct spatial demarcation created between the officers and troopers' quarters at Boralga, as demonstrated by the excavation map (see Figure 3.10), gives some indication of physical (thus psychological) separation, which was usually standard practice between higher and lower ranks within military and paramilitary camps. It is not known how strict the social segregation was at Boralga, and how much the physical separation impacted social interactions between officers and troopers. Nevertheless, the spatialisation of buildings implies segregation and classification, which is the intent behind most NMP camp layouts, and gives an impersonal and autonomous power over compliant subjects (Gieryn 2000:475). Although European 'civilisation' and military standards were expected, the officers at Boralga appeared to allow the practice of turning non-traditional objects into traditional forms, which may indicate a degree of tolerance towards the troopers' maintenance of cultural identity. Perhaps this leniency could be interpreted as a gesture of goodwill between the officers and the troopers at Boralga, though it is more likely that the opportunistic divisions within the camp facilitated certain personal activities that were out of sight and generally ignored by the officers.

This relational approach to class segregation within powered landscapes was demonstrated by Stephen Mrozowski and Mary Beaudry (1990), following their research at the planned mill city of Lowell in Massachusetts, which was a landscape built on the policy of corporate authoritarianism. The aim of the city's founders was to design a space that strictly controlled the environment of the mill employees and emphasised class differences (Mrozowski & Beaudry 1990:2015). An industrial design was used for the unskilled labourers' boarding houses, whereas the agents' houses were raised above the ground with fenced private yards, and contained various luxury items, such as tea wares, serving vessels and colourful, matched sets of decorated ceramics. (Beaudry 1989:22;

Mrozowski *et al*, 1996:42, 61-62; Mrozowski & Beaudry 1990:202) . Only plain whiteware items that made up limited sets of tea wares and serving vessels were recovered from the boarding houses (Mrozowski *et al*, 1996:61-62). The study found that the private lives of workers was also under corporate control with enforced curfews, mandatory attendance at Sunday church services and by discouraging alcohol consumption (Mrozowski *et al*, 1996:66). In spite of these restrictions, archaeological evidence revealed that the labourers did not always adhere to company regulations, with excavations revealing the presence of wine glasses, liquor bottles and beer mugs hidden in a cache under the steps, which were consumed in private (Beaudry 1989:28; Beaudry and Mrozowski 2001:121). The studies conducted at the mill city of Lowell demonstrate some similarities to the social and relational view of the officers and troopers stationed at Boralga, with class disparities in the domestic setting demonstrated through contrasts in building structures and the quantity and quality of luxury items used. Although the troopers at Boralga were also living in a very strict, ordered environment enforced by an empowered overseers, they too managed to carry out private activities beyond the eyes of authorities.

Domestic relationships with Aboriginal women

The extreme dynamics which shaped domestic relationships between men and Aboriginal women residing at NMP camps ranged from oppressive, coerced transactions, to marriages and stable long-term relationships with the troopers and officers. Relationships between Aboriginal women and officers, resulting in hybrid domestic settings have also been documented, such as Sub-Inspector Archibald Mossman, who lived with an Aboriginal woman for over ten years, and the case reported by Lamond in 1869 pertaining to Lyndon Poingdestre, who lived with three Aboriginal women and his children at Highbury camp over an extended period (Richards 2008:159). Other archival documents reveal officers fathering illegitimate Aboriginal children, such as Frederick Wheeler, whose daughter was born at Tamrookum, south of Brisbane in 1860, after patrols in the area (Richards 2008:156).

Although many NMP camps were occupied by women, stories of domestic experiences involving women and how they came to be there, were usually disclosed by white males. Had Aboriginal women been given the chance to recount events and describe the ensuing relationships from their viewpoint (which often involved kidnapping, abuse and exploitation), perhaps a very different perspective would be exposed. An account printed in the Western Star and Roma Advertiser on 13

July 1887, is an example of a European male perspective regarding the abduction of an Aboriginal woman:

> The other day a raid was made among the blacks camped at Barcaldine, and a gin carried off as a wife for a black trooper, who was thereby induced to remain in the force. The bride, however, did not appreciate the honor, conferred by an alliance with an Aboriginal man in uniform, and ran away the next day. She was, however, hunted up and brought back to the dusky Adonis, who rewarded the undutiful consort with the application of a waddy, which will probably have the desired effect of keeping her at home.

An article published by an NMP officer William Armit on 13 June 1883, in The Argus newspaper, describes the capturing of a 'wife' during a patrol on the Gilbert River. The abduction occurred before a Bora and the prisoner was kept at the NMP camp. After the officers secretly watched the Bora, Armit recollected cheerfully:

> We also turned our faces homewards, arriving at our camp after a pleasant march through our garden, and found our young prisoner running about as happy as a queen, in search of sugar-bag, which having discovered, she soon chopped out. Saddling up we were ready for a start, when the trooper who had remained in camp came to me and asked me if he could keep the gin "belonga wife myself- myself", as he put it. He was a bachelor, and had amused himself during our absence by courting his sable companion. As she seemed not only willing but anxious to accompany us, I consented, especially as Charlie averred that the tribe would most probably kill her if she returned to it after what had happened.

For troopers in the NMP, other priorities besides policing usually took precedence, such as rations, pay and access to women (Richards 2005:174). Initially some NMP officers permitted women to accompany troopers on deployment, however this was seen by various government officials as bad for discipline (Richards 2008:155). Before long, officials came to realise that disreputable conduct carried out by unmarried troopers (and officers), which included abduction, rape and abandonment of Aboriginal women, was becoming a major issue throughout Queensland (Richards 2008:156).

This led to the Colonial Secretary giving permission to the Commissioner of Police in 1866 to set aside part of the troopers' rations allowance to enable wives to accompany the troopers (Richards 2008:156; see Figure 13.23). However, access to women was also a way for officers to enforce discipline, with an entry in the Cooktown ration book stating that "tracker Tommy is not allowed a gin till the 1st June 01, by order of Sub-Inspector Garraway" (Figure 13.24).

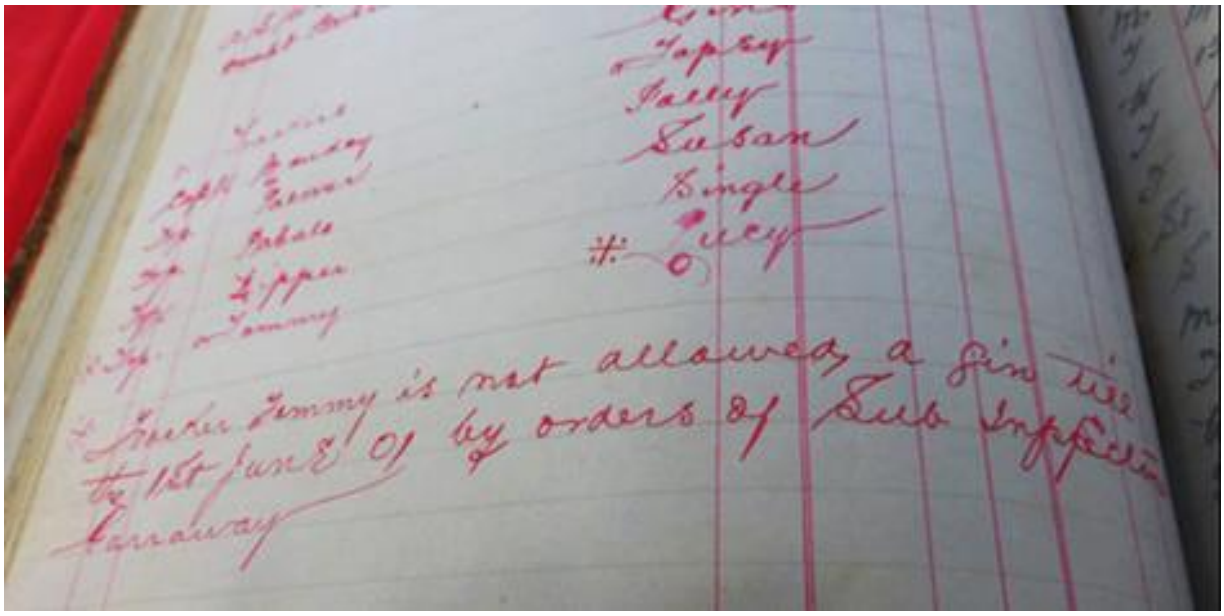


Figure 13. 23 A page from the 1898-1899 rations cash book for the Cooktown NMP camp referring to disciplinary action against Tracker Tommy (Photograph Heather Burke)

Figure 13. 24 Black Tracker Carning and his wife at Boulia 1902
(Queensland Police Museum, Neg. PM0121)

It is not known whether strong affectionate relationships were fostered between Aboriginal women residing at the camps and the officers' families, or whether the relationships were based on a fundamental symbiotic need, but it is assumed that the depth of friendships would have varied as much as the dispositions involved. Nevertheless, it is clear from the photographs shown in Figures 2.9 and 13.25, that European officers and their families at NMP camps attempted to portray 'fellow-feeling' or empathy by dressing the Aboriginal women in formal nineteenth century attire to demonstrate their 'essential humanity and equality' (Lydon 2017:198). This is not necessarily a reflection of their close relationship, but rather a concept based on the notion that 'moral conduct' is grounded in the experience of 'seeing and being seen' to adhere to 'civilised' expectations (Smith 1759).

An ornate, black glass button (imitation jet) from a dress or blouse recovered from the troopers' huts area as well as photographs of women in formal dresses at Boralga (see Figure 9.4) demonstrates that some cultural adherence most likely took place at Boralga, and that acceptable European attire was expected of the troopers' wives (see Figure 2.8). A photograph of an Aboriginal woman minding policeman Daniel Fitzgibbon's children at the Laura terminus shows that plain, practical clothing was more likely the reality when carrying out daily duties (see Figure 13.14). The material legacy, possibly resulting from intimate encounters between the troopers and their wives at Boralga, was evident in the form of a marble and writing slate recovered from the troopers' huts area, which indicated that children also inhabited this zone (also demonstrated in the photograph, Figure 2.8). However, it is not known if the children actually belonged to couples residing at Boralga, as it is possible that they were victims of kidnapping following patrols, and may have been handed to the troopers' families to foster until they were old enough for servitude, or to enlist into the police force.

Figure 13. 25 Trackers and their wives at Rewan Station, Springsure District, c1912
(State library of Queensland, Neg. 277315)

13.5 Archaeological comparisons to the already existing historical record

The majority of historical records and accounts relevant to this study were supported by the archaeological evidence at Boralga. The presence of archaeological material relating to essential buildings and replicable elements needed for the successful implementation of an NMP camp were identified, indicating a clear spatial demarcation between the officers' quarters and the troopers' huts. However, the camp layout and features did not correspond with early historical plans drawn by O'Connor, which can be explained by the fact that more than one building phase was carried out as equipment and materials changed in accordance with resources, staffing and seasons during the extended life of the camp (see Section 13.2.1). The definitive artefacts such as police jacket buttons, uniform buckles and a large quantity of ammunition from police issue weapons, confirmed the presence of an armed and dangerous force, whose vacillating objectives are in part recorded in official records, and were consistent with the daily activities outlined in the government authorised 'Rules and discipline for the NMP', such as patrols, drill and target practice (see Section 13.3.2).

Archaeological material evidence at Boralga and historical information demonstrated by the photograph shown in Figure 2.9, also corresponded regarding the presence of Aboriginal women and children at the camp, and was supported archaeologically by the recovery of personal items such as children's toys, writing slates and a blouse button recovered from the Troopers' huts area. In addition, the discovery of sewing pins and small sewing thimbles also found in the same area is suggestive of one of the many roles carried out by the Aboriginal women residing at the camp, and who were historically documented by Walter E. Roth as "a convenience for the constable (married or single) in charge, who practically work without wages as servants for him, and without his paying for their keep" (see Section 2.8, and Figures 13.14, 13.15). In this instance, mending clothes and sewing on buttons for the officers, troopers (their husbands), and their families was most likely an everyday activity. The general presence of Aboriginal women and children at NMP camps was also demonstrated by a list of names recorded in the Cooktown ration cash book (see Figure 13.23). Officer's wives and children also resided at NMP camps and can be seen in several historical photographs (see Figures 13.14, 13.18 and 13.25). Figure 13.4 shows a photograph of Officer Marrett's wife Eugenie who resided at Boralga. The presence of officer's families at the research site was supported archaeologically by the recovery of perfume bottles, an item of costume

jewellery, a small thimble, as well as writing slate and children's toys, which were found in refuse areas associated with the officers' quarters.

The glass and ceramic analysis supported historic accounts pertaining to the relatively high consumption of alcohol by NMP officers and regular tobacco use, particularly by the troopers (see section 5.12, 6.4.12 and 6.12). Of interest was the preference for wine or champagne over spirits and beer by the officers at Boralga, when wine consumption was relatively low in Australia during that time (Anderson 2015:10). Glass artefact assemblages at fort sites in America have revealed that champagne was the favoured alcoholic beverage among officers, and was an expression of social status (Adams 2009:119). Self-provisioning was confirmed by the native faunal assemblage recovered from the troopers' huts area, which also correlated with the historic documents describing ration shortfalls for the troopers' wives who often hunted to supplement food rations with native fauna, described in Chapter 7. The lack of cattle bone at the site, even though beef was regularly included in the ration allowance, could be explained by historical accounts describing instances where cattle bone was removed by the supplier before the meat was sold (see section 7.4).

13.5.1 What can the material culture record tell us that the historical record can't?

A significant number of Chinese medicine bottles and utility vessels such as barrel jars, as well as the face of a broken Chinese figurine indicated a Chinese presence. Chinese people were often employed as indentured labour, and worked as gardeners, cooks or general labourers during this time, however no historical record documenting Chinese occupation at Boralga has been found. Specific personal items such as a bone tooth brush and ointment pot lid recovered from the trooper's huts area gave a covert glimpse into an adherence to European expectations of hygiene and attention to personal care undertaken by the troopers, which is detailed personal information unlikely to be discovered in the archives. Likewise, archaeological exploration uncovered specific types of toys used by children within the camp, such as glass marbles, a popgun, porcelain doll and a child's porcelain tea set, childhood items that gave a sense of place and normality in a harsh and challenging environment. The personal nature of this information which pertains to the daily domestic activities of NMP camp occupants has yet to be discovered in archival records.

Historical documents describing troopers turning non-traditional objects into traditional forms within NMP camps have also never been found. Some maintenance of cultural identity undertaken by the troopers (and possibly the women) at Boralga was proven archaeologically with definitive

material evidence, such as knapped glass and stone recovered from the troopers' huts area, a practice also identified at other NMP camps following broader investigations carried out by various members participating in the overall NMP project. Comparisons which unpack other aspects of the troopers' identity resulting from the relational processes informed by a broader European framework, was demonstrated by the small quantity of rudimentary European domestic objects derived from the troopers' huts area. This modest assemblage would have in part been due to socio-economic circumstances, however it also may suggest that Aboriginal cultural identity and their sense of place was not greatly impacted by exposure to domestic objects. It is probable that identity was not expressed through displays of European material culture, because these material forms held no meaning or value for them. The troopers' small domestic deposit was in contrast to the large quantity of diverse domestic items associated with the higher ranking individuals at Boralga, and consistent with the literature review regarding domestic assemblages within American forts, which demonstrated that officers affirmed and maintained their cultural identities as 'civilised' colonisers by adopting norms of materialism with domestic objects in remote locations. Items such as matching table sets, serving platters, tureens and porcelain egg cups, suggest more formal dining rituals were undertaken by the officers and their families. The cultural identity of the officers and troopers proved easier to determine than finding definitive cultural material to substantiate relationships, particularly between the officers and troopers, thus the depth of social relations in this instance was not certain.

Chapter 14 - Conclusion

This study examined the artefact discard resulting from almost 20 years of occupation within the Boralga NMP camp, and as such, the archaeological assemblage provided rich material for eliciting insights into specific domestic activities and the identities of the individuals who carried them out. The wide variety of documentary records and historical accounts pertaining to the NMP greatly complemented these findings, and enabled the diverse artefact assemblage to be successfully compared and contrasted to the historical records in order to establish correlations and inconsistencies. The research has demonstrated that, where it was possible for material evidence from Boralga to be compared to the historical record, the majority of accounts were confirmed by the archaeology. Additionally, some cultural material revealed more nuanced activities carried out by camp occupants which were not included in the historical record. For example, the research revealed that the troopers did not possess domestic material culture that communicated displays of

social identity or ideologies of social class, but instead the troopers expressed cultural identity in more traditional ways that created a sense of place. By using archaeological exploration, the research carried out at Boralga has provided a more detailed picture of how individuals lived within the confines of the camp, and allowed a more intimate investigation of the influences that shaped relationships such as the presence of women and children, who would have changed the negotiation and expression of the domestic space for both the officers and troopers. The abundant cultural material present supported initial assessments by community consultants, which identified Boralga as a place of significance and high heritage value. The site is intrinsic to the investigation of frontier activities due to the large quantity of definitive material evidence, thus providing a different perspective into a much disputed aspect of Australia's colonial past.

References

Adams, K 2009, *Class and race within the frontier army: Military life in the West, 1870-1890*, University of Oklahoma Press, Norman.

Agius, C & Keep, D 2018, *The politics of identity: Place, space and discourse*, Manchester University Press, UK.

Alba, RD & Logan, JR 1993, 'Minority proximity to whites in suburbs: An individual-level analysis of segregation', *American Journal of Sociology*, vol. 98, pp. 1388-1427.

Allen, J 2008, Port Essington: *The historical archaeology of a north Australian nineteenth century military outpost*, Studies in Australasian Historical Archaeology 1, Sydney University Press, NSW.

Allen, J 1973, 'The archaeology of nineteenth-century imperialism: An Australian case study' *World Archaeology*, vol. 5, no. 1, pp. 44-60.

Allen, J & Jones, R 1980, 'Oyster Cove: Archaeological traces of the Last Tasmanians', *Papers and Proceedings of the Royal Society of Tasmania*, 114, pp. 225-233.

Allison, PM 1997, 'Household archaeology at Pompeii and Kinchega'. In C. Petrie and S. Bolton (eds), *In the Field: Archaeology at Sydney University*, Sydney University, Archaeological Methods Series 4, Sydney, pp. 25-28.

Allison, PM 1998, Kinchega archaeological research project, survey of the old Kinchega Homestead, 1998, unpublished report to the NSW National Parks and Wildlife Service, Sydney.

Allison, PM 1999, 'Household activities in historical archaeology', *Australasian Historical Archaeology*, vol. 16, pp. 16-29.

Altman, I & Low, SM 1992, (eds). *Place attachment*, Plenum, NY.

Altman, J & Jackson, S 2008, 'Indigenous land management' in D Lindenmayer, S Dovers, M Harris Olsen and S Morton (eds), *Commitments: Reshaping the lucky country's environment*, pp. 207-214.

Anderson, GC 1997, *Kinsmen of another kind: Dakota-white relations in the upper Mississippi River Valley 1650-1852*, Minnesota Historical Society Press, St. Paul.

Anderson, K 2015, *Growth and cycles in Australia's wine industry: A statistical compendium 1843-2013*, Adelaide University Press, SA.

Andrefsky, W 1994, 'The geological occurrence of lithic material and stone tool production strategies', *Geoarchaeology: An International Journal*, vol. 9, no. 5, pp. 375-391.

Andrews, SC & Mullins, PR 1989, Tableware and bottle glass assemblages in Hatcher-Cheatham site (44CF258): A multicomponent historic site in Chesterfield County, Virginia, vol. 4, CR Geier, editor, pp. 102-110, Manuscript, James Madison University, Archaeological Research Centre, Harrisonburg, VA.

Anschuetz, KF, Wilshusen, RH & Schleick, CL 2001, 'An archaeology of landscapes: perspectives and directions', *Journal of Archaeological Research*, vol. 9, no. 2, pp. 157-211.

Arnott, S & Maki, DL 2019, 'Forts on burial mounds: Interlocked landscapes of mourning and colonialism at the Dakota-settler frontier, 1860-1876', *Historical Archaeology*, vol. 53, pp. 153-169.

Association of Historical Archaeologists of the Pacific Northwest (AHAPN) 1998, *Draft historical archaeological materials cataloguing guidelines*

Attwood, B 1989, *The making of the Aborigines*, Allen & Unwin Book Publishers, Australia.

Aultman, J, Bon-Harper, N, Cooper, L, Galle, J, Grillo, K, Smith, K 2014, *Digital Archaeological Archive of Comparative Slavery (DAACS) cataloguing manual: Ceramics*. Retrieved 30 January 2018 from https://www.daacs.org/about-the-database/daacs-cataloging-manual/

Australian Food History Timeline 2019, 1872, Oyster farming begins in Sydney. Retrieved 11, June 2019 from https://australianfoodtimeline.com.au/oyster-farming-begins/

Barker, B 2007, 'Massacre: frontier conflict and Australian Archaeology', *Australian Archaeology*, no. 64, pp. 9-14.

Barker, B 2018, In Wallis, LA, Burke, H & Barker, B, and team 2018, *Archaeology on the frontier*. Retrieved 13 November 2018 from https://archaeologyonthefrontier.com/2018/03/30/my-unfortunate-habit-of-nippily/

Barker, B, Burke, H, Wallis, LA, Craig, S, & Combo, M 2019a, *'Betwixt and Between: Trauma, survival and the Aboriginal troopers of the Queensland Native Mounted Police',* Unpublished paper.

Barker, B, Wallis LA, Burke, H, Cole, N, Lowe, K, Artym, U, Pagels, A, Bateman, L, Hatte, E, De Leiuen C, Davidson, I, & Zimmerman, L 2019b, '*The archaeology of the 'secret war': The material evidence of conflict on the Queensland frontier 1849-1901'*, unpublished paper.

Barnett, GE 1926, *Chapters on machinery and labour*, Harvard University Press, Cambridge, UK.

Beaudry, MC 1989, 'The Lowell Boott Mills complex and its housing: material expressions of corporate ideology', *Historical Archaeology*, vol. 23, pp. 19-32.

Beaudry, MC & Mrozowski, SA 2001, Cultural space and the worker identity in the company city: Nineteenth-century Lowell, Massachusetts. In A. Mayne & T. Murray (eds), *The archaeology of urban landscapes explorations in slumland*, Cambridge University Press, UK.

Beaudry, MC, Cook, L, Mrozowski, SA 1991, Artefacts and active voices: Material culture as social discourse. In R. H. McGuire & R. Paynter (eds), *The archaeology of inequality*, Blackwell Oxford.

Beverton, T 2012, *Beverton's encyclopedia of inventions*, Quercus Publishing, UK.

Biggs, AJW, Phillip SR 1995, Soils of Cape York Peninsula, *Land Resources Bulletin QV95001*, Mareeba, Queensland Department of Primary Industries.

Binnie, JH 1944, *My Life on a Tropic Goldfield*, A Bread and Cheese Club Production, Melbourne.

Birmingham, J 2000, Resistance, creolisation or optimal foraging at Killalpannina Mission, South Australia. In R. Torrence and A. Clarke (eds) *The archaeology of difference: Negotiating cross-cultural entanglements in Oceania*, pp. 360-404, Routledge, London.

Birmingham, J 1992, *Wybalenna: The archaeology of cultural accommodation in nineteenth century Tasmania*, Sydney.

Birmingham, J 1990, '*A decade of digging: Deconstructing urban archaeology*', Australian Journal of Historical Archaeology, vol. 8, pp. 13-22.

Birks, S 2020, *A-Z of Stoke-on-Trent Potters, Potters Index C, Clemetson Brothers,* Retrieved, 7 February, 2020 from http://www.thepotteries.org/allpotters/273.htm

Bishop, JE & Co. 1909, *The Australasian Coachbuilder Book of Designs: Second Edition*, Sydney and Melbourne.

Boow, J 1991, *Early Australian commercial glass: Manufacturing process*, Crown copyright for the Heritage Council of New South Wales, NSW.

Bottoms, T 2013, *Conspiracy of silence: Queensland's frontier killing times*, Allen & Unwin, Crow's Nest, NSW.

Bourdieu, P 1996, *Physical space, social space, and habitus*, Department of Sociology, University of Oslo, Norway.

Breslin, B 1992, *Exterminate with pride: Aboriginal-European relationships in the Townsville-Bowen region to 1869*, Department of History and Politics, James Cook University, Qld.

Brisbane Courier, 10 January 1876, QLD.

Brooks, A 2005, *An archaeological guide to British ceramics in Australia 1788-1901*, The Australian Society for Historical Archaeology, Sydney & Archaeology Program, La Trobe University, Melbourne.

Brown, S, Avery, & S, Goulding, M 2002, Recent investigations at the Ebenezer Mission cemetery. In *After Captain Cook: The Archaeology of the recent indigenous past in Australia*,

Harrison R and Williamson C (eds) 2002, pp. 147-170. Sydney University Archaeological Methods Series 8.

Burke, H 2019, *Archaeology on the frontier*, Retrieved 14 August 2019 from https://archaeologyonthefrontier.com/2018/09/30/friendships-on-the-frontier/

Burke, H & Smith, C 2004, *The Archaeologists Field Handbook*, Allen and Unwin, Crow's Nest, NSW.

Burrard, G 1931, *The modern shotgun, Volume 1: The gun*, Charles Schribner's Sons, NY.

Carr, F 1861, Select Committee into the Native Police, Minutes of Evidence, South Australian Parliamentary Papers.

Casella, EC & Voss, LB 2012, *Intimate encounters: An archaeology of sexualities within colonial worlds*, Cambridge University Press, NY.

Casey, ES 2008, Place in landscape archaeology: Western philosophical prelude. In B. David and J. Thomas (eds), *Handbook of landscape archaeology*, pp. 51-58, Left Coast Press, Walnut Creek, California.

Casey, ES 1996, How to get from space to place in a fairly short stretch of time: Phenomenological prolegomena. In S. Feld and K. Basso (eds), *Senses of place*, pp. 13-52, Santa Fe, New Mexico: School of American Research Press.

Casey, ES 1998, *The fate of place: A philosophical history*, University of California Press, LA

Casey, M 1999, 'Local pottery and dairying at the DMR Site, Brickfields, Sydney, New South Wales', *Australasian Historical Archaeology*, vol 17, pp. 3-37.

Casey, M 2005, 'Material culture and the construction of hierarchy at the conservatorium site, Sydney', *Australasian Historical Archaeology*, vol. pp. 97-113.

Clausewitz, C 1976, *On War*, Princeton University Press, Princeton, NJ.

Cole, N 2000, 'Laura: Places of cultural and historical significance, recording: stage 1', Q*ueensland community cultural heritage report incentives program*, Environmental Protection agency, Brisbane.

Cole, N, Musgrave, G, George, L, George, T & Banjo, D 2002, 'Community archaeology at Laura Cape York Peninsula'. In Ulm, S, Wescott, C, Ried, J, Ross, A, Lilley, I, Prangnell, J & Kirkwood, I, (eds), Barriers, Borders, Boundaries: Proceedings of the 2001Australian Archaeological Association Annual Conference, Tempus 7, Anthropology Museum, University of Queensland, St Lucia, pp. 137-150.

Cole, N 2004, 'Battle Camp to Boralga: a local study of colonial war on Cape York Peninsula, 1873-1894', *Aboriginal History*, vol. 28, pp. 156-188.

Cole, N, Wallis, LA, Burke, H, Barker, B, & Rinyirru Aboriginal Corporation 2020, 'On the brink of a fever-stricken swamp': Culturally modified trees and land-people relationships at Lower Laura (Borlaga) Native Mounted Police camp, Cape York Peninsula, *Australian Archaeology',* vol, 86.

Coleman, DS, Coleman, EA & Coleman, EJ 1986, *The collectors encyclopedia of dolls,* Crown, NY.

Collins, PJ 2000, 'John Bungaree, the Coxans and the Native Police', *Royal Historical Society of Queensland Journal*, vol. 17 (7), pp. 303-320.

Connors, L 2015, *Warrior: A legendary leader's dramatic life and violent death on the colonial frontier*, Allan and Unwin, NSW.

Corfield, WH 1921, *Reminiscences of North Queensland*, 1862-1878, H. Pole and Co Limited, Brisbane.

Cummins & Campbell's Monthly Magazine, October 1942, Townsville.

Cunningham, P 1827, *Two years in New South Wales*, (ed) D. S. Macmillan, Sydney.

Dale, R 2019, *Did Stanstead have a vinegar distillery?* Stanstead Abbots Local History Society, Retrieved 5 May 2019 from https://www.salhs.org.uk/folders/vinegar/

Davidson, DS 1935, 'Archaeological problems of northern Australia', *Journal of the Royal Anthropological Institute of Great Britain and Ireland*, vol. 65, pp. 145-182.

Davies, P 2005, 'Writing slates and schooling', *Australasian Historical Archaeology*, vol. 23, pp. 63-9.

Deetz, JF 1963, Archaeological excavations at La Purisima Mission, UCLA *archaeological survey annual report*, vol. 5, pp. 165-191.

Delle, JA 1998, *An archaeology of social space: Analysing coffee plantations in Jamaica's Blue Mountains,* Plenum Press, NY.

De Certeau, M 1988, *The practice of everyday life,* University of California Press, LA.

Dermer, J 2019, *A short history of salt glazing*, Retrieved 17 September 2019 from http://www.johndermer.com.au/a-short-history-of-salt-glazing/

Dobell-Brown, S 1983, *The J.J. Weekes Ltd Catalogue, Sydney 1916*, reproduced by Stephen Dobell-Brown, the Dene Bindery in 1983.

Edmonds, P 2010, *Urbanizing frontiers: Indigenous peoples and settlers in 19th century pacific rim cities,* UBC Press, Vancouver.

Eichelberger, JE 2019, 'Colonial identities of the United States Army commissions officers: The negotiation of class and rank at Fort Yamhill and Fort Hoskins, Oregon, 1856-1866', *Historical Archaeology*, vol. 53, pp. 103-125.

Elton, H 1996, *Frontiers of the Roman Empire*, Batsford, London.

Evans, R 2007, A history of Queensland, Cambridge University Press, UK.

Falkenberg, J 1962, *Kin and Totem*, Oslo University Press, Minnesota.

Farrell, T 2015, *Champions and Co: Winning vinegar brewers.* Retrieved 13 November 2018 from http://letslookagain.com/2015/07/champion-co-vinegar-brewers/.

Feld, S & Basso, K 1996, *Senses of Place*, School of American Research Press, NM.

Fillios, M & Blake, N 2006, *Animal bones in Australian archaeology: a field guide to common native and introduced species'*, Sydney University Press, NSW.

Flexner, JL, & Ball, AC 2016, Sherds of paradise: Domestic archaeology and ceramic artefacts from a protestant mission in the South Pacific, European Journal of Archaeology, vol. 19, no. 4, pp. 728-754.

Forster, W 1858, June 18, Legislative assembly of NSW report from the Select Committee on murders by Aborigines on the Dawson River.

Friedland, R, Boden, D 1994, (eds), *NowHere: Space, time and modernity, University California Press, Berkeley.*

Fullilove, MT 1996, 'Psychiatric implications of displacement: Contributions from the psychology of place', *The American Journal of Psychiatry*, vol. 153, no. 12, pp. 1516-1523.

Garland, J 2015, *The spice of life*, Retrieved 5 May 2019 from http://blog.underoverarch.co.nz/2015/10/the-spice-of-life/

Genever, G 1996, *Failure of Justice: The story of the Irvinebank massacre*. Queensland Environmental Protection Agency, Townsville.

Gibbs, M 2005, 'The archaeology of subsistence on the maritime frontier: Faunal analysis of Cheynne Beach Whaling Station', *Australasian Historical Archaeology*.

Gieryn, TF 2000, 'A space for place in sociology', *Annual Review Sociology*, vol. 26, pp. 463-96.

Godden, GA 1991, *Encyclopedia of British pottery and porcelain marks*, Barrie & Jenkins, UK.

Gojak, D & Stuart, I 1999, 'The potential for the archaeological study of clay tobacco pipes from Australian sites', *Australian Historical Archaeology*, vol. 17, pp. 38-49.

Gosden, C & Marshall, Y 1999, 'The cultural biography of objects', *World Archaeology*, vol. 31, pp. 169-178.

Green, N 1995, *The Forrest River Massacres,* Freemantle Arts Centre Press, WA.

Grguric, N 2008, Appendix 1, Weapons on the Frontier, pp. 421-422, in Burke, H, Morrison, M, and Smith, C, *The Archaeologist's Field Handbook,* Allen and Unwin, Sydney, NSW.

Grguric, N 2016, *Colonial firepower: A primer on firearms related artefacts for Australian Archaeologists,* PowerPoint presentation, p. 6. Flinders University.

Grover, MA 2010, Chapter 9: Clothing and items of Personal Adornment, *Castle Hill Archaeological Project*, Office of history and Archaeology, Alaska Departments of Natural Resources, Division of Parks and Outdoor Recreation.

Gupta, A & Ferguson, J 1997, *Beyond culture, space, identity and the politics of difference,* Duke University Press, NC.

Hall, M & Silliman, SW 2005, *Historical Archaeology*, Wiley-Blackwell, US.

Hambrett, M 2018, How the Wiradjuri people of Central West NSW survived first contact with European settlers, Retrieved 2 October 2019 from https://www.abc.net.au/news/2018-08-17/curious-central-west-how-the-wiradjuri-survived-first-contact/10128822

Harding, CW 2009, *The Birmingham Cartridge Manufacturers,* Quiller Publications, UK.

Harris, JE 2010, prepared for Casey and Lowe Pty Ltd, *Glass Report: Darling Quarter (Walk) Darling Harbour Sydney*, NSW.

Harrison, R 1996, *It's the way it shatters that matters: An analysis of the technology and variability of Aboriginal glass artefacts in the Shark Bay and Swan regions of Western Australia,* Honours Thesis, University of Western Australia Archaeology Department.

Harrison, R 2000, 'Nowadays with glass: Regional variation in Aboriginal bottle glass Artefacts from Western Australia', *Archaeology in Oceania*, vol. 35 (1), pp. 34-47.

Harrison, R 2002, 'Australia's Iron Age: Aboriginal post-contact metal artefacts from old Lamboo Station, South Kimberly, Western Australia', *Australasian Historical Archaeology*, vol. 20, pp. 67-76.

Harrison, R 2002, Shared histories and the archaeology of the pastoral industry of Australia. In *After Captain Cook: The archaeology of the recent indigenous past in Australia*, R, Harrison & C Williamson (eds) 2002, pp. 38-58, Sydney University Archaeological Methods Series 8.

Harrison, R 2004, *Shared landscapes: Archaeologies of attachment and the pastoral industry in New South Wales,* UNSW Press, Sydney.

Head, L & Fullagar, R 1997, 'Hunter-gatherer archaeology and pastoral contact: Perspectives from the northwest Northern Territory, Australia', *World Archaeology*, vol. 28, no. 3, pp. 418-28.

Hillier, B & Hanson, J 1984, *The social logic of space*, Cambridge university press, UK.

Hodder, I 1986, *Reading the past: Current approaches to interpretation in archaeology*, Cambridge University Press, Cambridge, UK.

Holdaway, S & Stern, N 2004, *A record in stone: The study of Australia's flaked stone artefacts*, Aboriginal Studies Press, Melbourne.

How, C & Lewis, M 2009, *The Ewbank nail*, Proceedings of the third International Congress on Construction History, Cottbus, Germany.

Hughes, E & Lester, M 1993, *The big book of buttons*, Maine: New Leaf Publishers

Hunt, K 2000, *Material evidence, conserving historic building fabric: New heritage materials, reinforced concrete use, deterioration and repair*, Seminar, New South Wales Heritage Office, NSW.

Hutchison, D 1981,' Identifying bottles', *Australian Society for Historical Archaeology Newsletter* 11 (1), pp. 16-23.

Ilmakunnas, J 2016, 'Embroidering women and turning men: Handiwork, gender and emotions in Sweden and Finland, c. 1720-1820', *Scandinavian Journal of History*, vol. 41, no. 3, pp. 306-331.

Johnson, B 2019, *Afternoon Tea*, Historic UK, Retrieved 29 July 2019 from https://www.historic-uk.com/CultureUK/Afternoon-Tea/

Johnson, NN 1996, *Chilson's history of Fort Sisseton*, Esco Publishing, Pierre, SD.

Jones, O 1971, 'Glass bottle push-ups and pontil marks', *Historical Archaeology*, pp. 62-73.

Jones, O & Sullivan, C 1989, *The Parks Canada Glass Glossary*, Ottawa: Parks Canada.

Journal of Royal Geographical Society of Australasia 1898-1901.

Kerkhove, R & Uhr, F 2019, *The Battle of One Tree Hill*, Boolarong Press, Qld.

Kerkhove, R 2015, 'Barriers and bastions: Fortified frontiers and white and black tactics', *Our shared history: Resistance and reconciliation*, CQU (Noosa) online.

Kinsela, A 2014, *Ancient Australia unearthed*, Novella Distribution, Australia.

Kottak, CP 2011, *Anthropology: Appreciating human diversity*, McGraw Hill Companies Inc., NY.

Labbett, P 1993, *British small arms ammunition, 1864-1938,* Oceanside Armory Publications, California.

Laird, CN 1918, 'The potteries at Shek Waan, near Canton China', *The Journal of Industrial and Engineering Chemistry*, vol. 10, no. 7, pp. 568-571.

Lamond, HG 1953, *The Bulletin*, 74 (3807):27

Lamond, HG 1949, 'Native Mounted Police' *Walkabout* p. 32

Lamond to Commissioner, 20 January 1897, Poingdestre, staff file A/40323/97/960.

Laura Police Station File 1894, Telegram from Hervey Fitzgerald to Commissioner of Police dated 33 June, Queensland State Archives 290072.

Laurie, A 1957, 'Hornet Bank Massacre', October 27, 1857, *Conference historical society*, QLD.

Lawrence, S 2001, 'Foodways on two colonial whaling stations: Archaeological and historical evidence for diet in nineteenth century Tasmania', *Journal of the Royal Australian Historical society*, vol. 87, no. 2, pp. 209-229.

Lawrence, S 2000, *Dolly's Creek: An archaeology of a Victorian goldfields community*, Melbourne University Press, VIC.

Lawrence, S 1998, 'The role of material culture in Australasian archaeology', *Australian Historical archaeology*, vol. 16, pp. 8-15.

Lightfoot, KG 2019, 'Commentary: Frontier forts – colonialism and the construction of dynamic identities in North America', *Historical Archaeology*, vol. 53, pp. 170-180.

Lightfoot, KG, Martinez, A, Schiff, AM 1998, Daily practice and material culture in pluralistic social settings: An archaeological study of culture change and persistence from Fort Ross, California, *American Antiquity*, No. 63 (2), pp. 199-223.

Lindbergh, J 1999, 'Buttoning down archaeology', *Australian Historical Archaeology*, vol. 17, pp. 50-57.

Lindsey, W 2015a, *Glass making and glass makers*. Retrieved 8 November 2018 from https://sha.org/bottle/glassmaking.htm

Lindsey, W 2015b, *Bottle body characteristics and mould seams*. Retrieved 29 October 2018 from https://sh.org/botle/body.htm.

Lindsey, W 2015d, *Bottle finishes and closures*. Retrieved 8 November 2018 from https://sha.org/bottle/finishstyles.htm#Wide%20Prescription.

Lindsey, W 2015e, *Bottle typing (typology) and diagnostic shape*. Retrieved 8 November 2018 from https://sha.org/bottle/liquor.htm.

Lindsey, W 2015f, *Bottle/glass colour*. Retrieved 7 July 2020 from https://sha.org/bottle/colors.htm.

Litser, M & Wallis, LA 2011, '*Looking for the proverbial needle? The Archaeology of Australian colonial frontier massacres'*, Archaeology in Oceania, vol. 46, no. 3, pp. 105-117.

Lommel, A 2019, *The Unambal: An Aborigine tribe of North West Australia*, Retrieved 31 July 2019, from http://www.bradshawfoundation.com/unambal/circumcision_initiation.php

Loos, N 1982, *Invasion and resistance: Aboriginal-European relations in the North Queensland Frontier 1861-1897*, Canberra: Australian National University Press.

Lowe KM, Cole N, Burke H, Wallis LA, Barker B, Hatte E & Rinyirru Aboriginal Corporation 2018, 'The archaeological signature of 'ant bed' mound floors in the northern tropics of Australia: Case study on the Lower Laura (Boralga) Native Mounted Police Camp, Cape York Peninsula', *Journal of Archaeological Science: Reports* (19), pp. 686-700.

Lucas, GC 1962, *The geology of the Cooktown 1:250 000 sheet area, North Queensland*, Department of National Development, Bureau of mineral resources, geology and geophysics, Australia.

Lunn, K 1981, 'Identification and dating of Lea and Perrin's Worcestershire sauce bottles on Canadian historic sites: Interpretation past and present', *Canadian Journal of Archaeology,* vol. 5, pp. 1-17.

Lydon, J 1998, 'Boarding houses in the Rocks: Mrs. Ann Lewis' Privy, 1865', in M. Casey, D. Donlon, J. Hope and S. Wellfare (eds) Redefining archaeology: Feminist Perspectives, Australian National University, Canberra, pp. 138-146.

Lydon, J 2000, 'This civilizing experiment': Photography at Coranderrk Aboriginal Station during the 1860s. In *After Captain Cook: The Archaeology of the recent indigenous past in Australia*, Harrison R and Williamson C (eds) 2002, pp. 59-74. Sydney University Archaeological Methods Series 8.

Lydon, J 2009, 'Imagining the Moravian Mission: space and surveillance at the former Ebenezer Mission, Victoria, southeastern Australia', *Historical Archaeology*, vol. 42, no. 3, pp. 5-19.

Lydon, J 2017, 'Photography, humanitarianism, empire', *Aboriginal History,* vol. 41, pp. 197-199.

Lyman, RL 1994, *Vertebrate taphonomy*, Cambridge University Press, Cambridge.

McKinley Tarriff Act 1891, *The Tariff Act of 1891 and what it means to museums*, West Virginia Association of Museums, Retrieved 17 September 2019 from http://wvmuseums.org/the-tariff-act-of-1891-and-what-it-means-to-museums/

Macintyre, S 2003, *The History Wars*, The Sydney papers winter/spring, NSW

Majewski, T & O'Brien, MJ 1987, 'The use and misuse of nineteenth-century English and American ceramics in Archaeological analysis', *Advances in Archaeological Method and Theory*, vol. 11, pp. 97-209.

Mason, CI 1963, 'Eighteenth century culture change among the lower creeks', *The Florida Anthropologist*, vol. 63, no. 3, pp. 65-80.

Mate, GL 2010, *Mining the landscape: Finding the social in the industrial through an archaeology of the landscapes of Mount Shamrock*, Unpublished PhD thesis, University of Queensland, Brisbane.

McCarthy, M 2008, 'Boundaries and the archaeology of frontier zones', In *Handbook of landscape archaeology*, David, B and Thomas, J 2008, pp. 202-209, Left Coast Press Inc, California.

Meyer, F 2014, *Peachridge Glass: A Vogeler & Company, Baltimore, Md. – March 1881 Scientific American Illustrations.* Retrieved 14 November 2018 from https://www.peachridgeglass.com/2014/01/a-vogeler-company-baltimore-md-march-1881-scientific-american-illustrations/

Miller, GL 2000, 'A revised set of CC Index Values for classification and economic scaling of English ceramics from 1787 to 1880', *Historical Archaeology*, vol. 25, no. 1, pp. 1-25.

Morwood, M 1995, 'Aboriginal ethnography, SE Cape York Peninsula', in M Morwood and D Hobbs (eds), *Quinkan prehistory: The archaeology of Aboriginal art in S.E. Cape York Peninsula, Australia*, Tempus 3, Anthropology Museum, University of Queensland, St Lucia, pp. 33-39.

Myers, FR 1991, *Pintupi Country, Pintupi self: Sentiment, place and politics among Western Desert Aborigines*, University of California Press, LA.

Nayton, G 1992, 'Applying frontier theory to a Western Australian site: The problem of chronological control', *Australasian Historical Archaeology*, vol. 10, pp. 75-87.

Newton, D 2008, *Trademarked: A history of well-known brands from Aertex to Wright's coal tar,* The History Press, UK.

Odell, D 2007, *Frederick Stearns and Co*, Retrieved 9 May 2019 from http://www.bottlebooks.com/Wholesale%20Druggists/Frederick%20Stearns%20&%20Co.html

Olsen, JW 1978, 'A study of Chinese ceramics excavated in Tucson', *The Kiva*, vol. 44, no. 1, pp. 1-50.

Olsen, S 1963,' Dating early plain buttons by their form', *American Antiquity*, vol. 28 (4), pp. 551-554.

Ørsted-Jensen, R 2011, *Frontier history revisited: Colonial Queensland and the 'History War'*, Lux Mundi Publishing, QLD.

Ortner, SB 1984, 'Theory in anthropology since the sixties', *Comparative Studies in Society and History*, vol. 26, pp. 126-166.

Oxford Dictionary 2019, 'Acculturation' Retrieved 14 of August 2019 from https://www.lexico.com/en/definition/acculturation

Parker, BJ 2002, 'At the edge of empire: Conceptualising Assyria's Anatolian frontier ca. 700 b.c.' *Journal of Anthropological Archaeology*, vol. 21, pp. 371-395.

Paterson, A 2006, 'Towards a historical archeology of Western Australia's northwest' *Australasian Historical Archaeology*, vol. 24, pp. 99-111.

Paterson, A 1999, Confronting the sources: The archaeology of culture-contact in the south-Western lake Eyre Basin, Central Australia, unpublished PhD thesis, University of Sydney, Sydney.

Pearce, H 2000, 'Lakefield National Park Cultural Heritage Report vol. 2, Lakefield Laura Station historical heritage places survey', Cultural Heritage Branch, Department of Environmental Protection Agency, Brisbane.

Pease, GL 2007, *Pipe shapes: A look at old and new*, Retrieved 6 of March 2019 from http://www.glpease.com/Pipes/Shapes/Dublin.php

Port Denison Times 1864, 26 March, WA.

Port Douglas Chronicle 1889, Qld

Prangnell, J & Quirk, K 2009, 'Children in Paradise: Growing up on the Australian goldfields', *Historical Archaeology*, vol. 43, no. 3, pp. 38-49.

Prior, DJ 2014, *Methods and difficulties in quantifying archaeological vessel glass assemblages*, Oxbow Books, UK.

Public Affairs, parliamentary and access branch 2001, Commonwealth department of health and aged care, *Alcohol in Australia: Issues and strategies*, Retrieved 3 of January 2019 from http://www.health.gov.au/internet/drugstrategy/publishing.nsf/Content/alc-strategy/%24FILE/alcohol_strategy_back.pdf

Queensland Government Gazette, 10 March 1866.

Queensland Museum Network, Retrieved 4 of May 2019 from http://www.collections.qm.qld.gov.au/search.do?view=detail&page=1&id=1519422&db=object

Quirk, K 2007, *The Victorians in 'Paradise': Gentility as social strategy in the archaeology of colonial Australia*, Unpublished thesis, UQ.

Raibmon, P 2003, 'Living on display: Colonial visions of aboriginal domestic spaces', *BC Studies*, no. 140.

Rainbird, P, Allison, P, Schmidt, N & Wickman, S 1997, The Kinchega archaeological research project, unpublished report to NSW National Parks and Wildlife Service, Hurtsville.

Raymond, CM, Kytta, M, & Stedman, R 2017, 'Sense of place, fast and slow: The potential contributions of affordance theory to sense of place', *Frontiers in Psychology*, vol. 8, np-published online. Retrieved 1 of October 2019 from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5627138/

Rayson, V 2014, Circa 1850s cattle bone toothbrush, Retrieved 24 of June 2019 from https://open.abc.net.au/explore/68001

Reynolds, H 2006, *The other side of the frontier*: *Aboriginal resistance to the European Invasion of Australia,* James Cook University, Qld.

Richards, J 2008, *The Secret War: A true history of Queensland's Native Police,* University of Queensland Press, St Lucia, Queensland.

Richards, J 2005, *A question of necessity: The Native Police in Queensland*, Unpublished thesis, Griffith University, Qld.

Richie, N 1986, *Archaeology and the history of the Chinese in southern New Zealand during the nineteenth century; a study of acculturation, adaptation, and change,* Unpublished PhD thesis, University of Otago (3 volumes).

Riley, J 1958, *A history of the American soft drink industry: Bottles carbonated beverages, 1805-1957,* Published by The American Bottlers of Carbonated Beverages, Washington, DC

Rimfirecentral.com 2003, A short history of the rimfire cartridge. Retrieved 18 of June 2019 from https://www.rimfirecentral.com/forums/showthread.php?t=547425

Roth, WE, 1903, Letter to the Under Secretary Home Department, ID87382, Ration Cash Book, Native Police, start of communications 01/05/1894, QSA.

Rowland, M 2004, 'Myths and non-myths: Frontier 'massacres' in Australia's history – the Woppaburra of the Keppel Islands', *Journal of Australian Studies,* vol. 81, pp. 39-57.

RSPCA 2019, How often should my horse see a farrier? Retrieved 15 of July 2019 from https://kb.rspca.org.au/knowledge-base/how-often-should-my-horse-see-the-farrier/

Runnels, C 1976, 'More on glass implements from Greece', *Newsletter of Lithic Technology*, vol. 5(3), pp. 27–31.

Russell, L 2007, 'Dirty domestics and worse cooks: Aboriginal women's agency and domestic frontiers, southern Australia, 1800-1850', *Frontiers,* vol. 28, no. 1 & 2.

Ryan, L 2013, 'The black line in Van Dieman's Land: Success or failure?', *Journal of Australian Studies*, vol. 37, no. 1, pp. 3-18.

Ryan, L 2009, 'The long shadow of remembrance: Remembering the debate about massacre in the black war in Tasmania', *Coolabah*, vol 3, pp. 51-59.

Ryan, L 1981, *The Aboriginal Tasmanians,* St Lucia: University of Queensland Press, Qld.

Sahlins, M 1981, *Historical metaphors and mythical realities: Structure in the early history of the Sandwich Islands Kingdom,* Special Publication No. 1, Association for the Study of Anthropology in Oceania, University of Michigan Press, Ann Arbor.

Samford, PM 1997, 'Response to a market: Dating English underglaze transfer-printed wares', *Historical Archaeology*, vol. 31, no. 2, pp. 1-30.

Scott, DD 2003, 'Oral tradition and archaeology: Conflict and concordance; examples from two Indian war sites', *Historical Archaeology*, vol. 37, no. 3, pp. 55-65.

Scott, DD 1989, 'An officer's latrine at Fort Larned and some inferences on status', *Plains Anthropologist*, vol. 34, no. 123, pp. 23-34.

Scott, DD, Fox, RA, Connor, MA & Harmon, D 1998, *Archaeological perspectives on the archaeology of Little Big Horn*, University of Oklahoma Press, Oklahoma.

Silliman, SW 2009, 'Change and continuity, practice and memory: Native American persistence in colonial New England', *American Antiquity*, vol 74, no. 2, pp. 211-230.

Silverman, DJ 2016, *Thundersticks: Firearms and the violent transformation of Native America*, The Belknap Press of Harvard University Press, MA.

Skennerton, ID 2005, *.577 Pattern 1853 rifle musket and Snider Enfield*, Arms and Militaria Press, Qld, cited in, Enfield-Snider.com, retrieved 17 June 2019 from http://www.enfield-snider.com/Snider.htm

Skennerton, ID 1975, *Australian service longarms*, I.D. Skinnerton, Australia

Skinner, LE 1975, *Police on the pastoral frontier: Native police, 1849-1859*, St Lucia: University of Queensland Press, Brisbane.

Smiley, B 1999, 'The Sand Creek massacre', *Archaeology*, vol. 52, no. 6, p. 22.

Smith, A 1759, *The theory of moral sentiments*, A. Millar, London.

Smith, PA, Raven, MD, Walshe K, Fitzpatrick, RW & Pate, FD 2017, 'Scientific evidence for the identification of an Aboriginal massacre at the Sturt Creek sites on the Kimberly frontier of north-western Queensland', *Forensic Science International*, vol. 279, pp. 258-267.

Smith, PA, Blau, S, Fitzpatrick, R, Pate, D with Thomas, M, Barny, G, Dril, S, Patrick, M, Thomas, R, Thomas, O, and Traditional Owners 2005, Forensic archaeology on the Kimberly frontier, Unpublished Paper, Presented at the *Australian Institute of Maritime Archaeology/Australian Archaeological Association Conference*, November 2005, Fremantle.

Smithsonian National Museum of American History, Retrieved 2 of May 2019 from https://americanhistory.si.edu/blog/2009/10/cod-liver-oil-and-pink-peignoirs.html

Soja, EW 1996, *Thirdspace: Journeys to Los Angeles and other real-and-imagined places*, Cambridge, Blackwell, MA.

Spencer-Wood, SM 2010, A feminist framework for analyzing powered cultural landscapes in historical archaeology, *International Journal of Historical Archaeology*, vol. 14, pp. 498-526.

Spencer-Wood, SM 1999, Towards an historical archaeology of materialistic domestic reform. In R. M. McGuire & R. Paynter (eds), *The archaeology of inequality*, Blackwell Oxford, pp. 231-286.

Sprague, R 2002, 'China or Prosser button identification and dating', *Historical Archaeology*, vol. 36 (2), pp. 111-127.

Stephens, SE 1972, 'The Palmer Road in 1972', *Cairns Historical Society Bulletin* 337.

Stokes, G 1997, *The politics of identity in Australia,* Cambridge University Press, UK.

Stuart, I 1997, 'Cultural landscapes as an analytical tool: Analysing sqatting landscapes', *Historic Environment*, vol. 3 & 4, pp. 24-27.

Sydney Gazette, 10 April 1832, NSW.

Sydney Living Museums, 2019, *Troopers, trackers, bushrangers and their weapons.* Retrieved 17 June 2019 from https://sydneylivingmuseums.com.au/stories/troopers-trackers-bushrangers-and-their-weapons

The Argus, 13 June 1883, Melbourne.

The Pictorial Australian, 1 October 1895, SA.

The Queenslander, 27 January 1877, Brisbane.

Thomas, J 2001, Archaeologies of place and landscape. In I. Hodder (eds), Archaeological theory today, pp. 163-186, Cambridge: polity.

Thompson to Commissioner, 29 August 1882, Police Staff File, Frederick M. Clerk, A/38742.

Thorpe, B 1996, *Colonial Queensland: perspectives on frontier society*, St Lucia, University of Queensland press, QLD.

Tonkinson, M 1990, Is it in the blood?: Australian Aboriginal identity. In J. Linnekin and L. Poyer (eds), *Cultural identity and ethnicity in the Pacific*, Hawaii University Press, Honolulu.

Toulouse, J 1969, *Fruit Jars,* Thomas Nelson and Sons, NY.

Turnbull, C 1974, *Black War: The extermination of the Tasmanian Aborigines*, Sun books, Vic.

Varman, R.V.J 1993, *Bricks and Nails: Building Materials as Criteria for Dating in Sydney and Environs from 1788*. Unpublished PhD thesis, Department of Prehistoric and Historical Archaeology, University of Sydney, NSW.

Veth, P & O'Connor, S 2005, 'Archaeology, claimant connection to sites and Native Title: Employment of successful categories of data with specific comments on glass artefacts', *Australian Aboriginal Studies,* pp. 2-15.

Voss BL 2008, 'Domesticating imperialism: sexual politics and the archaeology of empire', *American anthropologist*, vol. 110, pp. 191-203.

Voss BL & Allen R 2010, 'Guide to ceramic NMV calculation qualitative and quantitative analysis', *Technical briefs in historic archaeology* vol. 5, pp. 1-9.

VT medicines, *Sparkling Pontiled Perry Davis Vegetable Pain Killer*. Retrieved 8 November 2018 from https://www.vtmedicines.com/bottle192.htm.

Walker, F 1850, 'Letter from the Commandant of Native Police, Middle District, to the colonial secretary'. In *Morten Bay Courier,* 29 June 1850, QLD, p. 4.

Walker, RB 1980, 'Tobacco smoking in Australia, 1788-1914' *Historical Studies*, vol. 19, no. 75, University of Melbourne, Vic.

Wall, D 1994, *The archaeology of gender: Separating the spheres in Urban America*, Plenum Press, NY.

Wallis, LA, Wright, R, Moffit, I, Domett, K, and the Woolga Valley Aboriginal Corporation 2005, Investigating the Woolga Aboriginal Massacre site: Northwest Queensland, viewed 15/01/2017, https://ehlt.flinders.edu.au/archaeology/department/research/woolgar.php

Wallis, LA, Burke, H, Barker, B & Cole, N 2019 , *Archaeology on the frontier*, Retrieved 08 August 2019 from https://archaeologyonthefrontier.com/2018/04/13/recruiting_part_i/

Wallis, LA, Burke, H, Barker, B & Cole, N 2019 , *Archaeology on the frontier,* Retrieved 13 August 2019, https://archaeologyonthefrontier.com/2018/02/14/uniforms-part-ii/

Waziyatawin 2008, *What does justice look like: The struggle for liberation in the Dakota homeland,* Living Justice Press, St Paul, MN.

Wegars, P 1998, 'The Asian comparative collection', *Australian Historical Archaeology*, vol. 11, pp. 43-48.

Wells, T 1998, 'Nail Chronology: The use of technologically derived features', *Historical Archaeology*, vol. 32 (2), pp. 78-99.

Wesley, D & Litster, M 2013, Bead currency used in Australia's first export industry, ABC Science, viewed 01/01/2019, http://www.abc.net.au/science/articles/2013/12/06/3905030.htm

Wetherington, RK & Levine, F 2014, *Battles and massacres on the Southwestern frontier: Historical and archaeological perspectives*, University of Oklahoma Press, USA.

Wetherbee, J 1985, *A second look at white ironstone*, Wallace-homestead Book Co, Lombard, Illinois.

Whipham, RA 1883, Buckingham Downs, Eglington, Ernest Police staff file transcript, December 16, ID563460.

Whitaker, C 1996, *Architecture and the American dream*, Clarkson N. Potter, NY.

Williamson, C 2002, Finding meaning in the patterns: The analysis of material culture from a contact site in Tasmania. In *After Captain Cook: The Archaeology of the recent indigenous past in Australia*, Harrison R and Williamson C (eds) 2002, pp. 74-101. Sydney University Archaeological Methods Series 8.

Wilson, A 1988, A failed colonial squire: Sir John Jamison at Regentville', in J. Birmingham, D. Bairstow and A. Wilson (eds) Archaeology and colonisation: Australia in the world context, *Australasian Society for Historical Archaeology*, Sydney, pp.123-138.

Wilson, GC & Kelly A 1987, *Preliminary analysis of clay tobacco pipes from the first government house site, Sydney*, Heritage Resource Services, ACT.

Withnall, IW & Cranfield LC 2013, 'Geological framework', *Queensland Minerals*, Qld.

Worthpoint market place partners, *St Jakobs oel antique bottle 'oel is German'*. Retrieved 14 November 2018 from https://www.worthpoint.com/worthopedia/t-jakobs-oel-antique-bottle-oel-135485267

Worthpoint market place partners, *Wasboes Norwegian Codd Liver oil*, Retrieved 9 May 2019 from https://www.worthpoint.com/worthopedia/1880s-wasboes-norwegian-cod-liver-oil-bottle-9

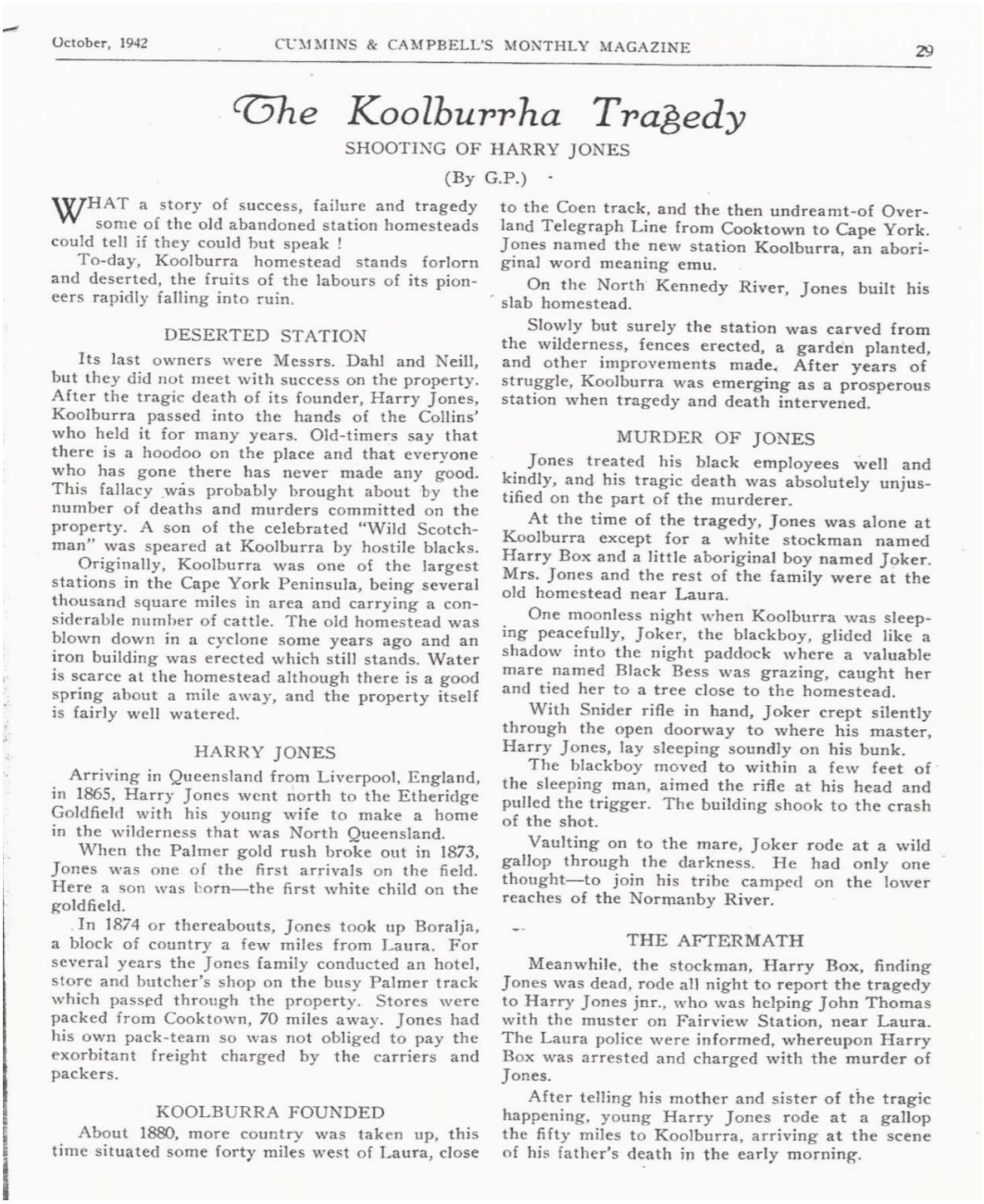
Yang, JK & Hellmann VR 1995, 'What's in a pot? An emic study of Chinese brown glazed stoneware', *Proceedings of the Society for California Archaeology*, vol. 11, pp. 59-66.

Young, L 2003, *Middle-class culture in the nineteenth century: America, Australia and Britain*, Palgrave Macmillan, London.

Appendices

Appendix 1. The death of Harry Jones

Figure A1.1 shows a magazine report on the death of one of the first arrivals on the gold fields, Harry Jones (Cummins & Campbell's Monthly Magazine 1942:29). Jones took up land at Boralga and conducted a hotel, store and butcher's shop on the busy Palmer track which passed through his property.



October, 1942 CUMMINS & CAMPBELL'S MONTHLY MAGAZINE 29

The Koolburrha Tragedy

SHOOTING OF HARRY JONES

(By G.P.)

WHAT a story of success, failure and tragedy some of the old abandoned station homesteads could tell if they could but speak !

To-day, Koolburra homestead stands forlorn and deserted, the fruits of the labours of its pioneers rapidly falling into ruin.

DESERTED STATION

Its last owners were Messrs. Dahl and Neill, but they did not meet with success on the property. After the tragic death of its founder, Harry Jones, Koolburra passed into the hands of the Collins' who held it for many years. Old-timers say that there is a hoodoo on the place and that everyone who has gone there has never made any good. This fallacy was probably brought about by the number of deaths and murders committed on the property. A son of the celebrated "Wild Scotchman" was speared at Koolburra by hostile blacks.

Originally, Koolburra was one of the largest stations in the Cape York Peninsula, being several thousand square miles in area and carrying a considerable number of cattle. The old homestead was blown down in a cyclone some years ago and an iron building was erected which still stands. Water is scarce at the homestead although there is a good spring about a mile away, and the property itself is fairly well watered.

HARRY JONES

Arriving in Queensland from Liverpool, England, in 1865, Harry Jones went north to the Etheridge Goldfield with his young wife to make a home in the wilderness that was North Queensland.

When the Palmer gold rush broke out in 1873, Jones was one of the first arrivals on the field. Here a son was born—the first white child on the goldfield.

In 1874 or thereabouts, Jones took up Boralja, a block of country a few miles from Laura. For several years the Jones family conducted an hotel, store and butcher's shop on the busy Palmer track which passed through the property. Stores were packed from Cooktown, 70 miles away. Jones had his own pack-team so was not obliged to pay the exorbitant freight charged by the carriers and packers.

KOOLBURRA FOUNDED

About 1880, more country was taken up, this time situated some forty miles west of Laura, close to the Coen track, and the then undreamt-of Overland Telegraph Line from Cooktown to Cape York. Jones named the new station Koolburra, an aboriginal word meaning emu.

On the North Kennedy River, Jones built his slab homestead.

Slowly but surely the station was carved from the wilderness, fences erected, a garden planted, and other improvements made. After years of struggle, Koolburra was emerging as a prosperous station when tragedy and death intervened.

MURDER OF JONES

Jones treated his black employees well and kindly, and his tragic death was absolutely unjustified on the part of the murderer.

At the time of the tragedy, Jones was alone at Koolburra except for a white stockman named Harry Box and a little aboriginal boy named Joker. Mrs. Jones and the rest of the family were at the old homestead near Laura.

One moonless night when Koolburra was sleeping peacefully, Joker, the blackboy, glided like a shadow into the night paddock where a valuable mare named Black Bess was grazing, caught her and tied her to a tree close to the homestead.

With Snider rifle in hand, Joker crept silently through the open doorway to where his master, Harry Jones, lay sleeping soundly on his bunk.

The blackboy moved to within a few feet of the sleeping man, aimed the rifle at his head and pulled the trigger. The building shook to the crash of the shot.

Vaulting on to the mare, Joker rode at a wild gallop through the darkness. He had only one thought—to join his tribe camped on the lower reaches of the Normanby River.

THE AFTERMATH

Meanwhile, the stockman, Harry Box, finding Jones was dead, rode all night to report the tragedy to Harry Jones jnr., who was helping John Thomas with the muster on Fairview Station, near Laura. The Laura police were informed, whereupon Harry Box was arrested and charged with the murder of Jones.

After telling his mother and sister of the tragic happening, young Harry Jones rode at a gallop the fifty miles to Koolburra, arriving at the scene of his father's death in the early morning.

Figure A1.1 Magazine report of Harry Jones' death

Appendix 2. Trench and context summaries

Context summaries for Trenches 1-20 are given below.

Table A2.1 Context summary Trench 1, Boralga NMP Camp

Square	Context	pH	Munsell colour	Description
1	001			Surface layer is fine grey silt. Removed loose leaf litter and vegetable matter; no apparent artefacts. Bucket colour is orange (for sieving). Very loose surface dust comes down onto a harder surface. No change in levels from start to end of removal of leaf litter. Surface is essentially level, with micro-undulations. Colour change in west corner, where the sediment appears to be burnt and is a mottled orange colour. The grey silt is a lot softer than the hard orange surface.
1	002			One fragment of black glass found in west corner of context 2. Context 2 is a grey silt that is very compacted, though is relatively easy to scrape. Contained several pieces of glass and one piece of ceramic. Very undulating surface.
1	003			Silty, grey compact matrix, same as Context 002.
1	004			Context 4 is a hard, compact grey sediment - uniform in colour and consistency. No cultural material was found in this context. Came through this layer on to hard lighter coloured mottled sediment. This is context 5. Because we found no cultural material in context 4 we ceased excavation of SQ1 - SQ 5 continued to see if there may be deeper cultural material
5	001			Bucket colour for sieving is pink. Removing surface leaf litter and loose dust. Appears dry and similar to square 1. No apparent artefacts. Once into the sediment itself, the deposit is quite loose and sandy and much easier to excavate than in square 1. Coming down onto a slightly more compact, mottled orange unit.
5	002			Compact grey silt that is relatively easy to excavate despite the compaction. Quite a bit of orange mottling across the square which might be related to rust or not - not apparent at this stage. Green bottle glass lip from along the north-eastern wall recovered. Pieces of charcoal (approx. 5mm diameter) visible in southern half of square. Snider cartridge recovered from northern half of square. larger pieces of glass becoming visible with depth. Complete perfume bottle recovered from east quadrant. Quite a lot of charcoal fragments in this layer. Comes down onto a white orange mottled layer across the square.
5	003			White orange sandier unit that is easier to excavate though still compact. A single small fragment of glass found in the south quadrant associated with a root. No charcoal in this sediment. Increasing numbers of small (<1cm) rounded quartz pebbles in this unit. Ceased excavating due to sterile nature.

Table A2.2 Context summary Trench 2, Boralga NMP Camp

Square	Context	pH	Munsell colour	Description
1	001			Removed grass etc. from surface and continued excavating down through loose grey material until hit hard lighter coloured compact sediment - this will be context 2
1	002	10YR-43 Brown		Context 2 is a compact lightish grey sediment uniform in colour and texture throughout the square. Very few artefacts. End excavation.
3	001			A relatively looser grey silty sediment with many roots, coming down onto a hard, compact yellow unit. This yellow unit is also apparently in square 1 outside the hut, so it seems likely that it is natural, rather than being an ant bed floor or the like. A couple of pieces of camp oven were recovered in context 1 and in the northern quadrant a long bolt is embedded in the surface of (and thus extends into) context 2.
3	002	10YR-6/4 Light Yellowish Brown		Very hard and compact silty clay unit. Pale yellow and very few artefacts apart from nails, including a rose headed wire nail and a lead headed nail. A 50 X 50 cm test pit was excavated in the south western corner of the square to a depth of 40 cm, but context was unchanged, and it included no artefacts. Square and trench closed due to sterility.

Table A2.3 Context summary Trench 3, Boralga NMP Camp

Square	Context	pH	Munsell colour	Description
	000			Surface collection of broken material left behind by bottle hunters
2	001			After removing the surface artefacts - proceeded to excavate context 1. Context 1 was a loose layer of grey sediment which came down on a lighter more compacted layer. This will be called context 2
2	002			Sediment more compact - lighter coloured - thin layer with some artefacts, eventually come down on a pebbly very hard compact surface - the bedrock of the pit with no artefacts present. This means approximately 35 cm of in situ material was removed by bottle hunters and what remained was the discarded pieces. No further artefacts found at base of compact layer.

Table A2.4 Context summary Trench 4, Boralga NMP Camp

Square	Context	pH	Munsell colour	Description
1	001		10/YR 43 Brown	Loose grey sediment - few artefacts – approximately 4 cm in depth. Comes down on harder more compact layer - which will be Context 2
1	002		10/YR 4/2 Dark Grayish brown	Hard compact grey layer - lots of artefacts - Comes down on hard whitish compact layer - culturally sterile
2	001		10/YR 43 Brown	Visible surface scatter on slope below site. Context 001 is a very fine layer of fine grey decomposed leaf litter covering context 002, which contains the artefacts. Several objects are partially visible embedded in the surface of context 002.
2	002		10/YR 4/2 Dark Grayish brown	Fine grey/brown silty layer, very compact and containing large artefacts. Obvious rubbish discard lying on top of bedrock with ash and charcoal mixed in with the soil and artefacts. Some small pockets in the substrate contain relatively fragile material such as cartridges. Very little bone, but much glass and ceramic, some burnt.
3	001		10/YR 43 Brown	Loose grey silt layer with organic matter. Very fine-grained silt overlying a more compact layer with artefacts.
3	002		10/YR 4/2 Dark Grayish brown	Burnt rubbish deposition layer with large inclusions of charcoal, burnt stone and ash. This context is essentially baked clay - very hard and difficult to excavate. A brass kerosene lamp base was retrieved from the north edge of this square.
5	001		10/YR 43 Brown	Loose grey sediment mixed with leaf litter - sparse cultural material.
5	002		10/YR 4/2 Dark Grayish brown	Compact grey layer - not as many artefacts as other squares-comes down on sterile whitish compact sediment
8	001		10/YR 43 Brown	Loose grey sediment, with leaf litter with very little cultural material.
8	002		10/YR 43 Brown	Compact grey silt layer with lots of charcoal and ash. Culturally rich with lots of artefacts. Context 002 is sitting on top of an undulating sterile layer of decomposing sandstone/ bedrock.

9	001		10/YR 43 Brown	Loose, grey organic layer with fine, grey silt. Colour is at least partly to do with the ashy deposit. Very few artefacts loose in the layer, mainly glass fragments.
9	002		10/YR 4/2 Dark Grayish brown	As with square 3, this context is a highly compacted burnt deposit with inclusions of charcoal, ash and baked stones. The rubbish is deposited with this context, but it is often very fragmented. Three whole bottles were recovered from the square. Several cartridges (Snider and smaller gauge) were recovered from the SW corner of this square.

Table A2.5 Context summary Trench 5, Boralga NMP Camp

Square	Context	pH	Munsell colour	Description
3	001			Square is located inside the fireplace of the 'house'. Context 001 is a thin layer of loose grey silt with organic matter. Surface is very flat and even.
3	002			Very hard and compacted grey silt layer with very few artefacts (one very small piece of glass and several nails, including a cut nail. End levels were taken before reaching the end of context 002 because of the compaction of the deposit and the relative paucity of artefacts. A small test pit (c 40 x 40 cm) was excavated in the northwest corner - context 002 is approx. 10-12cm deep, overlying a paler, mottled yellow/orange layer. Artefacts appear to be sitting in 002 , with some at the very base of 002.
4	001			Square is located inside the fireplace of the 'house'. Context 001 is a thin layer of loose grey silt with organic matter. Surface is very flat and even.
4	002			Context 002 in this square is a visibly different colour to context 002 in square 3 – 002. Square 4 is a pale-yellow colour from burning. Very compact and difficult to dig and surface is very uneven, with pockets of charcoal and very few artefacts. A large, squared piece of timber was lying SW-NE across the northern end of the square, approximately 12 cm below the surface and on top of the burnt orange layer (003).

Table A2.6 Context summary Trench 6, Boralga NMP Camp

Square	Context	pH	Munsell colour	Description
1	001		10/YR 4/2 Dark Grayish brown	This trench was sited in the wrong place and was discontinued after one context. The correct location for this was over a geophysical anomaly sited further to the NE - this is now trench 7.

Table A2.7 Context summary Trench 7, Boralga NMP Camp

Square	Context	pH	Munsell colour	Description
1	001			This trench is sited over a geophysical anomaly (metal) located close to trench 1, the lagoon and the troopers' huts. Context 001 is a fine grey silt that grades to a harder consistency approximately 2-3cm deep. This contains pieces of gravel, charcoal and many artefacts, including trouser buttons, clay pipes, glass, metal (nails) and ceramics. Context 001 sits above a softer, paler layer (context 002). Area of darker sediment in SW corner was left in situ as a possible post hole pending excavation of adjacent squares. Very fragmentary and highly calcined bone noted in context.
1	002			Very pale, soft and powdery layer, with few artefacts concentrated in upper 10cm. Some charcoal mottling in upper section as well, but sterile below the upper level where material has presumably moved down from context 001. Test pit excavated in SE corner to test depth down to 50cm, but sterile.
2	001			Grey silt layer with organic matter, grading to a slightly more compact section in the NW corner. Context 001 in this square is shallower than in Square 1 and there are fewer artefacts.
2	002			Pale, fine, powdery layer with relatively few artefacts and some charcoal mottling. Three areas of soil shadows in square, although not obviously related to structural features (I.e. They are not in alignment). Some small fragments of glass and charcoal contained in stain in NW corner.
3	001			Dark grey, powdery layer with organic material. One small patch of burning in NW corner makes the sediment harder in this area, but other sediment quite easy to dig and relatively friable.
3	002			Same as for square 1
5	001			Dark grey, silty layer of loose soil with organic material on top overlying a more compact layer. Soil in this square is much darker than 7, suggesting higher charcoal/ash and organic content. Many medium-sized rocks in NW corner and SW corner is very hard, burnt and mixed with small pebbles. Glass is mixed with the stones in NW corner. Lots of burnt bone that flakes into tiny pieces in southern half of square.
7	001			Grey humic sediment that is relatively loose - some artefacts increase in density with depth and there is also an increase in charcoal content.
8	001	6	7.5YR-4/2 Brown	Second excavation. Loose grey topsoil, grass and leaf litter which was removed from top few centimetres of the square. One glass where found.
8	002			

8	003	6.5	10YR-5/2 Grayish Brown	Crisp, hard, sandy, mottled soil. Soft compaction very east to trowel. Well sorted. Fair horizon clarity. Sterile of cultural material. Seems to be natural sandy level below occupation layer and above pebbles floor. The artefacts found in this context (knapped bottle base, glass, pipe stem) are all likely to be from the interface of 002. Charcoal mottled might be from a bushfire event.
9	001	6	10/YR 4/2 Dark Grayish brown	Topsoil with grass shoots and roots, decomposing leaf and vegetation. Depth approximately 1 to 5 cm. Loose dark grey soil, easy to trowel, powdery. Sterile of cultural material.
9	002	6	10/YR 4/2 Dark Grayish brown	Dark grey, slightly compacted layer, very soft and fine silty deposit.
10	001	6	7.5YR 4/1 Dark Grey	Topsoil with grass shoots and roots, decomposing leaf and vegetation. Depth approximately 1 to 5 cm. Loose dark grey soil, easy to trowel, powdery. Sterile of cultural material.
10	002	6	10/YR 4/2 Dark Grayish brown	Top 5cm has very little artfactual material, however artefacts appear below this depth. Dark grey fine silt deposit that is compacted, but still friable. Evidence of burning with medium sized pebbles (c 2cm) in eastern third of square. This area has more artefacts, although there are still bits of isolated glass on the western two-thirds (including half of a Chinese medicine bottle). All bone extremely friable and breaks up into small pieces on excavation.
11	001	6	7.5YR-4/2 Brown	Loose grey topsoil with grass and leaf litter which was removed from the top few centimetres of the square.
11	002	7	Munsell 7.5YR- 4/2 Brown	Compact grey sandy loan with deposits of ash, calcined bone and red mottled soil throughout the centre. Artefacts include buckles, buttons, nails, glass, clay pipe, ceramic and cartridges. These mostly concentrated in the south east corner. Horseshoe nails in north east corner. Softer, darker soil in south east corner with
12	001	6	10/YR 4/2 Dark Grayish brown	Surface topsoil with decomposed organic matter. Grass and weed shoots across square. Soil is loose and soft to trowel. No cultural material.
12	002	6	10/YR 4/2 Dark Grayish brown	Dark grayish brown sandy silt. Soft soil with a few grass roots. Compact with no inclusions. Artefact rich, dense across SE to NE with large amount of bone in top 3cm. Bone calcined and highly fragmented. Photos taken in situ, some bagged. Other artefacts include ceramic, cartridges, buttons, metal, and other domestic refuse. Interface with 003 has charcoal flecks and lenses of artefacts including nails and glass. Flaked glass core found in NW corner.

14	001	6	10/YR 4/2 Dark Grayish brown	Loose pale grey silt and leaf litter. No artefacts.
14	002			Soft, grey, sandy silt, quite compacted. Dense area of artefacts in eastern wall (glass, horseshoe nails, bone, very thin sheet of metal -possibly lead or zinc - that breaks up into very small pieces on excavation.
16	001	6.5	10/YR 4/2 Dark Grayish brown	Topsoil with grass shoots and roots, decomposing leaf and vegetation. Depth approximately 1 to 3 cm. Loose grey brown soil, easy to trowel, powdery. Sterile of cultural material.
16	002	6.5	Munsell 7.5YR-5/3 Brown	Sandy silt, brownish grey, very compacted and difficult to trowel. Some pebbles in ND corner, otherwise consistent. Lower density of artefacts than squares 12 and 14. Some metal and flaked glass, bottle glass, two bullets. Interface with sterile context 003 lighter brownish yellow with fewer pebbles and more sand.
18	001	6.5	10/YR 4/2 Dark Grayish brown	General vegetation from surface and upper cm or so from square. Sediment is mostly loose leaf litter and organic matter. What little sediment there is, is a fine grey sandy silt. A horizon with minimal depth. No artefacts removed.
18	002	6.5	10/YR 4/2 Dark Grayish brown	Dark grey brown, uniformly compact, medium to low-density of artefactual material. Comes down on lighter yellow white surface marking the beginning of the sterile sediment as found throughout trench 7. A couple of small pieces of glass and metal found in top of sterile sediment but obviously belonging to context 002

Table A2.8 Context summary Trench 8, Boralga NMP Camp

Square	Context	pH	Munsell colour	Description
1	001		10YR-6/3 Pale Brown	Trench sited across geophysics anomaly in association with concrete/pebbled mound and path. Square 1 is sited to be inside the anomaly. Fine silt layer overlying a more compact layer - relatively easy to excavate. Context comes down on a harder, mottled red surface - one nail recovered and small pieces of rusted metal sitting on the harder, red surface. Context 001 was essentially sterile.
1	002		10YR-7/4 Very Pale Brown	This context was the hard, compacted orange pebble layer (approximately 4-5cm thick) and lying approximately 6cm below surface. The relatively few artefacts from this context were lying at the interface of 001 and 002. Excavation took out the pebble layer and removed some of the deposit beneath (technically context 003). Deposit

				beneath 002 was pale yellow, soft and powdery, like the SE corner of square 4.
4	001		10YR-5/3 Brown	Soft grey silt and organic layer overlying a softer silty, paler layer. Although these were both excavated as context 001, they should have been excavated as two contexts (see profile photograph). NW corner and western half of this square had a hard packed, orange pebble layer approx. 5cm below the surface. This was not excavated but corresponds to context 002 in square 1. The SE corner of this square had no pebbled hard layer, but was soft. Artefacts were only found in the soft SE corner, approximately 15 cm below surface. Context 001 in SE corner ended at 25cm because context was continuing but was sterile.

Table A2.9 Context summary Trench 9, Boralga NMP Camp

Square	Context	pH	Munsell colour	Description
1	001			Small 50 X 50 cm square excavated in centre of large pebble mound to the west of Trench 8 and north of the 'officer's quarters'. Pebbles 8-10cm in diameter interspersed with compact but not hard sediment. Stones are all rounded and brought in from gullies. Stones sit on very hard and compact sediment free of rocks. Very hard and difficult to dig.
1	002			Very hard and compact sediment. Hole in context 001 in NE corner which comes down onto familiar red rock 10 cm below the rest of the square.
1	003			Top of context 3 fine powdery grey sediment. Continues for 15 cm but this context culturally sterile so excavation discontinued. Square 1 consists of three contexts: the upper one is a lightish yellow sediment with smallish stones. This sits on 002 , a reddish rock-filled sediment which sits above 003.

Table A2.10 Context summary Trench 10, Boralga NMP Camp

Square	Context	pH	Munsell colour	Description
1	001			Trench sited over geophysics anomaly possibly associated with a farrier/saddlery. Context 001 is a loose, grey organic silt layer overlying harder, more compacted grey layer.

1	002		10YR-5/2 Grayish Brown	Grey compact sediment with evidence of burning (charcoal and black stained grey sediment) in SE corner of trench. Comes down onto a hard, compacted red stone surface.
1	003		10YR-6/3 Pale Brown	Compact, pale yellow sediment, the top few centimetres of which had cultural material, but none lower down. Cultural deposit continued down into NE corner.
4	001			Loose, pale grey organic layer overlying harder, more compact surface (002). One large piece of metal in situ in 002 in SE corner of square
4	002			Pale grey silty layer that is more compacted than 001, but still friable and relatively easy to dig. Several horseshoes, horseshoe nails, and other pieces of iron retrieved from this context, but other metal is in situ in the underlying context (003) which is much harder and probably baked. Small area of greyer deposit in NW corner, SW corner is extremely hard and baked like concrete.
4	003			Pale yellow silty sediment that is compact but easy to excavate across most of the square. SW corner is very hard and burnt and NW corner had a grey sediment and artefacts continued lower down. A 50 cm x 1 m pit was dug across the western half to section because horseshoes we're in situ at a greater depth in the NW corner. Small quantities of pebbles and orange stones present in context 003.

Figure A2.1 Horseshoes in situ at Trench 4, Square 4, Context 002 (Photograph Bateman 2016)

Table A2.11 Context summary Trench 11, Boralga NMP Camp

Square	Context	pH	Munsell colour	Description
1	001			Thin, dark grey layer with artefacts (chiefly glass and ceramic) with high quantities of charcoal and ash. This was burnt and very compact and hard to excavate. Underlying this was a softer, paler layer of sterile sand. No obvious pits or other features, so cultural material may have been discarded on the surface and burnt. Material was clustered into two areas: one across the eastern half of the square, the other in the western quarter.

Table A2.12 Context summary Trench 12, Boralga NMP Camp

Square	Context	pH	Munsell colour	Description
3	001			Surface sediment is a soft and loose, grey powdery deposit with many roots. No obvious artefacts other than some very corroded small pieces of metal.
3	002			Compact, crisp pale grey, sandy deposit with a lot of thin netted wire (like chicken wire) and occasional glass and ceramics. Some charcoal. Concentrated area of wire in SE corner of trench - a large chunk of wire consolidated with soil came out of this area. This was a darker patch clearly visible in the end levels of context 002. Material in this square appears to be a low density scatter on an old surface that has been buried. One large iron object still in situ in NW wall at close of excavation.

Table A2.13 Context summary Trench 13, Boralga NMP Camp

Square	Context	pH	Munsell colour	Description
1	001			Soft grey, friable deposit/humic layer. Very thin and no artefacts.
1	002			Soft, pale yellow sand that is friable and easy to excavate. Very few artefacts and no cultural features. More compact than 001. Test pit dug in northern corner to test depth - no artefacts or cultural features, so this layer is sterile.
6	001			
6	002			Grey compacted layer overlying hard packed pebble layer (003). Removal of context 002 removed a portion of the pebbled layer. Several lumps of melted lead and some nails were mixed in with this layer. Base of context 002 and context 003 were very difficult to

				excavate because of the hard-packed nature of the pebbled surface. This surface may have been an outside, built up surface surrounding the structure for use in the wet season. The pebbles are all highly rounded river pebbles, presumably brought in from nearby gullies (e.g. To the south).
6	003			Test pit excavated in north corner of square to sample context 003. Context was very hard and compact with pebbles ranging in size from 5cm-1cm. Layer is 10-12 cm thick overlying the pale yellow sand that is sterile. A nail/thin spike was visible in the wall at the base of the pebbled surface, but no other artefacts. All material was retrieved from the test pit.

Table A2.14 Context summary Trench 14, Boralga NMP Camp

Square	Context	pH	Munsell colour	Description
1	001		10YR-6/3 Pale Brown	50 x 50cm square in the middle of the raised mound that may be a hut structure.
	002		10YR-6/4 Light Yellowish Brown	Came down onto a red rocky surface identical to that in Trench 9 which may represent the interior of a built structure. Rocky layer is about 10cm thick and lies above the pale yellow sterile sand layer.

Table A2.15 Context summary Trench 15, Boralga NMP Camp

Square	Context	pH	Munsell colour	Description
1	001			Sterile, light grey sediment that is relatively loose and includes organic/humic content.
1	002			50 x 50 cm test pit excavated in eastern corner of square to sample depth. Mostly artefact free deposit that is whitish/grey in colour and compact.

Table A2.16 Context summary Trench 16, Boralga NMP Camp

Square	Context	pH	Munsell colour	Description
1	001		10YR-4/1 Dark Gray	Soft, loose grey friable deposit with organic/humic content. Several pieces of ceramic and glass and one lump of lead on surface.
1	002		10YR-4/2 Dark Grayish Brown	Compacted grey silty sediment with quantities of domestic debris sitting approx. 5-10cm below surface. Some pebbles, charcoal and very burnt calcined bone, as well as ceramic, glass and metal.
1	003		10YR-5/2 Grayish Brown	Pale yellow sterile sand layer underlying cultural deposits. This layer is sterile, soft and easy to excavate.
2	001			Loose, grey sediment mainly vegetable materials (humic layer).
2	002			Dark grey deposit with high quantities of charcoal, ash and organic matter, mixed in with an artefact layer. Metal, glass and ceramic all present in this context, along with some pebbles/stones and highly calcined bone. Deposit is compact but still relatively easy to excavate. Many tree roots throughout this context have created pockets of cultural material, so the surface of context 003 is very uneven.
3	001	6.5	10YR-4/2 Dark Grayish Brown	Loose leaf litter with grass shoots and decomposing bark, humic, sandy silt. Loose, dark grey soil. No cultural material. Loose soil removed coming down onto more hard, compact soil.
3	002	6.5	10YR/3/2 Very Dark Grayish Brown	Moderately compacted dark, grey sandy silt. Presence of charcoal, white flecks and grey ash indicates burning and 19th century occupation layer. Dense artefact lens across eastern half of square including ceramic doll face, bottle finishes and stopper, ceramic (embossed white, blue band , brown transfer printed) cartridges, lamp base and a range of domestic refuse. This context is fairly easy to trowel and there are more pebbles in the western half. This comes down onto a soft sandy yellowish context while is sterile, some artefacts were retrieved from the interface.
4	001	6.5	10YR/3/2 Very Dark Grayish Brown	Loose leaf litter with grass shoots, decomposing bark and other organic material. Sandy silty dark grey soil. Humic from decomposing organic material. Large charcoal lumps, but no cultural material.
5	001	6	10YR-4/2	Loose leaf litter with grass shoots and roots. Dark, grey, organic/ humic layer. Decomposing bark. Loose soft soil on top of harder more compacted layer. One piece of glass found.

			Dark Grayish Brown	
5	002	6.5	10YR/3/2 Very Dark Grayish Brown	Moderately compacted, dark grey brown sandy silt soil. Some pebble inclusions. Loose towards bottom of context. Ashy grey, burnt bone and charcoal indicates burning. This is not uniform but dispersed across square and within the context depth. Probable area of rubbish pit with a range of domestic refuse. Western corner had a number of small tacks or pins. Approx. 15cm long piece of lead sheeting in NE wall of trench in eastern corner.
6	001		10YR-4/2 Dark Grayish Brown	Loose leaf litter with grass shoots and decomposing bark from adjacent dead tree. Sandy silty dark grey soil. Humic/organic surface layer. Soft and loose, coming down onto more compacted context (002). One glass stopper and one piece of bottle glass.
6	002	7	10YR-2/2 Very Dark Brown	Moderately compacted, dark grey brown sandy silt soil. Some pebble inclusions. Loose towards bottom of context. Ashy grey and burnt bone and charcoal dispersed across square.
7	001	6	10YR-4/2 Dark Grayish Brown	Loose leaf litter with grass shoots and roots. Dark, grey, organic/ humic layer. Decomposing bark. Loose soft soil on top of harder more compacted layer. One piece of glass and one ceramic piece found.
7	002	6.5	10YR-4/2 Dark Grayish Brown	Moderately compacted, dark grey brown sandy silt soil. Some pebble inclusions. Loose towards bottom of context. Ashy grey, burnt bone and charcoal indicates burning. This is not uniform but dispersed across square and within the context depth. Probable area of rubbish pit or area and there is a range of domestic refuse. Torpedo bottle parts, bone bead or crochet hook, cartridges in artefact lens.

Figure A2.2 Boralga research team excavating Trench 16

Table A2.17 Context summary Trench 17, Boralga NMP Camp

Square	Context	pH	Munsell colour	Description
1	001		10YR-4/2 Dark Grayish Brown	Loose grey silty sediment with surface leaf litter.
1	002		10YR-5/2 Grayish Brown	50 x 50cm test pit excavated in northern corner to test depth. Sterile yellow/grey sediment that is very compact.

Table A2.18 Context summary Trench 18, Boralga NMP Camp

Square	Context	pH	Munsell colour	Description
1	001			Loose, pale grey sediment that includes leaf litter and plant material. Trench 18 is a 50 x 50cm square placed on a high point next to 6 aligned posts, to see whether this is the floor of a structure.
1	002		10YR-5/2 Grayish Brown	50 x 50cm test pit excavated in northern corner to test depth. Sterile yellow/grey sediment that is very compact.
1	003		10YR-6/4 Light Yellowish Brown	Hard, cement-like sediment that is only thin, and that sits above a 'pavement' of small, rounded pebbles/stones (context 003).

Table A2.19 Context summary Trench 19, Boralga NMP Camp

Square	Context	pH	Munsell colour	Description
1	001			Loose, thin, grey organic layer.
1	002			Context 2 is a thin lens of compact grey sediment - possibly ants nest floor - sits on the same small cobbly stone layer as in Square 18. Square 19 is inside the 7 posts

Table A2.20 Context summary Trench 20, Boralga NMP Camp

Square	Context	pH	Munsell colour	Description
1	001		10YR-5/3 Brown	Loose, grey silty organic layer with leaf litter. Very thin layer. Large portions of glass bottle (Lea and Perrin's, and black alcohol bottles) were sitting on the surface, so this was dug as a possible rubbish discard area.
1	002		10YR-6/3 Pale Brown	Hard packed, pale yellow silt layer with no artefacts. All artefacts were essentially sitting on the surface, so this was not a pit. Excavated a 50 x 50 cm test pit in the eastern corner to test depth, but hard packed layer continued with no artefacts.

Appendix 3. Data base recording fields for glass artefacts

Native Mounted Police in Queensland Glass

Form produced by Leanne Bateman on 26-Jun-2019

Characteristics

01. Catalogue number [required]

This gets automatically generated for new records. It can be edited afterwards if required. Any text can be entered.

---

02. Total station object number

A whole number. Decimal points are not allowed.

---

03. Original catalogue number

Any text can be entered.

---

04. Related site [required]

A list of items is presented in a drop down box. A single item can be selected from the list.

Barcoo River, Battle Camp, Bloomsbury, Boralga NMP camp, Boulia NMP camp, Cambridge Downs Homestead, Carl Creek NMP camp, Coen NMP camp, Collaroy, Corella Creek NMP camp 2, Dunrobin NMP camp, Eleutha NMP camp, Eyre's Creek/Cluney NMP camp, Fort Cooper NMP camp, Frome NMP camp, Garden Creek, Glenroy NMP camp, Highbury NMP camp, Hilary Creek, JC Waterhole and hotel, Mackenzie River, Marion Downs Stone Huts, Marlborough, Maytown, Mistake Creek NMP camp, Mosman's Well, Mt Coolon (previously known as Koala) Police Station, Mt

McConnell, Murdering Lagoon, Murrays Lagoon, Musgrave NMP camp, Nigger Creek NMP camp, Normanby Homestead (and Police Camp), Oak Park NMP camp, Old Fairlight station, Original Riversleigh Homestead, Peak Downs NMP camp, Puckley Creek NMP camp, Twin Hills telegraph station, Wondai Gumbal NMP camp

05. Related excavation context

The system has too many available options to list out. Provide the answer(s) below, with reference to the options available in the system.

06. Description/General notes

Text can be entered into the area provided. Tools presented above the area are used to format and layout the text.

---

07. Diagnostic

A list of items is presented in a radio button list. A single item can be selected.

N/A No Unknown Yes

08. Colour

Provide a check next to all suitable answers. More than one answer can be provided.

Amethyst (solarised), Aqua, Aqua (tint), Brown/amber, Cobalt blue, Colourless, Dark green/black, Emerald green (green non-olive), Grey, Honey (solarised), Milk/white, Olive green, Olive green (tint), Olive/amber, Pink/rose, Sapphire blue (pale or medium), Unidentifiable

09. Completeness

A list of items is presented in a drop down box. A single item can be selected from the list.

Complete (95-100%), Fragment (0-50%), Fragment (51-95%)

10. Portion/component

Provide a check next to all suitable answers. More than one answer can be provided.

Base only, Base w/-body & shoulder, Body sherd only, Body w/- base, Body w/- Rim, Body w/- shoulder, Body w/- shoulder & neck, Complete, Finish/seal only, Handle, Neck only, Neck w/- finish/seal, Rim, Shoulder only, Shoulder w/- neck, Shoulder w/neck finish/seal, Stopper

11. Object

Provide a check next to all suitable answers. More than one answer can be provided.

Bottle, Condiments/cruet (salt, pepper), Drinking glass, Flat glass (e,g, window), Kerosene lamp (chimney or base, Knapped (flake or core), Other, Stemware (wine or other), Tableware (e.g. bowl, plate, vase), Tumbler (Inc. shot glass), Unknown

12. Tableware type

Provide a check next to all suitable answers. More than one answer can be provided.

Cut glass, Plain moulded, Pressed glass, Unknown

13. Horizontal shape

Provide a check next to all suitable answers. More than one answer can be provided.

Dodecahedron, Flat Octagonal, Flattened Oval, Heptagon, Hexagonal, Kidney, Oval, Ovoid, Rectangular, RECTANGULAR Chamfered, RECTANGULAR Flared, RECTANGULAR recessed, RECTANGULAR Rounded, Rhomboid, Round, Round Flattened, Round Fluted, Round Ribbed, SQUARE, SQUARE Chamfered, SQUARE, Concave Chamfered, SQUARE Diamond, SQUARE Rounded, Symmetrical Octagonal, Triangular Chamfered, Unidentified

14. Probable contents

Provide a check next to all suitable answers. More than one answer can be provided.

Alcohol – Beer, Alcohol - General (unidentified), Alcohol - Gin/Schnapps (square case bottle), Alcohol - Spirits (general), Alcohol - Wine/champagne, Castor oil, Condiments – General, Condiments – Pickles, Condiments – Sauce, Fish/meat paste, Ink, Medicine – General, Non-alcoholic drink (cordial, soft drink, aerated water), Ointment/lotion, Patent medicine/tonic, Perfume/cologne, Poison (e.g. Phenyl), Prescription medicine/dispensing, Unidentified, Vinegar/salad oil

15. Shoulder width (units: mm)

Any numeric value.

---

16. Complete height (units: mm)

Any numeric value.

---

17. No. of mould seams

Any numeric value.

---

18. Mould type

Provide a check next to all suitable answers. More than one answer can be provided.

2 pc full length, 2 pc full length continuous, 2 pc shoulder, 2 pc vertical, separate base, 3 pc mould, 4 pc mould, Dip mould, N/A, Ricketts mould, Turn or paste mould (no seams visible), Unidentified

19. Maker's Marks/Trademarks

Text can be entered into the area provided. Tools presented above the area are used to format and layout the text.

---

20. Other marks, motifs and decoration

Text can be entered into the area provided. Tools presented above the area are used to format and layout the text.

---

21. Date range

Any text can be entered.

---

22. Conjoins with (description)

Any text can be entered.

---

23. Conjoins with (selection)

The system has too many available options to list out. Provide the answer(s) below, with reference to the options available in the system.

---

24. References

Text can be entered into the area provided. Tools presented above the area are used to format and layout the text.

---

25. Grouped frags

A list of items is presented in a radio button list. A single item can be selected.

N/A No Unknown Yes

26. Photograph

A file path is expected. An image file (jpg, gif, tif, png) can be selected by clicking the 'Browse' button. The selected file can reside on the local computer, external hard drive, SD card or USB stick prior to uploading.

Filename/Id:

Device/Source:

Measurements

27. Length (units: mm)

Any numeric value.

---

28. Width (units: mm)

Any numeric value.

---

29. Thickness (units: mm)

Any numeric value.

---

30. Weight (units: g)

Any numeric value.

Base fragments only

31. Base diameter (units: mm)

Any numeric value.

---

32. Base thickness (units: mm)

Any numeric value.

---

33. Kick-up depth (units: mm)

Any numeric value.

---

34. Pontil mark

A list of items is presented in a radio button list. A single item can be selected.

N/A No Unknown Yes

35. Technological base marks

Provide a check next to all suitable answers. More than one answer can be provided.

Lettering, None, Pontil Mark, Push up only - technology unclear, Shaped pushup - metal cone, Shaped pushup - metal cone w/- baseplate, Shaped pushup - wooden cone, Suction scar, Valve mark

Closure/finish fragments only

36. Bore diameter (units: mm)

Any numeric value.

---

37. Finish type

Provide a check next to all suitable answers. More than one answer can be provided.

Blob top, Burst-off lip, champagne, Club sauce, Crown seal, Double collar, External screw thread, Flanged, Flared lip, folded-out finish, Internal screw thread, One-part, Packer, Prescription lip, Sheared lip, Single collar, Single collar ring seal, Square Patent, Straight finish folded-in lip, Three-part, Two-part, Unfinished, Unidentified

38. Closure type

Provide a check next to all suitable answers. More than one answer can be provided.

Codd and variants, Cork, Gledhill, Ground glass stopper, Lamont, Screw cap/lid, Swing, Unidentified, Wooden, peg and rubber

39. Applied finish

A list of items is presented in a radio button list. A single item can be selected.

N/A No Unknown Yes

40. Stretch marks

A list of items is presented in a radio button list. A single item can be selected.

N/A No Unknown Yes

Grouped non-diagnostic fragments only

41. Number

Any numeric value.

---

42. Group weight (units: g)

Any numeric value.

---

43. Group Max length (units: mm)

Any numeric value.

---

44. Group Max width (units: mm)

Any numeric value.

---

45. Group Max thickness (units: mm)

Any numeric value.

---

46. Group Min length (units: mm)

Any numeric value.

---

47. Group Min width (units: mm)

Any numeric value.

---

48. Group Min thickness (units: mm) *Any numeric value.*

Figure A3.1 Glass database recording fields 1-48

Appendix 4. Mould types and seams

Mould seams are a physical characteristic that can assist in telling a more complete story regarding the date and typology of a given bottle. The following lists the variations of mould seams that have evolved over time which were induced by the advancement of manufacturing and moulding processes;

Full length two-piece moulds - have two vertical mould seams that are visible from the base to just below the finish and were common from c1860-1870 (Lindsey 2015b; Harris 2010:2).

Continuous full-length two-piece moulds - vary slightly in that the entire bottle was made in two pieces and included the finish. This mould style commenced in 1903 (Hutchinson 1981:19), and was most common between 1920-1925 (Boow 1991:49).

Shoulder length two-piece moulds - can be identified by the disappearance of mould seams just above the curve of the shoulder and was made in a hinged two-piece mould to form the lower body, whilst the rest of the body was free blown. This technique commenced c1835 and was most common at c1860. Variations of this mould type had separate base parts.

Dip moulds – use a tapered one-piece mould for the base, neck and shoulders and can be free blown or moulded. In order for the bottle to be removed from the mould, the base was slightly tapered. A sag may be visible at the base depending on how long the bottle sat before being placed in the

annealing oven. Dip moulded bottles with free blown shoulders dated at c1860-1870. Dip blown bottles with moulded shoulders dated between 1870-1910 (Jones & Sullivan 1975:26).

Turn-paste moulds – found on circular bottles only, and describes a bottle that has been deliberately turned in the mould to erase the seam marks. These bottles have no embossing, and have a highly polished appearance with occasional faint horizontal rotational lines visible on the glass surface. This technique dates between 1870-1920, and was most popular between 1870-1900 (Jones & Sullivan 1989:31; Boow 1991:8). Turn paste moulds were used on dark green wine or champagne bottles and brandy bottles after 1880.

Three piece mould – means the bottle has been formed from a single piece body mould and two hinged shoulder moulds with a possible separate base piece. The bottle will have a horizontal mould seam on the shoulder with two diametrically opposed vertical mould seams running above this to the neck or finish. Embossing will only be located on the shoulders and/or the base. This mould type dates between c1840-1920, with Hutchison's (1981:19) date being c1850s. Three piece moulds were used on dark green/black bottles between 1850-1900 (Boow 1991:49). Examples with applied finishes date between 1850s-1880s, with the vertical side seam ending immediately below the base of the applied finish. Tooled finish examples date from the 1890s-1920s (Lindsey 2015b).

Four piece mould – is a mould with two body parts and two shoulder/neck parts, and often incorporates a cup or post bottom base mould. Recognised on a bottle as a horizontal mould seam on the shoulder, with two diametrically opposed vertical mould seams running above this to the neck or finish, and two diametrically opposed mould seams running below this to the base which may have a cup or post bottom. Shoulder fragments will be the most diagnostic portion for recognising this mould type which dates between 1870s-1910s.

Appendix 5. Glass colour

Glass fragments were classified according to the 'guide to glass colour' chart in Figure A5.1 below. Two additional colours needed were not included on the chart, which were olive green tint and grey.

Figure A5.1 Glass colour classification chart

Appendix 6. Officer dismissals due to drunkenness

The following lists the names of NMP officers and their year of dismissal due to drunkenness (The Archaeology of the Queensland Native Mounted Police data base 2019).

Constable Swineburne, 1854

Constable John Booth, 1854

Commandant Frederick Walker, 1855

Sergeant Henry Inskip, 1858

Constable Nathaniel Sadleir, 1860

Lieutenant John O'Connell Bligh, 1860

Sergeant William Spooner, 1860

Marmaduke Richardson, 1863

Sub-Inspector John Coffee, 1867

Constable Thomas Spence Williams, 1875

Sub-Inspector Hugh Galbraith, 1879

Constable George Nowlan, 1881

Sergeant Walter Pickering, 1881

Constable George Robert Townsend, 1881

Constable Frederick Malcolm Clerk, 1883

Constable Walter Jones, 1884

Sergeant Michael Byrne, 1886

Constable William Wyer, 1891

Constable Cornelius Doherty, 1891

Constable David Hardie, 1896

Constable Michael Stapleton, 1896

Constable James Heenan, 1903

Constable Joseph Shannon, 1907

Constable Jeremiah O'Grady, 191

Appendix 7. Data base recording fields for ceramic artefacts

Native Mounted Police in Queensland Ceramic

Form produced by Leanne Bateman on 26-Jun-2019

Characteristics

01. Catalogue number [required]

This gets automatically generated for new records. It can be edited afterwards if required.

Any text can be entered.

---

02. Total station object number

A whole number. Decimal points are not allowed.

---

03. Original catalogue number

Any text can be entered.

---

04. Related site [required]

A list of items is presented in a drop down box. A single item can be selected from the list.

Barcoo River, Battle Camp, Bloomsbury, Boralga NMP camp, Boulia NMP camp, Cambridge Downs Homestead, Carl Creek NMP camp, Coen NMP camp, Collaroy, Corella Creek NMP camp 2, Dunrobin NMP camp, Eleutha NMP camp, Eyre's Creek/Cluney NMP camp, Fort Cooper NMP camp, Frome NMP camp, Garden Creek, Glenroy NMP camp, Highbury NMP camp, Hilary Creek, JC Waterhole and hotel, Mackenzie River, Marion Downs Stone Huts, Marlborough, Maytown, Mistake Creek NMP camp, Mosman's Well, Mt Coolon (previously known as Koala) Police Station, Mt McConnell, Murdering Lagoon, Murrays Lagoon, Musgrave NMP camp, Nigger Creek NMP camp, Normanby Homestead (and Police Camp), Oak Park NMP camp, Old Fairlight station, Original Riversleigh Homestead, Peak Downs NMP camp, Puckley Creek NMP camp, Twin Hills telegraph station, Wondai Gumbal NMP camp

05. Excavation context

The system has too many available options to list out. Provide the answer(s) below, with reference to the options available in the system.

---

06. Diagnostic

A list of items is presented in a radio button list. A single item can be selected.

N/A No Unknown Yes

07. Technological ware type

A list of items is presented in a drop down box. A single item can be selected from the list.

Earthenware, Porcelain, Stoneware

08. Sub-type

A list of items is presented in a drop down box. A single item can be selected from the list.

Earthenware - Coarse/unrefined (terracotta or redware), Earthenware - Coarse/unrefined (Yellowware), Earthenware – Creamware, Earthenware – Pearlware, Earthenware - Refined earthenware/whiteware (porous, not translucent), Earthenware - White granite/ ironstone (vitrified, not translucent), Porcelain - Hard paste, Porcelain - Soft paste (incl. bone china), Porcellaneous, Stoneware

09. Portion/component

A list of items is presented in a drop down box. A single item can be selected from the list.

Base only, Base/footing only, Body and base, Body and rim/marley, Body and shoulder, Body only, Body, base and rim, Finish only, Finish, neck and shoulder, Handle, Handle and body, Lid, Neck and finish, Neck and rim, Neck only, Pipe bowl, Pipe stem, Rim/marley only, Shoulder and neck, Shoulder only, Spout

10. Completeness

A list of items is presented in a drop down box. A single item can be selected from the list.

Complete (95-100%), Fragment (0-50%), Fragment (51-95%)

11. Functional Type

Provide a check next to all suitable answers. More than one answer can be provided.

Dairy, Drinking (other than teaware), Food/drink storage, Household general, Insulating, Kitchenware, Personal/hygiene, Tableware, Teaware, Unidentifiable, Unidentified

12. Object

The system has too many available options to list out. Provide the answer(s) below, with reference to the options available in the system.

---

13. Paste colour

Provide a check next to all suitable answers. More than one answer can be provided.

Black, Blue, Brown, Buff, Cream, Grey, Red, White, Yellow

14. Glaze type

Provide a check next to all suitable answers. More than one answer can be provided.

Clear (lead or other oxide), None (unglazed), Rockingham (dark brown), Salt and single colour slip (specify colour under DecColours and include slip in DecMethod below), Single colour slip (any colour), Tin (white)

15. Decorative Method

Provide a check next to all suitable answers. More than one answer can be provided.

Annular (thick and thin rings on body and rim), Cut sponge print (stamped), Decal, Edge banded (thin hairline rings on rim only), Flow transfer print, Gilt/tea leaf, Handpainting, Lustre, Mocha, Moulded – relief, Moulded - rim (e.g. scalloped), Other, Salt glaze, Slip (single coloured glaze), Sponged, Sprigging, Transfer printing, Unidentifiable, Unmodified/undecorated (i.e. none)

16. Decorative colour

Text can be entered into the area provided. Tools presented above the area are used to format and layout the text.

---

17. Identifiable Motifs

Text can be entered into the area provided. Tools presented above the area are used to format and layout the text.

---

18. Pattern name

Provide a check next to all suitable answers. More than one answer can be provided.

Albion, Alhambra, Asiatic Pheasant, Cable, Dulcamara, Fibre, Other, Rhine, Unidentified, Willow

19. Maker's Marks/Trademarks

Text can be entered into the area provided. Tools presented above the area are used to format and layout the text.

---

20. Description/General notes

Text can be entered into the area provided. Tools presented above the area are used to format and layout the text.

---

21. Date range

Any text can be entered.

---

22. Conjoins with (description)

Any text can be entered.

---

23. Conjoins with (selection)

The system has too many available options to list out. Provide the answer(s) below, with reference to the options available in the system.

---

24. References

Text can be entered into the area provided. Tools presented above the area are used to format and layout the text.

---

25. Photograph

A file path is expected. An image file (jpg, gif, tif, png) can be selected by clicking the 'Browse' button. The selected file can reside on the local computer, external hard drive, SD card or USB stick prior to uploading.

Filename/Id:

Device/Source:

Measurements

26. Length (units: mm)
Any numeric value.

---

27. Width (units: mm)

Any numeric value.

---

28. Thickness (units: mm)

Any numeric value.

---

29. Weight (units: g)

Any numeric value.

---

30. Base diameter (units: mm)

Any numeric value.

---

31. Rim diameter (units: mm)

Any numeric value.

---

32. Arc length (units: %)

Any numeric value.

Grouped non-diagnostic fragments only

33. Number
Any numeric value.

---

34. Group weight (units: g)

Any numeric value.

---

35. Group Max length (units: mm)

Any numeric value.

---

36. Group Max width (units: mm)

Any numeric value.

---

37. Group Max thickness (units: mm)

Any numeric value.

---

38. Group Min length (units: mm)

Any numeric value.

---

39. Group Min width (units: mm)

Any numeric value.

---

40. Group Min thickness (units: mm)

Any numeric value.

Figure A7.1 Ceramic database recording fields 1-40

Appendix 8. Josephson's Australian ointment

The following Figure A8.1 shows an advertisement from 1895 for Josephson's Australian Ointment

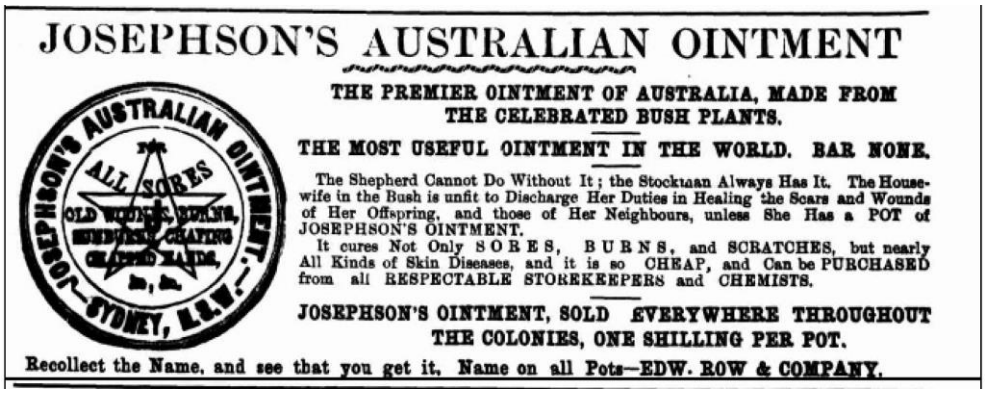


Figure A8.1 Advertisement for Josephson's Australian Ointment,

(The Pictorial Australian, 1895, 1 October, p 175; see figure 6.25)

Appendix 9. Ceramic conjoins

The following 5 tables list the square, context, vessel, technological ware type, join for ceramic from Trenches 3, 4, 7,11 and 16.

Table A9.1 Summary of conjoins, Trench 3

Square	Context	Vessel	Ware type	Join
-	000	Dinner plate	Earthenware	BOR-007690, BOR-007698
2	001	Unidentified	Earthenware	BOR-001631, BOR-001632
2	001	Unidentified	Earthenware	BOR-001671, BOR-001672, BOR-001673
-	000	Unidentified	Stoneware	BOR-001700, BOR-001701
-	000	Unidentified	Stoneware	BOR-001698, BOR-001699
2	001	Barrel jar	Stoneware	BOR-001634, BOR-001635
2	001	Unidentified	Stoneware	BOR-001691, BOR-001692
2	001	Unidentified	Stoneware	BOR-001688, BOR-001689

Table A9.2 Summary of conjoins, Trench 4

Square	Context	Vessel	Ware type	Join
1	001	Unidentified	Stoneware	BOR-012285, BOR-012286
1	001	Unidentified	Earthenware	BOR-012290, BOR-012291
1	002	Saucer/nappie	Porcelain	BOR-017829, BOR-017830
1	002	Saucer/nappie	Porcelain	BOR-017827, BOR-017828
1	002	Plate	Porcelain	BOR-017833, BOR-017832
1	002	Tea cup	Porcelain	BOR-017837, BOR-017838
1	002	Tea cup	Porcelain	BOR-017824, BOR-017825, BOR-017826
1	002	Tea cup	Earthenware	BOR-017839, BOR-017840

1	002	Coffee cup	Earthenware	BOR-018048, BOR-018049
1	002	Unidentified	Earthenware	BOR-018046, BOR-018047
1	002	Unidentified	Earthenware	BOR-018004, BOR-018005, BOR-018006
1	002	Unidentified	Earthenware	BOR-017994. BOR-017995, BOR-017996
1	002	Unidentified	Earthenware	BOR-017979, BOR-017980
1	002	Unidentified	Earthenware	BOR-017976, BOR-017977, BOR-017978
1	002	Unidentified	Earthenware	BOR-017971, BOR-017972, BOR-017973
1	002	Unidentified	Earthenware	BOR-017961, BOR-017962, BOR-017963
1	002	Unidentified	Earthenware	BOR-017958, BOR-017959, BOR-017960
1	002	Unidentified	Earthenware	BOR-017945, BOR-017946, BOR-017947, BOR-017949, BOR-017950, BOR-017951, BOR-017952
1	002	Unidentified	Earthenware	BOR-017934, BOR-017935, BOR-017936, BOR-017937, BOR-017938, BOR-017939, BOR-017940
1	002	Dinner plate	Earthenware	BOR-018007, BOR-018008, BOR-018009, BOR-018010, BOR-018011
1	002	Dinner plate	Earthenware	BOR-018015, BOR-018020, BOR-018023, BOR-018025, BOR-018027, BOR-018028, BOR-018030, BOR-018031, BOR-018032
1	002	Dinner plate	Earthenware	BOR-017988, BOR-017991
1	002	Dinner plate	Earthenware	BOR-017965, BOR-017966, BOR-017967, BOR-017968, BOR-017969 BOR-017970
1	002	Plate	Earthenware	BOR-017974, BOR-017975
1	002	Plate	Earthenware	BOR-017932, BOR-017933
1	002	Plate	Earthenware	BOR-017930, BOR-017931
1	002	Ink bottle	Earthenware	B0R-017941, BOR-017942
1	002	Dish	Stoneware	BOR-017780, BOR-017781, BOR-017782, BOR-017783, BOR-017784

1	002	Dish	Stoneware	BOR-017778, BOR-017779
2	002	Tureen	Earthenware	BOR-012806, BOR-012807
2	002	Ointment pot	Earthenware	BOR-013046, BOR-013047, BOR-013048
2	002	Ink bottle	Earthenware	BOR-012770, BOR-012771, BOR-012772, BOR-012773, BOR-012774
2	002	Ink bottle	Earthenware	BOR-012767, BOR-012768
2	002	Unidentified	Earthenware	BOR-019276, BOR-019277
2	002	Unidentified	Earthenware	BOR-019263, BOR-019269, BOR-019272
2	002	Unidentified	Earthenware	BOR-012862, BOR-012863, BOR-012864
2	002	Unidentified	Earthenware	BOR-012860, BOR-012861
2	002	Unidentified	Earthenware	BOR-012850, BOR-012851, BOR-012852, BOR-012853, BOR-012854
2	002	Unidentified	Earthenware	BOR-012802, BOR-012803
2	002	Dinner plate	Earthenware	BOR-012809, BOR-012810
2	002	Dinner plate	Earthenware	BOR-012865, BOR-012866, BOR-012867, BOR-012868, BOR-012869, BOR-012870, BOR-012871, BOR-012872
2	002	Dinner plate	Earthenware	BOR-012785, BOR-012786, BOR-012787, BOR-012788, BOR-012789
2	002	Plate	Earthenware	BOR-012856, BOR-012857
2	002	Plate	Earthenware	BOR-012858, BOR-012859
2	002	Plate	Earthenware	BOR-012793, BOR-012794
2	002	Plate	Earthenware	BOR-012791, BOR-012792
2	002	Unidentified	Porcelain	BOR-013075, BOR-013076
2	002	Unidentified	Porcelain	BOR-013072, BOR-013072
2	002	Unidentified	Porcelain	BOR-013069, BOR-013070
2	002	Plate	Porcelain	BOR-013073, BOR-013074

2	002	Plate	Porcelain	BOR-012843, BOR-012844
2	002	Plate	Porcelain	BOR-012829, BOR-012836, BOR-012837, BOR-012838, BOR-012839, BOR-012840, BOR-012841, BOR-012842
2	002	Plate	Porcelain	BOR-012823, BOR-012824, BOR-012825, BOR-012826, BOR-012827, BOR-012828
2	002	Tea cup	Porcelain	BOR-012780, BOR-012781, BOR-012782, BOR-012783, BOR-012784
2	002	Crock/demijohn	Stoneware	BOR-013060, BOR-013061, BOR-013062
2	002	Crock/demijohn	Stoneware	BOR-012873, BOR-012874, BOR-012875, BOR-012876, BOR-012877. BOR-012878, BOR012879, BOR-012880, BOR-012881, BOR-012882, BOR-012883, BOR-012884, BOR-012885, BOR-012886, BOR-012887, BOR-012888, BOR-012889, BOR-012890, BOR-012891
2	002	Crock/demijohn	Stoneware	BOR-012892, BOR-012893, BOR-012894, BOR-012895, BOR-012896
2	002	Crock/demijohn	Stoneware	BOR-013058, BOR-013059
2	002	Unidentified	Stoneware	BOR-013050, BOR-013051
2	002	Unidentified	Stoneware	BOR-013052, BOR-013053, BOR-013054, BOR-013055, BOR-013056, BOR-013057
2	002	Unidentified	Stoneware	BOR-013041, BOR-013042
2	002	Unidentified	Stoneware	BOR-013039, BOR-013040
2	002	Unidentified	Stoneware	BOR-013024, BOR-012025, BOR-012026, BOR-012027, BOR-012028, BOR-012029, BOR-012030, BOR-012031, BOR-012032, BOR-012033, BOR-012034, BOR-012035, BOR-012036, BOR-012037, BOR-012038
2	002	Unidentified	Stoneware	BOR-013019, BOR-013020, BOR-013021, BOR-013022, BOR-013023
2	002	Unidentified	Stoneware	BOR-013017, BOR-013018
3	002	Plate	Earthenware	BOR-013878, BOR-013788
3	002	Plate	Earthenware	BOR-013784, BOR-013785, BOR-013786

3	002	Dinner plate	Earthenware	BOR-013755, BOR-013756, BOR-013757, BOR-013758, BOR-013759, BOR-013760, BOR-013761, BOR-013762, BOR-013763
3	002	Unidentified	Earthenware	BOR-013778, BOR-013779, BOR-013780
3	002	Toy tea cup	Porcelain	BOR-001030, BOR-013745
3	002	Bowl	Porcelain	BOR-013735, BOR-013737
3	002	Barrel jar	Stoneware	BOR-013748, BOR-013749, BOR-013750, BOR-013751, BOR-013752
3	002	Crock/demijohn	Stoneware	BOR-013722, BOR-013723
3	002	Unidentified	Stoneware	BOR-013718, BOR-013719, BOR-013720
4	005	Dinner plate	Earthenware	BOR-023835, BOR-023843, BOR-023850, BOR-023853, BOR-023861
4	005	Tureen	Earthenware	BOR-023830, BOR-023831, BOR-023832, BOR-023833, BOR-023834
5	002	Unidentified	Earthenware	BOR-23740, BOR-023741
5	002	Unidentified	Earthenware	BOR-023733, BOR-023734
5	002	Unidentified	Stoneware	BOR-023816, BOR-023817
5	002	Unidentified	Stoneware	BOR-023814, BOR-023815
5	002	Unidentified	Stoneware	BOR-023812, BOR-023813
5	002	Unidentified	Stoneware	BOR-023810, BOR-023811
5	002	Crock/demijohn	Stoneware	BOR-023807, BOR-023808
5	002	Dish	Stoneware	BOR-017513, BOR-017514, BOR-017515, BOR-017516, BOR-017517, BOR-017519, BOR-017523, BOR-017525, BOR-017526, BOR-017527, BOR-017528, BOR-017529, BOR-017531, BOR-017532, BOR-017534, BOR-017535, BOR-017536, BOR-017537, BOR-017538, BOR-017540
5	002	Unidentified	Porcelain	BOR-023420, BOR-023421
5	002	Coffee cup	Porcelain	BOR-023412, BOR-023419

5	002	Saucer/nappie	Porcelain	BOR-023404, BOR-023405, BOR-023407, BOR-023408, BOR-023409, BOR-023411
8	002	Dinner plate	Earthenware	BOR-011446, BOR-011447
8	002	Plate	Earthenware	BOR-011441, BOR-011442
8	002	Plate	Earthenware	BOR-011439, BOR-011440
8	002	Unidentified	Earthenware	BOR-011443, BOR-011444, BOR-011445
8	002	Dish	Stoneware	BOR-017507, BOR-017508, BOR-017510, BOR-017511
8	002	Dish	Stoneware	BOR-017489, BOR-017490, BOR-017491, BOR-017492, BOR-017493, BOR-017494, BOR-017495, BOR-017496, BOR-017497, BOR-017498, BOR-017499
8	002	Unidentified	Stoneware	BOR-011514, BOR-011515
8	002	Barrel jar	Stoneware	BOR-011492, BOR-011493
8	002	Plate	Porcelain	BOR-011428, BOR-011429
8	002	Teapot lid	Porcelain	BOR-011434, BOR-011433
8	002	Tea cup	Porcelain	BOR-011430, BOR-011431
9	002	Tea cup	Porcelain	BOR-001418, BOR-001419, BOR-001420, BOR-001421, BOR-001422, BOR-001423, BOR-001424
9	002	Unidentified	Earthenware	BOR-001403, BOR-001411, BOR-001412, BOR-001413, BOR-001414, BOR-001415, BOR-001416, BOR-001417
9	002	Saucer/nappie	Porcelain	BOR-001160 BOR-001012, BOR-001027, BOR-001149, BOR-001156
9	002	Saucer/nappie	Porcelain	BOR-001384, BOR-001385, BOR-001386, BOR-001387, BOR-001388, BOR-001389, BOR-001390, BOR-001391, BOR-001392, BOR-001393, BOR-001394, BOR-001395, BOR-001396, BOR-001397, BOR-001398, BOR-001399, BOR-001400, BOR-001401
10	001	Bowl	Porcelain	BOR-016152, BOR-016153
10	001	Plate	Earthenware	BOR-016145, BOR-016146, BOR-016147

10	001	Plate	Earthenware	BOR-016127, BOR-016128, BOR-016129
10	1	Plate	Earthenware	BOR-016124, BOR-016125, BOR-016126

Table A9.3 Summary of conjoins, Trench 7

Square	Context	Vessel	Ware type	Join
3	001	Unidentified	Earthenware	BOR-027720, BOR-027721
5	001	Unidentified	Stoneware	BOR-031459, BOR-031460
12	002	Chamber pot	Earthenware	BOR-038631, BOR-038633, BOR-038634, BOR-038635
12	002	Chamber pot	Earthenware	BOR-038625, BOR-038626, BOR-038627, BOR-038628, BOR-038629
12	002	Chamber pot	Earthenware	BOR-038614, BOR-038616

Table A9.4 Summary of conjoins, Trench 11

Square	Context	Vessel	Ware type	Join
1	1	Unidentified	Earthenware	BOR-032513, BOR-032513
1	1	Unidentified	Earthenware	BOR-032519, BOR-032520
1	1	Dinner plate	Earthenware	BOR-032509, BOR-032510
1	1	Dinner plate	Earthenware	BOR-032507, BOR-032508

Table A9.5 Summary of conjoins, Trench 16

Square	Context	Vessel	Ware type	Join
1	001	Coffee cup	Earthenware	BOR-032884, BOR-032885, BOR-032886
1	002	Plate	Porcelain	BOR-033736, BOR-033737
1	002	Saucer/nappie	Porcelain	BOR-033739, BOR-033740, BOR-033741, BOR-033742
1	002	Tea cup	Porcelain	BOR-033743, BOR-033744, BOR-033745, BOR-033746, BOR-033747, BOR-033748
1	002	Tureen	Porcelain	BOR-033768, BOR-033769
1	002	Dinner plate	Earthenware	BOR-033762, BOR-033763, BOR-033764, BOR-033765, BOR-033766, BOR-033767
1	002	Dinner plate	Earthenware	BOR-033759, BOR-033760
1	002	Unidentified	Earthenware	BOR-033774, BOR-033775, BOR-033776
2	001	Unidentified	Earthenware	BOR-032843, BOR-032844
2	002	Tea cup	Porcelain	BOR-034339, BOR-034340, BOR-034341, BOR-034342
2	002	Tea cup	Porcelain	BOR-034335, BOR-034336
2	002	Tea cup	Porcelain	BOR-034332, BOR-034333
2	002	Tea cup	Porcelain	BOR-034327, BOR-034328, BOR-034329, BOR-034330, BOR-034331
2	002	Unidentified	Earthenware	BOR-034356, BOR-034357, BOR-034358, BOR-032361
2	002	Unidentified	Earthenware	BOR-034313, BOR-034314
2	002	Dinner plate	Earthenware	BOR-034348, BOR-043349, BOR-034350
2	002	Dinner plate	Earthenware	BOR-034351, BOR-034352
2	002	Dinner plate	Earthenware	BOR-034301, BOR-034302, BOR-034303, BOR-034304, BOR-034305, BOR-034306, BOR-034307, BOR-034308, BOR-034309, BOR-034310, BOR-034311, BOR-034312
2	002	Dinner plate	Earthenware	BOR-034297, BOR-043298, BOR-034299, BOR-034300
2	002	Dinner plate	Earthenware	BOR-034293, BOR-034294, BOR-034295,

				BOR-034296
2	002	Plate	Earthenware	BOR-034362, BOR-034363, BOR-034364
3	002	Plate	Porcelain	BOR-038988, BOR-038989, BOR-038990, BOR-038991, BOR-038992, BOR-038993, BOR-038994, BOR-038995, BOR-038996
3	002	Plate	Porcelain	BOR-038997, BOR-038998, BOR-038999, BOR-039000, BOR-039002, BOR-039004, BOR-039005, BOR-039006, BOR-039007, BOR-039008, BOR-039009, BOR-039010, BOR-039011, BOR-039012, BOR-039013, BOR-039014
3	002	Ointment pot	Earthenware	BOR-038477, BOR-038478, BOR-038479, BOR-038480, BOR-038481, BOR-038482, BOR-038483, BOR-038484, BOR-038485, BOR-038486, BOR-038487, BOR-038488
3	002	Jug	Earthenware	BOR-038671, BOR-038669
3	002	Jug	Earthenware	BOR-038661, BBOR-038662, BOR-038663, BOR-038664, BOR-038665, BOR-038666, BOR-038667, BOR-038668
3	002	Jug	Earthenware	BOR-038659, BOR-038660
3	002	Saucer/nappie	Earthenware	BOR-038745, BOR-038746, BOR-038747, BOR-038749, BOR-038750, BOR-038751, BOR-038756
3	002	Saucer/nappie	Earthenware	BOR-039109, BOR-039110, BOR-039111
3	002	Unidentified	Earthenware	BOR-039128, BOR-039129, BOR-029130
3	002	Unidentified	Earthenware	BOR-039131, BOR-039132, BOR-039133, BOR-039135
3	002	Unidentified	Earthenware	BOR-039140, BOR-039141, BOR-039145, BOR-039146, BOR-039147
3	002	Unidentified	Earthenware	BOR-039150, BOR-039152, BOR-039153, BOR-039154, BOR-039155, BOR-039156, BOR-039157, BOR-039158, BOR-039159, BOR-039160, BOR-039161
3	002	Coffee cup	Earthenware	BOR-039193, BOR-039197, BOR-039199, BOR-039201, BOR-039202

4	002	Saucer/nappie	Porcelain	BOR-038595, BOR-038596, BOR-038599, BOR-038601
4	002	Saucer/nappie	Earthenware	BOR-039370, BOR-039371, BOR-039372, BOR-039373, BOR-039374, BOR-039375, BOR-039376, BOR-039377
4	002	Teapot	Earthenware	BOR-038553, BOR-038556, BOR-038560, BOR-038562
4	002	Unidentified	Earthenware	BOR-038441, BOR-038442, BOR-038443, BOR-038444, BOR-038447, BOR-038449, BOR-038450, BOR-038451, BOR-038452, BOR-038453
5	002	Teapot	Earthenware	BOR-038547, BOR-038548
5	002	Teapot	Earthenware	BOR-038549, BOR-038551
5	002	Saucer/nappie	Earthenware	BOR-039582, BOR-039583, BOR-039584, BOR-039585, BOR-039586, BOR-039587, BOR-039588, BOR-039589, BOR-039590
5	002	Dinner plate	Earthenware	BOR-039406, BOR-039408
5	002	Dinner plate	Earthenware	BOR-039362, BOR-039364, BOR-039365, BOR-039368
5	002	Plate	Earthenware	BOR-039356, BOR-039357
5	002	Serving platter	Earthenware	BOR-039205, 039207
6	002	Egg cup	Porcelain	BOR-038465, BOR-038467
6	002	Plate	Earthenware	BOR-038593, BOR-038594
6	002	Plate	Earthenware	BOR-038588, BOR-038590
7	002	Egg cup	Porcelain	BOR-038458, BOR-038459, BOR-038461, BOR-038462, BOR-038463, BOR-038464
7	002	Mixing bowl	Earthenware	BOR-039418, BOR-039419, BOR-039420, BOR-039421, BOR-039422, BOR-039423
7	002	Dinner plate	Earthenware	BOR-039378, BOR-379379, BOR-039380, BOR-079381, BOR-079382, BOR-039384, BOR-079385, BOR-079386, BOR-039387, BOR-079388, BOR-079390, BOR-039391, BOR-079393, BOR-079395, BOR-039396,

				BOR-039397, BOR-039398, BOR-039399, BOR-039400, BOR-03940
7	002	Plate	Earthenware	BOR-039352, BOR-039353
7	002	Plate	Earthenware	BOR-039267, BOR-039271, BOR-039272
7	002	Coffee cup	Earthenware	BOR-039182, BOR-029184, BOR-029186

Appendix 10. Faunal Data

Table A10.1 outlines class and taxon by trench, square, and context, and Table A10.2 shows overall bone modification.

Table A10.1 Bone weight per trench, square and context, all trenches (weight in grams)

Trench	Square & Weight	Class	Taxon	STP	Context 001	Context 002	Context 003
1	1	Unidentified	Unidentified			0.4	
1	1	Mammal	Unidentified			5.4	
1	1	Unidentified	Unidentified				0.2
Total	**6**					**5.8**	**0.2**
1	5	Unidentified	Unidentified			0.9	
1	5	Unidentified	Unidentified			1.3	
1	5	Mammal	Unidentified			3.3	
1	5	Mammal	Unidentified			37.6	
Total	**43.1**					**43.1**	
2	1	Mammal	Unidentified			38.9	
Total	**38.9**					**38.9**	
2	3	Unidentified	Unidentified			0.1	
Total	**0.1**					**0.1**	
4	1	Unidentified	Unidentified			0.2	
4	1	Unidentified	Unidentified			0.8	
4	1	Mammal	Unidentified			42.1	
4	1	Unidentified	Unidentified			0.7	
4	1	Mammal	Unidentified			9.6	
4	1	Mammal	Unidentified			11.9	
4	1	Unidentified	Unidentified			0.6	
Total	**65.9**					**65.9**	
4	2	Unidentified	Unidentified			0.4	
4	2	Unidentified	Unidentified			0.5	
4	2	Mammal	Unidentified			2.3	
4	2	Mammal	Unidentified			0.6	
Total	**3.8**					**3.8**	
4	3	Unidentified	Unidentified			1.7	
4	3	Unidentified	Unidentified			0.1	

4	3	Unidentified	Unidentified			0	
4	3	Unidentified	Unidentified			3.1	
4	3	Unidentified	Unidentified			0.9	
4	3	Unidentified	Unidentified			0.9	
4	3	Mammal	Unidentified			3.5	
4	3	Unidentified	Unidentified			23	
Total	**33.2**					**33.2**	
4	8	Unidentified	Unidentified			2.5	
4	8	Unidentified	Unidentified			0	
4	8	Unidentified	Unidentified			0	
4	8	Unidentified	Unidentified			45	
4	8	Unidentified	Unidentified			41.8	
4	8	Unidentified	Unidentified			132.2	
4	8	Unidentified	Unidentified			4	
4	8	Mammal	Unidentified			3.7	
4	8	Unidentified	Unidentified			0.6	
4	8	Mammal	Cattle			28.4	
4	8	Mammal	Cattle			29	
4	8	Mammal	Cattle			17	
4	8	Mammal	Cattle			20	
4	8	Mammal	Unidentified			32.7	
4	8	Mammal	Unidentified			47	
4	8	Mammal	Unidentified			28.7	
4	8	Mammal	Unidentified			7.1	
Total	**439.7**					**439.7**	
4	9	Unidentified	Unidentified		0.2		
4	9	Unidentified	Unidentified			15.3	
4	9	Unidentified	Unidentified			46.4	
4	9	Unidentified	Unidentified			34.3	
4	9	Unidentified	Unidentified			41.2	
4	9	Unidentified	Unidentified			9.1	
4	9	Unidentified	Unidentified			3.6	
4	9	Mammal	Unidentified			5.9	
4	9	Mammal	Unidentified			23	
4	9	Mammal	Unidentified			1.4	
4	9	Unidentified	Unidentified			1	
4	9	Unidentified	Unidentified			0.9	
4	9	Unidentified	Unidentified			0.4	
4	9	Unidentified	Unidentified			7.8	
4	9	Mammal	Unidentified			4.9	
4	9	Mammal	Unidentified			4.7	
4	9	Mammal	Unidentified			2.2	
4	9	Unidentified	Unidentified			2.4	
4	9	Aves	Bird			0.2	

4	9	Unidentified	Unidentified			1.5	
4	9	Unidentified	Unidentified			0.9	
4	9	Unidentified	Unidentified			0.4	
4	9	Unidentified	Unidentified			0.3	
Total	**208**				**0.2**	**207.8**	
4	10	Mammal	Cattle		110.7		
4	10	Mammal	Kangaroo/ Wallaby		10.3		
4	10	Unidentified	Unidentified		18.3		
4	10	Aves	Bird		0.6		
4	10	Mammal	Unidentified		2.3		
4	10	Mammal	Kangaroo/ Wallaby		1.3		
4	10	Unidentified	Unidentified		4.2		
4	10	Unidentified	Unidentified		16.1		
4	10	Unidentified	Unidentified		2.6		
4	10	Mammal	Kangaroo/ Wallaby		3.6		
4	10	Mammal	Kangaroo/ Wallaby		2.2		
4	10	Mammal	Unidentified		1.4		
4	10	Mammal	Wallaby		2.6		
4	10	Unidentified	Unidentified		0.6		
4	10	Mammal	Kangaroo/ Wallaby		0.3		
4	10	Unidentified	Unidentified		0.5		
4	10	Unidentified	Unidentified		13.4		
4	10	Mammal	Kangaroo/ Wallaby		1.9		
4	10	Mammal	Unidentified		3.3		
4	10	Unidentified	Unidentified		86.5		
4	10	Unidentified	Unidentified		0.7		
4	10	Unidentified	Unidentified		0.2		
4	10	Mammal	Unidentified		0.6		
4	10	Unidentified	Unidentified		0.8		
4	10	Unidentified	Unidentified		0.3		
Total	**285.3**				**285.3**		
7	1	Unidentified	Unidentified		1.3		
7	1	Unidentified	Unidentified		2.9		
7	1	Unidentified	Unidentified		0.7		
7	1	Unidentified	Unidentified		0.3		
7	1	Unidentified	Unidentified		0.9		
7	1	Mammal	Unidentified		1		
7	1	Mammal	Unidentified		0.6		
7	1	Mammal	Unidentified			3.7	

7	1	Mammal	Unidentified			2.2	
7	1	Unidentified	Unidentified			0.3	
Total	**13.9**				**7.7**	**6.2**	
7	2	Unidentified	Unidentified		2.3		
7	2	Unidentified	Unidentified		4.8		
7	2	Unidentified	Unidentified		3.9		
7	2	Unidentified	Unidentified		3.8		
7	2	Unidentified	Unidentified		1.7		
7	2	Mammal	Unidentified			0.7	
7	2	Unidentified	Unidentified			0.2	
Total	**17.4**				**16.5**	**0.9**	
7	3	Mammal	Unidentified		20.8		
7	3	Mammal	Possum		1.1		
7	3	Mammal	Kangaroo/ Wallaby		3.9		
7	3	Unidentified	Unidentified		99.3		
7	3	Unidentified	Unidentified		2		
7	3	Unidentified	Unidentified		28.6		
7	3	Mammal	Unidentified		20.8		
7	3	Unidentified	Unidentified		41.5		
7	3	Unidentified	Unidentified		28.6		
7	3	Unidentified	Unidentified		6.3		
7	3	Unidentified	Unidentified		11.1		
7	3	Unidentified	Unidentified		42.5		
7	3	Mammal	Unidentified		10.1		
7	3	Mammal	Unidentified		14.5		
7	3	Mammal	Unidentified		5		
7	3	Reptile	Snake		0.3		
7	3	Osteichthyes	Fish		0		
7	3	Osteichthyes	Fish		0.1		
7	3	Osteichthyes	Fish		0.1		
7	3	Mammal	Wallaby		1.4		
7	3	Mammal	Unidentified		1.8		
7	3	Unidentified	Unidentified		1.3		
7	3	Mammal	Unidentified		2.4		
7	3	Unidentified	Unidentified		2.4		
7	3	Mammal	Rat		0.5		
7	3	Unidentified	Unidentified		0.3		
7	3	Unidentified	Unidentified		0.1		
7	3	Unidentified	Unidentified		0.4		
7	3	Unidentified	Unidentified		0.3		
7	3	Unidentified	Unidentified		0.6		
7	3	Mammal	Unidentified		2.4		
7	3	Unidentified	Unidentified		0.4		
7	3	Unidentified	Unidentified		0.3		
7	3	Unidentified	Unidentified		0.4		
7	3	Unidentified	Unidentified		0.4		

7	3	Unidentified	Unidentified		0.3		
7	3	Unidentified	Unidentified		0.3		
7	3	Mammal	Kangaroo/ Wallaby			10.6	
7	3	Unidentified	Unidentified			2.2	
7	3	Unidentified	Unidentified			1	
7	3	Unidentified	Unidentified			0.3	
7	3	Unidentified	Unidentified			0.6	
7	3	Unidentified	Unidentified			0.5	
7	3	Unidentified	Unidentified			0.2	
7	3	Unidentified	Unidentified			0.4	
7	3	Mammal	Unidentified			0.5	
7	3					3.5	
Total	**372.4**				**352.6**	**19.8**	
7	5	Unidentified	Unidentified		18.4		
7	5	Unidentified	Unidentified		40.2		
7	5	Unidentified	Unidentified		18		
7	5	Unidentified	Unidentified		6.2		
7	5	Mammal	Kangaroo/ Wallaby		16.1		
7	5	Mammal	Unidentified		38.2		
7	5	Mammal	Unidentified		15.5		
7	5	Unidentified	Unidentified		60.2		
7	5	Unidentified	Unidentified		54.6		
7	5	Aves	Bird		1		
7	5	Unidentified	Unidentified		0.4		
7	5	Unidentified	Unidentified		0.3		
7	5	Unidentified	Unidentified		1.4		
7	5	Unidentified	Unidentified		1.3		
7	5	Unidentified	Unidentified		0.6		
7	5	Aves	Bird		1		
7	5	Mammal	Kangaroo/ Wallaby		0		
7	5	Mammal	Kangaroo/ Wallaby		4.4		
7	5	Mammal	Unidentified		0.7		
7	5	Unidentified	Unidentified		0.2		
7	5	Unidentified	Unidentified		0.6		
7	5	Mammal	Unidentified		1		
7	5	Unidentified	Unidentified		1.1		
7	5	Unidentified	Unidentified		0.8		
7	5	Unidentified	Unidentified		1.3		
7	5	Unidentified	Unidentified		0.6		
7	5	Unidentified	Unidentified		0.6		
7	5	Unidentified	Unidentified		0.7		
7	5	Mammal	Cattle		8.4		

7	5	Mammal	Unidentified		4.2		
7	5	Mammal	Kangaroo/ Wallaby		0.7		
7	5	Unidentified	Unidentified		108.9		
7	5	Unidentified	Unidentified		8.81		
7	5	Unidentified	Unidentified		0.3		
7	5	Unidentified	Unidentified		0.2		
7	5	Mammal	Unidentified		9.7		
7	5	Mammal	Unidentified		12.5		
7	5	Unidentified	Unidentified		0.3		
7	5	Unidentified	Unidentified		0.1		
7	5	Unidentified	Unidentified		1.1		
Total	**440.61**				**440.61**		
7	7	Mammal	Kangaroo/ Wallaby		0.6		
7	7	Unidentified	Unidentified		3.6		
7	7	Unidentified	Unidentified		3		
7	7	Unidentified	Unidentified		1		
7	7	Unidentified	Unidentified		1.6		
7	7	Unidentified	Unidentified		2		
7	7	Mammal	Unidentified		1.2		
7	7	Mammal	Unidentified		1.8		
7	7	Unidentified	Unidentified		0.4		
Total	**15.2**				**15.2**		
7	9	Mammal	Kangaroo			**0.5**	
Total	**0.5**						
7	10	Mammal	Unidentified			**98**	
Total	**98**						
7	11	Mammal	Unidentified			11.8	
7	11	Mammal	Unidentified			13.1	
7	11	Osteichthyes	Fish			0.1	
Total	**25**					**25**	
7	12	Aves	Bird			2.8	
7	12	Mammal	Unidentified			7.1	
7	12	Mammal	Unidentified			75.7	
7	12	Mammal	Unidentified			18.8	
7	12	Mammal	Unidentified			11.2	
7	12	Mammal	Unidentified			75.9	
7	12	Mammal	Unidentified			37.5	
7	12	Mammal	Unidentified			39.3	
7	12	Mammal	Unidentified			15.2	
7	12	Unidentified	Unidentified			1.8	
7	12	Unidentified	Unidentified			0.1	
7	12	Osteichthyes	Fish			0.1	

7	12	Osteichthyes	Fish			0.1	
7	12	Unidentified	Unidentified			0.1	
7	12	Unidentified	Unidentified			0.2	
7	12	Unidentified	Unidentified			0.1	
7	12	Mammal	Wallaby			0.1	
7	12	Mammal	Wallaby			0.2	
7	12	Aves	Bird			2.1	
7	12	Unidentified	Unidentified			0.1	
7	12	Aves	Bird			0.6	
7	12	Mammal	Unidentified			40	
7	12	Mammal	Unidentified			13.3	
7	12	Mammal	Unidentified			26.9	
Total	**369.3**					**369.3**	
7	14	Mammal	Kangaroo/ Wallaby			8.5	
7	14	Aves	Bird			1.4	
7	14	Aves	Bird			0.6	
7	14	Unidentified	Unidentified			0.3	
7	14	Mammal	Unidentified			13.9	
7	14	Mammal	Unidentified			7.3	
7	14	Mammal	Unidentified			10.5	
7	14	Mammal	Unidentified			4.6	
7	14	Aves	Bird			4.2	
7	14	Mammal	Unidentified			1.2	
7	14	Unidentified	Unidentified			0.3	
Total	**52.8**					**52.8**	
7	18	Mammal	Wallaby			**0.4**	
Total	**0.4**						
14	1	Aves	Bird			**0.6**	
Total	**0.6**						
16	1	Mammal	Unidentified			3.9	
16	1	Mammal	Unidentified			1.3	
16	1	Mammal	Unidentified			0.5	
16	1	Unidentified	Unidentified			0.8	
16	1	Unidentified	Unidentified			0.4	
Total	**6.9**					**6.9**	
16	2	Unidentified	Unidentified			0.5	
16	2	Unidentified	Unidentified			0.2	
16	2	Mammal	Unidentified			3.9	
16	2	Unidentified	Unidentified			6.2	
16	2	Unidentified	Unidentified			4.2	
16	2	Mammal	Unidentified			13.1	
16	2	Mammal	Unidentified			9	
16	2	Mammal	Unidentified			10.4	
16	2	Mammal	Unidentified			2.7	
16	2	Mammal	Unidentified			12.2	
16	2	Mammal	Unidentified			1.5	

16	2	Mammal	Unidentified			3.5	
16	2	Unidentified	Unidentified			1.8	
16	2	Unidentified	Unidentified			0.5	
16	2	Mammal	Unidentified			2.4	
16	2	Unidentified	Unidentified			1.9	
Total	**74**					**74**	
16	3	Mammal	Unidentified			6.9	
16	3	Mammal	Unidentified			11.6	
16	3	Mammal	Pig			5.1	
Total	**23.6**					**23.6**	
16	5	Mammal	Unidentified			4.1	
16	5	Mammal	Unidentified			65.2	
Total	**69.3**					**69.3**	
16	6	Mammal	Unidentified			3.7	
16	6	Mammal	Unidentified			21.8	
16	6	Mammal	Unidentified			10.5	
16	6	Mammal	Unidentified			4.7	
16	6	Mammal	Unidentified			7.9	
16	6	Aves	Bird			0.9	
16	6	Mammal	Unidentified			14.9	
16	6	Mammal	Unidentified			8.7	
Total	**73.1**					**73.1**	
16	7	Mammal	Unidentified			22.6	
16	7	Mammal	Unidentified			6.1	
Total	**28.7**					**28.7**	
-	-	Unidentified	Unidentified	**0.9**			
Total	**0.9**						
Overall total	**2806.61**			**0.9**	**1118.11**	**1687.4**	**0.2**

Table A10.2 Modification of bone, all trenches

Trench	Square	Class	Taxon	Modification	Calcined	Context 001	Context 002
1	1	Mammal	Unidentified	Burnt	No		**5.4**
1	5	Unidentified	Unidentified	Burnt	Yes		**0.9**
2	1	Mammal	Unidentified	Burnt	No		**38.9**
4	1	Unidentified	Unidentified	Burnt	No		0.2
4	1	Unidentified	Unidentified	Burnt	No		0.8
4	1	Unidentified	Unidentified	Burnt	No		42.1
4	1	Unidentified	Unidentified	Burnt	Yes		0.7
4	1	Unidentified	Unidentified	Burnt	No		0.6
							44.4
4	2	Unidentified	Unidentified	Burnt	Yes		0.5
4	2	Mammal	Unidentified	Cut	-		2.3
							2.8
4	3	Unidentified	Unidentified	Burnt	No		-

4	3	Unidentified	Unidentified	Burnt	Yes		3.1
4	3	Unidentified	Unidentified	Burnt	No		0.9
4	3	Unidentified	Unidentified	Burnt	No		0.9
4	3	Mammal	Unidentified	Burnt	No		3.5
4	3	Unidentified	Unidentified	Burnt	No		23
							31.4
4	8	Unidentified	Unidentified	Burnt	Yes		2.5
4	8	Unidentified	Unidentified	Burnt	No		45
4	8	Unidentified	Unidentified	Burnt	Yes		41.8
4	8	Unidentified	Unidentified	Burnt	Yes		132.2
4	8	Unidentified	Unidentified	Burnt	Yes		4
4	8	Mammal	Unidentified	Burnt	No		3.7
4	8	Unidentified	Unidentified	Burnt	Yes		0.6
4	8	Mammal	Cattle	Burnt	No		28.4
4	8	Mammal	Unidentified	Burnt	No		32.7
4	8	Mammal	Unidentified	Burnt	No		47
4	8	Mammal	Unidentified	Burnt	No		28.7
4	8	Mammal	Unidentified	Burnt	No		7.1
							373.7
4	9	Unidentified	Unidentified	Burnt	Yes	**0.2**	
4	9	Unidentified	Unidentified	Burnt	Yes		15.3
4	9	Unidentified	Unidentified	Burnt	No		46.4
4	9	Unidentified	Unidentified	Burnt	Yes		34.3
4	9	Unidentified	Unidentified	Burnt	No		41.2
4	9	Unidentified	Unidentified	Burnt	Yes		9.1
4	9	Unidentified	Unidentified	Burnt	No		3.6
4	9	Mammal	Unidentified	Burnt	No		5.9
4	9	Mammal	Unidentified	Burnt	No		23
4	9	Mammal	Unidentified	Burnt	No		1.4
4	9	Unidentified	Unidentified	Burnt	No		1
4	9	Unidentified	Unidentified	Burnt	Yes		0.9
4	9	Unidentified	Unidentified	Burnt	No		0.4
4	9	Unidentified	Unidentified	Burnt	No		7.8
4	9	Mammal	Unidentified	Burnt	No		4.9
4	9	Mammal	Unidentified	Burnt	No		4.7
4	9	Unidentified	Unidentified	Burnt	Yes		2.4
4	9	Unidentified	Unidentified	Burnt	No		1.5
4	9	Unidentified	Unidentified	Burnt	No		0.9
4	9	Unidentified	Unidentified	Burnt	No		0.4
4	9	Unidentified	Unidentified	Burnt	Yes		0.3
							205.4
4	10	Mammal	Kangaroo/ Wallaby	Cut	-	1.3	
4	10	Unidentified	Unidentified	Burnt	No	2.6	
4	10	Mammal	Kangaroo/ Wallaby	Burnt	No	3.6	
4	10	Mammal	Unidentified	Burnt	No	1.4	

4	10	Unidentified	Unidentified	Burnt	No	0.5	
4	10	Unidentified	Unidentified	Burnt	No	86.5	
4	10	Mammal	Unidentified	Burnt	Yes	0.6	
4	10	Unidentified	Unidentified	Cut	-	0.8	
						97.3	
7	1	Unidentified	Unidentified	Burnt	Yes	2.9	
7	1	Unidentified	Unidentified	Burnt	Yes	0.7	
7	1	Unidentified	Unidentified	Burnt	Yes	0.9	
7	1	Unidentified	Unidentified	Burnt	Yes		0.3
						4.5	**0.3**
7	2	Unidentified	Unidentified	Burnt	Yes	3.8	
7	2	Unidentified	Unidentified	Burnt	Yes	1.7	
						5.5	
7	2	Mammal	Unidentified	Burnt	Yes		**0.7**
7	3	Mammal	Unidentified	Burnt	No	20.8	
7	3	Mammal	Kangaroo/ Wallaby	Burnt	No	3.9	
7	3	Unidentified	Unidentified	Burnt	No	99.3	
7	3	Unidentified	Unidentified	Burnt	No	2	
7	3	Unidentified	Unidentified	Burnt	No	28.6	
7	3	Unidentified	Unidentified	Burnt	No	41.5	
7	3	Unidentified	Unidentified	Burnt	Yes	28.6	
7	3	Unidentified	Unidentified	Burnt	Yes	6.3	
7	3	Unidentified	Unidentified	Burnt	Yes	11.1	
7	3	Unidentified	Unidentified	Burnt	No	42.5	
7	3	Mammal	Unidentified	Burnt	No	10.1	
7	3	Mammal	Unidentified	Burnt	No	14.5	
7	3	Mammal	Unidentified	Burnt	No	5	
7	3	Reptile	Snake	Burnt	No	0.3	
7	3	Osteichthyes	Fish	Burnt	No	0.1	
7	3	Mammal	Wallaby	Burnt	No	1.4	
7	3	Mammal	Unidentified	Burnt	No	1.8	
7	3	Unidentified	Unidentified	Burnt	No	1.3	
7	3	Mammal	Unidentified	Burnt	No	2.4	
7	3	Unidentified	Unidentified	Burnt	No	2.4	
7	3	Unidentified	Unidentified	Burnt	No	0.3	
7	3	Unidentified	Unidentified	Burnt	No	0.4	
7	3	Unidentified	Unidentified	Burnt	No	0.3	
7	3	Unidentified	Unidentified	Burnt	Yes	0.6	
7	3	Mammal	Unidentified	Burnt	No	2.4	
7	3	Unidentified	Unidentified	Burnt	No	0.3	
7	3	Unidentified	Unidentified	Burnt	No	0.4	
7	3	Unidentified	Unidentified	Burnt	No	0.4	
7	3	Unidentified	Unidentified	Burnt	No	0.3	
7	3	Unidentified	Unidentified	Burnt	No	0.3	
						329.6	
7	3	Unidentified	Unidentified	Burnt	No		1

7	3	Unidentified	Unidentified	Burnt	No		0.6
7	3	Unidentified	Unidentified	Burnt	No		0.4
7	3	Unidentified	Unidentified	Burnt	Yes		0.5
7	3	Mammal	Unidentified	Burnt	No		3.5
							6
7	5	Unidentified	Unidentified	Burnt	Yes	18.4	
7	5	Unidentified	Unidentified	Burnt	Yes	40.2	
7	5	Unidentified	Unidentified	Burnt	No	18	
7	5	Unidentified	Unidentified	Burnt	Yes	6.2	
7	5	Mammal	Unidentified	Burnt	No	38.2	
7	5	Mammal	Unidentified	Burnt	Yes	15.5	
7	5	Unidentified	Unidentified	Burnt	No	60.2	
7	5	Unidentified	Unidentified	Burnt	Yes	54.6	
7	5	Aves	Bird	Burnt	No	1	
7	5	Unidentified	Unidentified	Cut	No	0.4	
7	5	Unidentified	Unidentified	Cut	No	0.3	
7	5	Unidentified	Unidentified	Burnt	No	1.4	
7	5	Unidentified	Unidentified	Cut	Yes	1.3	
7	5	Unidentified	Unidentified	Cut	No	0.6	
7	5	Aves	Bird	Burnt	Yes	1	
7	5	Mammal	Unidentified	Burnt	Yes	0.7	
7	5	Unidentified	Unidentified	Burnt	No	0.6	
7	5	Mammal	Unidentified	Burnt	No	1	
7	5	Unidentified	Unidentified	Burnt	Yes	1.1	
7	5	Unidentified	Unidentified	Burnt	No	0.8	
7	5	Unidentified	Unidentified	Burnt	No	1.3	
7	5	Unidentified	Unidentified	Burnt	No	0.6	
7	5	Mammal	Cattle	Burnt	No	8.4	
7	5	Mammal	Unidentified	Burnt	Yes	4.2	
7	5	Unidentified	Unidentified	Burnt	Yes	108.9	
7	5	Mammal	Unidentified	Burnt	No	9.7	
7	5	Mammal	Unidentified	Burnt	No	12.5	
7	5	Unidentified	Unidentified	Burnt	No	0.3	
7	5	Unidentified	Unidentified	Burnt	No	0.1	
7	5	Unidentified	Unidentified	Burnt	Yes	1.1	
						408.6	
7	7	Unidentified	Unidentified	Burnt	No	3	
7	7	Unidentified	Unidentified	Burnt	Yes	1.6	
7	7	Unidentified	Unidentified	Burnt	Yes	2	
7	7	Mammal	Unidentified	Burnt	Yes	1.2	
7	7	Unidentified	Unidentified	Burnt	Yes	1.8	
7	7	Unidentified	Unidentified	Burnt	No	0.4	
						10	
7	10	Mammal	Unidentified	Burnt	Yes		**98**
7	11	Mammal	Unidentified	Burnt	No		11.8
7	11	Mammal	Unidentified	Burnt	No		13.1
7	11	Osteichthyes	Fish	Burnt	No		0.1

							25
7	12	Aves	Bird	Burnt	No		2.8
7	12	Mammal	Unidentified	Burnt	No		7.1
7	12	Mammal	Unidentified	Burnt	No		75.7
7	12	Mammal	Unidentified	Burnt	No		18.8
7	12	Mammal	Unidentified	Burnt	No		11.2
7	12	Mammal	Unidentified	Burnt	No		75.9
7	12	Mammal	Unidentified	Burnt	No		37.5
7	12	Mammal	Unidentified	Burnt	No		39.3
7	12	Mammal	Unidentified	Burnt	No		15.2
7	12	Unidentified	Unidentified	Burnt	No		1.8
7	12	Unidentified	Unidentified	Burnt	No		0.1
7	12	Osteichthyes	Fish	Burnt	No		0.1
7	12	Osteichthyes	Fish	Burnt	No		0.1
7	12	Unidentified	Unidentified	Burnt	No		0.1
7	12	Unidentified	Unidentified	Burnt	No		0.2
7	12	Unidentified	Unidentified	Burnt	No		0.1
7	12	Aves	Bird	Burnt	No		2.1
7	12	Unidentified	Unidentified	Burnt	No		0.1
7	12	Aves	Bird	Burnt	No		0.6
7	12	Mammal	Unidentified	Burnt	Yes		40
7	12	Mammal	Unidentified	Burnt	Yes		13.3
7	12	Mammal	Unidentified	Burnt	No		26.9
							369
7	14	Aves	Bird	Burnt	No		1.4
7	14	Aves	Bird	Burnt	No		0.6
7	14	Mammal	Unidentified	Burnt	No		13.9
7	14	Mammal	Unidentified	Burnt	Yes		7.3
7	14	Mammal	Unidentified	Burnt	No		10.5
7	14	Mammal	Unidentified	Burnt	No		4.6
7	14	Aves	Bird	Burnt	No		4.2
7	14	Mammal	Unidentified	Burnt	No		1.2
7	14	Unidentified	Unidentified	Burnt	No		0.3
							44
14	1	Aves	Bird	Burnt	No		**0.6**
16	1	Mammal	Unidentified	Burnt	No		3.9
16	1	Mammal	Unidentified	Burnt	No		1.3
16	1	Mammal	Unidentified	Burnt	No		0.5
16	1	Unidentified	Unidentified	Burnt	No		0.8
16	1	Unidentified	Unidentified	Burnt	Yes		0.4
							6.9
16	2	Unidentified	Unidentified	Burnt	Yes		0.5
16	2	Unidentified	Unidentified	Burnt	No		0.2
16	2	Mammal	Unidentified	Burnt	No		3.9
16	2	Unidentified	Unidentified	Burnt	Yes		6.2
16	2	Unidentified	Unidentified	Burnt	No		4.2
16	2	Mammal	Unidentified	Burnt	No		13.1

16	2	Mammal	Unidentified	Burnt	Yes		9
16	2	Mammal	Unidentified	Burnt	No		10.4
16	2	Mammal	Unidentified	Burnt	Yes		2.7
16	2	Mammal	Unidentified	Burnt	No		12.2
16	2	Mammal	Unidentified	Burnt	Yes		1.5
16	2	Mammal	Unidentified	Burnt	No		3.5
16	2	Unidentified	Unidentified	Burnt	No		1.8
16	2	Unidentified	Unidentified	Burnt	Yes		0.5
16	2	Mammal	Unidentified	Burnt	Yes		2.4
16	2	Unidentified	Unidentified	Burnt	No		1.9
							74
16	3	Mammal	Unidentified	Burnt	No		6.9
16	3	Mammal	Unidentified	Burnt	No		11.6
16	3	Mammal	Pig	Burnt	No		5.1
							23.6
16	5	Mammal	Unidentified	Burnt	No		4.1
16	5	Mammal	Unidentified	Burnt	No		65.2
							69.3
16	6	Mammal	Unidentified	Burnt	No		3.7
16	6	Mammal	Unidentified	Burnt	No		21.8
16	6	Mammal	Unidentified	Burnt	No		10.5
16	6	Mammal	Unidentified	Burnt	No		4.7
16	6	Mammal	Unidentified	Burnt	No		7.9
16	6	Aves	Bird	Burnt	No		0.9
16	6	Mammal	Unidentified	Burnt	No		8.7
							58.2
16	7	Mammal	Unidentified	Burnt	No		22.6
16	7	Mammal	Unidentified	Burnt	No		6.1
							28.7
Total						**855.7**	**1507.2**

Appendix 11. Rations and Supplies

The following is a list of rations, supplies or tenders for Barcoo 1880, Coopers Plains 1862 and 1863, Rockhampton 1865 and Port Douglas 1889.

Rations and supplies

From the Port Douglas Chronicle it can be established that the daily ration for a native police troopers in 1889 is:

1 Lb. flour
1 lb. sugar
4 oz. tea
1 oz. tobacco
1 oz, salt
and 1 oz. soap

(Morning Bulletin 4 January 1889, p6)

Tenders for Supply of Native Police Rations, 1880.

TENDERS will be received by the undersigned up to the 10th day of December 1879, for the Supply of Rations for use of Native Police, Barcoo, for the year 1880, as under:

Flour, per lb. and by bag
Tea, " " " chest or ½ chest
Soap, " " " cwt.
Tobacco, per lb.
Salt, " " ‘

(Western Champion 22 November 1879, p3)

Mounted Native Police Barracks, Cooper's Plains, October 8, 1861.

TENDERS are hereby required for the undermentioned Daily Rations to each Trooper of the Second Division of the Native Mounted Police Force during the year 1862:

1 lb. Flour, first quality
4 ozs. sugar, best Pampanga
½-oz. tea, good Hysonskin
½ oz. Tobacco, Barret's twist
1 oz, Soap, colonial.

(Maryborough Chronicle, Wide Bay and Burnett Advertiser 10 October 1861, p3)

Mounted Native Police Barracks, Cooper's Plains.

TENDERS are hereby required for the undermentioned DAILY RATIONS to each Trooper of the Second Division of the Native Mounted Police during the year 1863.

1lb Flour, first quality.
4oz. Sugar, best Pampanga.
1oz. Tea, good Hysonskin.
1oz. Tobacco, Barrett's twist,
1oz. Soap, colonial

(Maryborough Chronicle, Wide Bay and Burnett Advertiser 1 January 1863, p4)

Native Police Office, Rockhampton, 28th December 1864.

TENDERS are hereby required for the supply of the undermentioned daily rations to each trooper of the 1st and 2nd Divisions Native Mounted Police, during the year 1865

One pound Flour (best quality)
Four ounces Sugar (Mauritius)
Half-ounce Tea (best)
Half-ounce Tobacco (good)
One ounce Soap

(Rockhampton Bulletin and Central Queensland Advertiser 27 December 1864, p3)

TENDERS FOR NATIVE POLICE RATIONS

TENDERS will be received at the Office of the inspector of Police, PORT DOUGLAS, for the supply of NATIVE POLICE RATIONS, of the best quality, at so much per ration, for 12 months, from 1st January 1889.

The following comprises the ration:

1lb flour,
¼ lb. sugar,
½ oz. tea,
½ oz. tobacco,
½ oz. salt,
1oz soap

(Cairns Post 12 December 1888, p2)

Appendix 12. Data base recording fields for bone

Native Mounted Police in Queensland Bone

Form produced by Leanne Bateman on 26-Jun-2019

01. Catalogue number [required]

This gets automatically generated for new records. It can be edited afterwards if required.

Any text can be entered.

---

02. Total station object number

A whole number. Decimal points are not allowed.

---

03. Related site

A list of items is presented in a drop down box. A single item can be selected from the list.

Barcoo River, Battle Camp, Bloomsbury, Boralga NMP camp, Boulia NMP camp, Cambridge Downs Homestead, Carl Creek NMP camp, Coen NMP camp, Collaroy, Corella Creek NMP camp 2, Dunrobin NMP camp, Eleutha NMP camp, Eyre's Creek/Cluney NMP camp, Fort Cooper NMP camp, Frome NMP camp, Garden Creek, Glenroy NMP camp, Highbury NMP camp, Hilary Creek, JC Waterhole and hotel, Mackenzie River, Marion Downs Stone Huts, Marlborough, Maytown, Mistake Creek NMP camp, Mosman's Well, Mt Coolon (previously known as Koala) Police Station, Mt McConnell, Murdering Lagoon, Murrays Lagoon, Musgrave NMP camp, Nigger Creek NMP camp, Normanby Homestead (and Police Camp), Oak Park NMP camp, Old Fairlight station, Original Riversleigh Homestead, Peak Downs NMP camp, Puckley Creek NMP camp, Twin Hills telegraph station, Wondai Gumbal NMP camp

04. Related excavation context

The system has too many available options to list out. Provide the answer(s) below, with reference to the options available in the system.

---

05. Class

Provide a check next to all suitable answers. More than one answer can be provided.

Amphibian, Bird, Crustacean, Fish, Mammal, Other, Reptile, Unidentified

06. Taxon

Provide a check next to all suitable answers. More than one answer can be provided.

Bandicoot, Chicken, Cow, Dog, Horse, Kangaroo, Other, Pig, Possum, Rat, Sheep/goat, Snake, Unidentified, Wallaby

07. Length (units: mm)

Any numeric value.

---

08. Weight (units: g)

Any numeric value.

---

09. Body part

Provide a check next to all suitable answers. More than one answer can be provided.

Claw, Fore limb, Head/neck, Hind limb, Hoof, Limb (unidentified), Tooth, Trunk, Unidentified, Whole

10. Element

Provide a check next to all suitable answers. More than one answer can be provided.

Femur, Fibula, Humerus, Mandible, Metacarpals, Metatarsals, Other, Pelvis, Radius, Rib, Scapula, Shoulder, Skull, Teeth, Tibia, Ulna, Unidentified, Vertebra

11. Part speciment

Provide a check next to all suitable answers. More than one answer can be provided.

Caudal, Complete, Cranial, Distal, Distal and shaft, Dorsal, Epiphyses, Lateral, Proximal, Proximal and shaft, Shaft, Unidentified, Ventral

12. Side

Provide a check next to all suitable answers. More than one answer can be provided.

Left, Medial, Right, Unidentified

13. Age

Provide a check next to all suitable answers. More than one answer can be provided.

Fused, Unfused, Unidentified, Worn,

14. Modification

Provide a check next to all suitable answers. More than one answer can be provided.

Burnt, Butchered, Carved, Chewed, Cut, Ground, None, Other

15. Butchery location

Provide a check next to all suitable answers. More than one answer can be provided.

Anterior, Dorsal, Epiphysis, Joint surface, Lateral, Medial, Posterior, Shaft-proximal, Shaft-distal, Unidentified, Ventral

16. Meat cut

Text can be entered into the area provided. Tools presented above the area are used to format and layout the text.

---

17. Description/General notes

Text can be entered into the area provided. Tools presented above the area are used to format and layout the text.

---

18. References

Text can be entered into the area provided. Tools presented above the area are used to format and layout the text.

---

19. Photograph

A file path is expected. An image file (jpg, gif, tif, png) can be selected by clicking the 'Browse' button. The selected file can reside on the local computer, external hard drive, SD card or USB stick prior to uploading.

Figure A12.1 Bone database recording fields 1-19

Appendix 13. Summary of fasteners

Table A13.1 is an overall summary of structural fasteners, Table A13.2 shows non-structural fasteners and Table A13.3 shows spikes. Although the fastener may be highly corroded and only 0-50% complete, if it consists of a head, shank and point it was recorded as complete for the MNI in this instance.

Table A13.1 Summary of structural fasteners and MNI, all trenches

Trench	Context	Weight in (g)	Metal Type	Fastener Type & Date	Complete	Head	Shank	Point	NMI
1	**Total 002**	**3.7**	Other iron	Clout	1				
Total Trench 1		**3.7**			**1**				**Total 1**
2	**Total 001**	**1.8**	Other iron	Varman's Type II (1870s-1880s)	**1**				
	002	9.5	Other iron	Varman's Type II (1870s-1880s)		2			
	002	17	Other iron	Varman's Type II (1870s-1880s)	4				
	002	8.3	Lead/other iron	Lead headed nail	1				
	002	10.4	Lead/other iron	Lead headed nail		2			
	002	12.6	Other iron	Standard nail				5	
	002	13.1	Other iron	Standard nail				1	
	002	0.7	Wrought iron	Nail (pre 1970s)		1			
	002	1.4	Other iron	Standard nail		1			
	002	10.8	Other iron	Standard nail				3	
	Total 002	**83.8**			**5**				
Total Trench 2		**85.6**			**6**	**6**	**0**	**9**	**Total 15**
3	**Total 001**	**2.3**	Other iron	Standard nail			1		
	Total 002	**13.3**	Other iron	Standard nail				7	
Total Trench 3		**15.6**			**0**	**0**	**1**	**7**	**Total 7**
4	001	3.7	Lead/other iron	Lead headed nail		1			
	001	3.6	Other iron	Bolt/nail head		1			
	001	91.3	Other iron	Standard nail			120		
	001	19.8	Other iron	Standard nail		10			
	001	54.1	Other iron	Standard nail				26	
	001	7.5	Other iron	Standard nail		3			
	001	2.1	Other iron	Standard nail	2				

	001	1.2	Other iron	Standard nail		2			
	001	4.1	Other iron	Standard nail		2			
	001	15.9	Other iron	Standard nail		10			
	001	3.2	Other iron	Standard nail			8		
	001	2.2	Other iron	Standard nail	1				
	001	1.5	Other iron	Standard nail		1			
	001	0.5	Other iron	Standard nail	1				
	001	1.7	Other iron	Standard nail	1				
	001	10.5	Other iron	Standard nail		3			
	001	3.5	Other iron	Standard nail		2			
	001	2.1	Other iron	Standard nail	2				
	001	3.5	Other iron	Standard nail	1				
	001	1	Other iron	Standard nail	1				
	001	2	Other iron	Standard nail	1				
	001	0.9	Other iron	Standard nail	1				
	001	0.5	Other iron	Standard nail	1				
	001	1.2	Other iron	Standard nail	1				
	001	1.6	Other iron	Standard nail	1				
	Total 001	**239.2**			**14**	**35**	**128**	**26**	**49**
	002	6	Other iron	Varman's Type II (1870s-1880s)	1				
	002	7.2	Other iron	Standard nail		5			
	002	8.1	Other iron	Standard nail	3				
	002	41.6	Other iron	Standard nail			32		
	002	3.4	Other iron	Standard nail		1			
	002	1.9	Other iron	Standard nail		2			
	002	1.5	Other iron	Standard nail		1			
	002	52	Other iron	Standard nail			28		
	002	11.1	Other iron	Standard nail				7	
	002	1.9	Other iron	Standard nail		2			
	002	2	Other iron	Ewbank nail (1834-1939)					
	002	2.4	Other iron	Standard nail	1				
	002	1.1	Other iron	Standard nail	1				
	002	1.7	Other iron	Standard nail	1				
	002	6.8	Other iron	Standard nail		4			
	002	3.1	Other iron	Standard nail				3	
	002	5.1	Other iron	Standard nail				5	
	002	15	Other iorn	Standard nail				4	
	002	1.4	Other iron	Standard nail				1	
	002	13.4	Other iron	Standard nail			17		
	002	2.9	Other iron	Standard nail			1		
	002	2.9	Other iron	Standard nail				4	
	002	6.8	Other iron	Standard nail				5	
	002	4.7	Other iron	Standard nail			2		
	002	1	Other iron	Standard nail		2			
	002	2.2	Other iron	Standard nail		2			
	002	1.9	Other iron	Standard nail		1			
	002	5.7	Other iron	Standard nail		1			

	002	1.7	Other iron	Standard nail		1			
	002	1.1	Other iron	Standard nail		1			
	002	1	Other iron	Standard nail		1			
	002	1.5	Other iron	Clout	1				
	002	22.1	Other iron	Standard nail			20		
	002	2.9	Other iron	Standard nail		1			
	002	1.1	Other iron	Standard nail		1			
	002	1.1	Other iron	Standard nail		1			
	002	0.9	Other iron	Standard nail		2			
	002	0.9	Other iron	Standard nail		1			
	002	1.7	Other iron	Standard nail		1			
	002	1.5	Other iron	Standard nail		1			
	002	0.4	Other iron	Standard nail		1			
	002	0.1	Other iron	Standard nail		1			
	002	5.6	Other iron	Standard nail				4	
	002	1.5	Other iron	Standard nail				1	
	002	2.8	Other iron	Standard nail				2	
	002	1.3	Other iron	Standard nail			1		
	002	1.3	Other iron	Standard nail				2	
	002	4.7	Other iron	Standard nail	1				
	002	112.5	Other iron	Standard nail			100		
	002	59.4	Other iron	Standard nail			19		
	002	24.7	Other iron	Standard nail			4		
	002	4.7	Other iron	Standard nail			3		
	002	6	Other iron	Standard nail				3	
	002	2.5	Other iron	Standard nail				1	
	002	21.8	Other iron	Standard nail			17		
	002	3.2	Other iron	Standard nail				4	
	002	9.5	Other iron	Standard nail		7			
	002	3.3	Other iron	Standard nail		3			
	002	0.9	Other iron	Standard nail		2			
	002	1.8	Other iron	Standard nail		1			
	002	2.9	Other iron	Standard nail		1			
	002	0.3	Other iron	Standard nail		1			
	002	0.3	Other iron	Standard nail		1			
	002	0.7	Other iron	Standard nail		1			
	002	1.8	Other iron	Standard nail		1			
	002	0.6	Other iron	Standard nail		1			
	002	1.3	Other iron	Standard nail		1			
	002	7.4	Other iron	Standard nail	1				
	002	1.2	Other iron	Standard nail	1				
	002	1.4	Other iron	Standard nail		1			
	002	2	Other iron	Standard nail	1				
	002	0.8	Other iron	Standard nail	1				
	002	2.4	Other iron	Standard nail	1				
	002	1.6	Other iron	Standard nail	1				
	Total 002	**545**			**15**	**55**	**244**	**46**	**70**

Total Trench 4		**784.2**			**29**	**90**	**372**	**72**	**Total 119**
5	**Total 001**	**1.1**	Other iron	Standard nail	**1**				**1**
	002	1.8	Other iron	Standard nail				1	
	002	2.2	Other iron	Standard nail				1	
	002	1.4	Other iron	Standard nail			1		
	002	0.9	Other iron	Standard nail		1			
	002	0.8	Other iron	Standard nail				1	
	002	3.5	Other iron	Standard nail				1	
	002	3.7	Other iron	Standard nail	1				
	002	5	Other iron	Standard nail	1				
	002	1.6	Other iron	Standard nail	1				
	002	8.5	Lead/other iron	Lead headed nail	1				
	002	9.8	Other iron	Standard nail			6		
	002	5.2	Other iron	Standard nail				2	
	002	2.4	Other iron	Standard nail	1				
	002	2	Other iron	Standard nail	1				
	002	1.5	Other iron	Standard nail		1			
	002	2.9	Other iron	Standard nail	1				
	002	5.5	Other iron	Standard nail	1				
	002	6.1	Other iron	Standard nail	1				
	002	3.2	Other iron	Standard nail	1				
	002	4.2	Other iron	Standard nail	1				
	002	13.9	Other iron	Varman's Type II (post 1880)	1				
	002	7.2	Other iron	Varman's Type II (post 1880)	1				
	002	6.9	Other iron	Varman's Type II (post 1880)	1				
	002	7.3	Other iron	Varman's Type II (post 1880)					
	002	4.2	Other iron	Standard nail	1				
	Total 002	**111.7**			**15**	**2**	**7**	**6**	**21**
Total Trench 5		**112.8**			**16**	**2**	**7**	**6**	**Total 22**
6	**Total 001**	**5.9**	Other iron	Standard nail	**1**	**0**	**0**	**0**	**1**
Total Trench 6		**5.9**			**1**	**0**	**0**	**0**	**Total 1**
7	001	8.4	Lead/other iron	Lead headed nail	1				
	001	4	Other iron	Standard nail				1	
	001	6.6	Other iron	Standard nail				1	
	001	5.3	Other iron	Standard nail			11		
	001	13.8	Other iron	Standard nail			6		

	001	1.5	Other iron	Standard nail				1	
	001	0.5	Other iron	Standard nail				1	
	001	3	Other iron	Standard nail				1	
	001	3.6	Other iron	Standard nail				1	
	001	12.8	Other iron	Standard nail				3	
	001	7.2	Other iron	Standard nail				4	
	001	2.7	Other iron	Standard nail				1	
	001	1.7	Other iron	Standard nail				1	
	001	1.6	Other iron	Standard nail				1	
	001	0.9	Other iron	Standard nail				1	
	001	1.9	Other iron	Standard nail				2	
	001	0.9	Other iron	Standard nail				1	
	001	0.5	Other iron	Standard nail				1	
	001	0.5	Other iron	Standard nail				1	
	001	2.5	Other iron	Standard nail				1	
	001	5.9	Other iron	Standard nail			1		
	001	12.9	Other iron	Standard nail				2	
	001	10.6	Other iron	Standard nail				2	
	001	4.4	Other iron	Standard nail		4			
	001	6.8	Other iron	Standard nail		3			
	001	1.8	Other iron	Standard nail		3			
	001	1.3	Other iron	Standard nail		2			
	001	1.7	Other iron	Standard nail		1			
	001	1.4	Other iron	Standard nail		1			
	001	2.1	Other iron	Standard nail				1	
	001	0.6	Other iron	Standard nail		1			
	001	9.7	Other iron	Stanard nail	1				
	001	1.9	Other iron	Standard nail	1				
	001	2.2	Other iron	Standard nail				1	
	001	1.2	Other iron	Standard nail	2				
	001	1.5	Other iron	Standard nail	1				
	001	1.6	Other iron	Standard nail	1				
	001	1.7	Other iron	Standard nail	1				
	001	3	Other iron	Standard nail	1				
	001	2.7	Other iron	Standard nail	1				
	001	1.6	Other iron	Standard nail		1			
	001	0.7	Other iron	Standard nail	1				
	001	10.9	Other iron	Standard nail	3				
	001	2.8	Other iron	Standard nail	1				
	001	4	Other iron	Standard nail	1				
	001	6.4	Other iron	Varman's Type II (post 1880)	1				
	001	5.1	Other iron	Standard nail	1				
	001	5.2	Other iron	Standard nail	1				
	001	3.8	Other iron	Standard nail	1				
	001	5.4	Other iron	Standard nail	1				

	001	6.4	Other iron	Standard nail	1				
	001	19.2	Other iron	Standard nail	5				
	001	5.4	Other iron	Standard nail	2				
	001	2.8	Other iron	Standard nail	1				
	001	4.1	Other iron	Standard nail		1			
	001	4	Other iron	Standard nail	1				
	001	2.6	Other iron	Standard nail		1			
	001	7.9	Other iron	Standard nail	1				
	001	5.8	Other iron	Standard nail	1				
	001	8.7	Other iron	Standard nail	1				
	001	11.33	Other iron	Standard nail		1			
	001	8.9	Other iron	Standard nail	1				
	001	9.5	Other iron	Standard nail	1				
	001	2	Other iron	Standard nail			4		
	001	2.4	Other iron	Standard nail				3	
	001	0.9	Other iron	Standard nail				3	
	001	6.7	Other iron	Standard nail				4	
	001	1.9	Other iron	Standard nail				1	
	001	3.3	Other iron	Standard nail				1	
	001	3.5	Other iron	Standard nail		1			
	001	1.8	Other iron	Standard nail		1			
	001	1	Other iron	Clout	1				
	001	2.7	Lead	Clout	1				
	001	0.9	Other iron	Standard nail	1				
	001	0.9	Other iron	Standard nail		1			
	001	0.5	Other iron	Standard nail	1				
	001	2.1	Other iron	Standard nail	1				
	001	0.8	Other iron	Standard nail				1	
	001	2.2	Other iron	Standard nail				1	
	001	0.9	Other iron	Standard nail				1	
	001	3.8	Other iron	Standard nail	1				
	001	4	Other iron	Standard nail	1				
	001	2.9	Other iron	Standard nail	1				
	001	2.3	Other iron	Standard nail	1				
	001	2.7	Other iron	Standard nail	1				
	001	3.4	Other iron	Standard nail	1				
	001	8.9	Other iron	Varman's Type II (post 1880)	1				
	001	8.9	Other iron	Varman's Type II (post 1880)	1				
	001	4.4	Other iron	Standard nail				1	
	001	5.5	Other iron	Standard nail	1				
	001	4.9	Other iron	Standard nail	1				
	001	3.7	Other iron	Standard nail	1				
	001	4.8	Other iron	Standard nail	1				
	001	4.5	Other iron	Standard nail	1				

	001	2.6	Other iron	Standard nail			3		
	001	1.9	Other iron	Standard nail			1		
	001	2.7	Other iron	Standard nail		1			
	001	2.3	Other iron	Standard nail	1				
	001	0.3	Other iron	Standard nail	1				
	001	1.1	unidentified	Screw				1	
	001	3.2	Other iron	Standard nail	2				
	001	4.5	Other iron	Standard nail		2			
	001	1.2	Other iron	Standard nail	1				
	001	1.6	Other iron	Standard nail	1				
	001	0.3	Other iron	Standard nail	1				
	001	2.1	Other iron	Standard nail		1			
	001	3.8	Other rion	Standard nail	1				
	001	2.8	Other iron	Standard nail	1				
	001	5.5	Other iron	Standard nail	1				
	001	5.5	Other iron	Standard nail	1				
	001	4.9	Other iron	Standard nail		1			
	001	2.2	Other iron	Standard nail	1				
	001	2	Other iron	Standard nail	1				
	001	2.5	Other iron	Standard nail		1			
	001	3.2	Wrought iron	Clout	1				
	001	4.4	Other iron	Standard nail	2				
	001	1.7	Other iron	Standard nail	1				
	001	2	Other iron	Standard nail	1				
	001	0.9	Other iron	Standard nail	1				
	001	2.1	Other iron	Standard nail	1				
	001	2	Other iron	Standard nail	1				
	001	1.7	Wrought iron	Standard nail	1				
	001	8.5	Other iron	Standard nail	2				
	001	14.4	Other iron	Standard nail		8			
	001	13.5	Other iron	Standard nail		12			
	001	1.1	Other iron	Standard nail		2			
	001	1.2	Othr rion	Standard nail		1			
	001	1.3	Other iron	Standard nail		1			
	001	2.1	Other iron	Clout		1			
	001	2.8	Other iron	Standard nail		1			
	001	19.6	Other iron	Standard nail			8		
	001	34.6	Other iron	Standard nail			23		
	001	5.3	Other iron	Standard nail			5		
	001	11.3	Other iron	Standard nail			20		
	001	3.4	Other iron	Standard nail				1	
	001	0.9	Other iron	Standard nail				1	
	001	23.7	Other iron	Standard nail				16	
	001	6.5	Other iron	Standard nail				6	
	001	18.6	Other iron	Standard nail				9	
	001	8.9	Other iron	Standard nail				3	
	001	0.5	Ohther iron	Standard nail				2	
	001	1.6	Other iron	Standard nail			1		

	001	5.3	Other iron	Standard nail			1		
	001	0.6	Other iron	Standard nail				1	
	001	3.7	Other iron	Standard nail	2				
	001	14.5	Other iron	Standard nail	2				
	001	2.6	Other rion	Standard nail	2				
	001	2.8	Other iron	Standard nail		1			
	001	2.1	Other iron	Standard nail	1				
	001	0.9	Other iron	Clout	1				
	001	4	Other iron	Standard nail	1				
	001	3.2	Other iron	Standard nail	1				
	001	5	Other iron	Standard nail	1				
	001	2	Other iron	Standard nail	1				
	001	7.3	Other iron	Varman's Type II (post 1880)	1				
	001	6	Other iron	Standard nail	1				
	001	3.5	Other iron	Standard nail				3	
	001	5.3	Other iron	Standard nail			11		
	001	25.7	Other iron	Standard nail				13	
	001	1.6	Other iron	Standard nail				3	
	001	4.1	Other iron	Standard nail				6	
	001	36.7	Other iron	Standard nail				23	
	001	22.3	Other iron	Standard nail			21		
	001	1.1	Other iron	Standard nail			2		
	001	18.2	Other iron	Standard nail			29		
	001	3.1	Other iron	Standard nail				2	
	001	1.9	Other iron	Standard nail		1			
	001	14.1	Other iron	Standard nail	4				
	001	12.3	Other iron	Standard nail	4				
	001	1.9	Other iron	Standard nail				1	
	001	1.9	Other iron	Standard nail			1		
	001	1.6	Other iron	Standard nail		1			
	001	4.9	Other iron	Standard nail	1				
	001	4.9	Other iron	Varman's Type II (post 1880)	1				
	001	4.8	Other iron	Varman's Type II (post 1880)	1				
	001	5.3	Other iron	Standard nail	1				
	001	4.3	Other iron	Standard nail	1				
	001	3.2	Other iron	Standard nail	1				
	001	1.3	Other iron	Standard nail	1				
	001	3.8	Other iron	Standard nail				1	
	001	1.3	Other iron	Standard nail	1				
	001	1.4	Other iron	Standard nail	1				
	001	1.4	Other iron	Standard nail	1				
	001	0.9	Other iron	Standard nail	1				
	001	1	Other iron	Standard nail	1				
	001	2.5	Wrought iron	Clout	1				
	001	2.6	Other iron	Standard nail		1			
	001	0.6	Other iron	Standard nail	1				

	001	1.1	Other iron	Clout	1				
	001	0.9	Other iron	Standard nail	1				
	001	1.3	Other iron	Standard nail	1				
	001	0.8	Other iron	Standard nail		1			
	001	0.4	Other iron	Standard nail	1				
	001	0.4	Other iron	Standard nail		1			
	001	1.3	Other iron	Standard nail		1			
	001	1	Other iron	Standard nail	1				
	001	8.7	Other iron	Standard nail		2			
	001	3.6	Other iron	Standard nail		1			
	001	0.8	Other iron	Standard nail			2		
	001	0.7	Other iron	Standard nail			1		
	001	3.3	Other iron	Standard nail		3			
	001	2.7	Other iron	Standard nail		6			
	001	16.7	Other iron	Standard nail		14			
	001	3.7	Other iron	Standard nail		2			
	001	11.4	Other iron	Standard nail			11		
	001	5.6	Other iron	Standard nail				1	
	001	1	Other iron	Standard nail			1		
	001	3.3	Other iron	Standard nail		1			
	001	1.1	Other iron	Standard nail		1			
	001	16.5	Other iron	U nail	1				
	001	13.4	Other iron	Standard nail			8		
	001	16.0	Other iron	Standard nail				13	
	001	6.5	Other iron	Standard nail				4	
	001	0.8	Other iron	Standard nail				2	
	001	3.4	Other iron	Standard nail				4	
	001	17.6	Other iron	Standard nail		8			
	001	1.9	Other iron	Standard nail		1			
	001	7.2	Other iron	Standard nail		1			
	001	2.9	Other iron	Standard nail		1			
	001	4	Other iron	Standard nail		3			
	001	19.9	Other iron	Varman's Type II (post 1880)	1				
	001	7.1	Other iron	Varman's Type II (post 1880)	1				
	001	9.4	Other iron	Standard nail	2				
	001	4.3	Other iron	Standard nail	1				
	001	0.7	Other iron	Standard nail	1				
	001	33.2	Other iron	Standard nail	9				
	001	18.9	Other iron	Standard nail	7				
	001	30.7	Other iron	Standard nail	9				
	Total 001	**1190.13**			**151**	**105**	**171**	**161**	**312**
	002	9.6	Other iron	Standard nail				4	
	002	9.4	Other iron	Standard nail					
	002	1.6	Other iron	Standard nail				1	
	002	9.2	Other iron	Standard nail	2				
	002	3	Other iron	Standard nail	1				
	002	2	Other iron	Standard nail	1				
	002	1.3	Other iron	Standard nail		1			

	002	1.5	Other iron	Standard nail		1			
	002	2.1	Other iron	Standard nail		1			
	002	1.7	Other iron	Standard nail		1			
	002	13.4	Other iron	Standard nail			8		
	002	5.6	Other iron	Standard nail	1				
	002	8.1	Other iron	Standard nail	2				
	002	5.6	Other iron	Varman's Type II (post 1880)	1				
	002	7.4	Other iron	Standard nail	3				
	002	3.5	Other iron	Standard nail	2				
	002	7.4	Other iron	Varman's Type II (post 1880)	1				
	002	13.9	Other iron	Standard nail	1				
	002	3	Other iron	Clout	1				
	002	0.3	Other iron	Standard nail	1				
	002	5.7	Brass	Standard nail	1				
	002	10.4	Other iron	Varman's Type II (post 1880)	1				
	Total 002	**125.7**			**19**	**4**	**8**	**5**	**24**
Total Trench 7		**1314.03**			**170**	**109**	**179**	**166**	**Total 336**
8	001	0.7	Other iron	Standard nail	1				
	001	5.2	Other iron	Standard nail		2			
	001	3.5	Other iron	Standard nail				2	
	001	1.5	Other iron	Standard nail	1				
	001	3.3	Other iron	Standard nail	1				
	Total 001	**14.2**			**3**	**2**		**2**	**5**
	002	4	Lead/other iron	Lead headed nail	1				
	002	0.8	Other iron	Standard nail				1	
	002	1.8	Other iron	Standard nail				1	
	002	6	Other iron	Standard nail	1				
	002	3.6	Other iron	Standard nail				1	
	002	8.4	Other iron	Standard nail	1				
	Total 002	**20.6**			**3**	**0**	**0**	**3**	**6**
Total Trench 8		**34.8**			**6**	**2**	**0**	**5**	**Total 11**
9	001	1.4	Other iron	Standard nail	1				1
Total Trench 9	**Total 001**	**1.4**			**1**	**0**	**0**	**0**	**Total 1**
10	002	1.3	Brass	Standard nail	1				
	002	9	Other iron	Standard nail			17		
	002	1.5	Other iron	Standard nail				3	
	002	9.6	Other iron	Standard nail			1		
	002	0.4	Other iron	Standard nail			1		
	002	5.6	Other iron	Standard nail			9		
	002	8.1	Other iron	Standard nail				5	
	002	12.7	Other iron	Standard nail				3	
	002	5.8	Other iron	Standard nail				2	

	002	6.9	Othr iron	Standard nail		1			
	002	5	Other iron	Standard nail		3			
	002	1.6	Other iron	Standard nail		1			
	002	1.9	Other iron	Standard nail		1			
	002	2.5	Other iron	Standard nail		1			
	002	5.8	Other iron	Varman's Type II (post 1880)	1				
	002	8.1	Other iron	Varman's Type II (1880s-1890s)	1				
	002	9.8	Other iron	Varman's Type II (post 1870)	1				
	002	4	Other iron	Standard nail	1				
	002	4.5	Other iron	Standard nail	1				
	Total 002	**104.1**			**6**	**7**	**28**	**13**	**19**
	003	1.7	Other iron	Standard nail				4	
	003	1.1	Other iron	Standard nail				3	
	003	1.2	Other iron	Standard nail				1	
	003	12.8	Other iron	Standard nail			17		
	003	18.2	Other iron	Standard nail			15		
	003	2.3	Other iron	Standard nail				3	
	003	3.2	Other iron	Standard nail		3			
	003	2.8	Other iron	Standard nail		2			
	003	0.5	Other iron	Standard nail	1				
	003	4.9	Other iron	Standard nail				1	
	003	4.4	Other iron	Standard nail	3				
	003	10.4	Other iron	Standard nail	2				
	003	2.8	Other iron	Standard nail				1	
	003	7.2	Other iron	Varman's Type II (pre 1870)	1				
	003	9.2	Other iron	Screw	1				
	003	5.2	Other iron	Standard nail	1				
	003	1.5	Brass	Standard nail				1	
	003	0.3	Other iron	Standard nail				1	
	003	1.1	Other iron	Standard nail				2	
	003	4.5	Other iron	Standard nail		2			
	003	3.4	Other iron	Standard nail			1		
	003	4.7	Other iron	Standard nail	1				
	003	2.9	Other iron	Standard nail			3		
	003	1.7	Other iron	Standard nail				4	
	Total 003	**108**			**10**	**7**	**36**	**21**	**31**
Total Trench 10		**212.1**			**16**	**14**	**64**	**34**	**Total 50**
11	001	4.1	Other iron	Standard nail			3		
	001	1.3	Other iron	Standard nail				1	
	001	9.6	Other iron	Standard nail			6		
	001	3.1	Other iron	Standard nail		2			
	001	4.4	Other rion	Varman's Type II	1				

				(post 1880)					
	001	2.4	Other iron	Standard nail	1				
Total Trench 11	**Total 001**	**24.9**			**2**	**2**	**9**	**1**	**Total 4**
12	002	14.9	Other iron	U nail	1				
	002	3.1	Other iron	Standard nail			2		
	002	2.7	Other iron	Standard nail			4		
	002	4	Other iron	Standard nail		2			
	002	4	Other iron	Standard nail				4	
	002	2.2	Other iron	Standard nail				1	
	002	2.4	Other iron	Standard nail	1				
Total Trench 12	**Total 002**	**33.3**			**2**	**2**	**6**	**5**	**Total 7**
13	002	12	Other iron	Varman's Type II (post 1880)	3				
	002	2.5	Other iron	Standard nail	1				
	002	4.2	Other iron	Standard nail		1			
	002	3.5	Other iron	Standard nail	1				
	002	7.6	Lead/other iron	Lead headed nail	1				
	002	3	Other iron	Varman's Type II (post 1880)	1				
	002	3.8	Other iron	Standard nail		3			
Total Trench 13	**Total 002**	**36.6**			**7**	**4**	**0**	**0**	**Total 11**
14	001	5.7	Other iron	Standard nail	1				
	001	0.5	Other iron	Standard nail			1		
	001	0.7	Other iron	Standard nail		1			
	Total 001	**6.9**			**1**	**1**	**1**		**2**
	002	14.3	Other iron	Standard nail		4			
	Total 002	**14.3**			**0**	**4**	**0**	**0**	**4**
Total Trench 14		**21.2**			**1**	**5**	**1**	**0**	**Total 6**
15	002	8.7	Lead/other iron	Lead headed nail	1				
	002	4.1	Lead - cast	Lead headed nail		1			
	002	12.8	Other iron	Standard nail				3	
	002	14.3	Other iron	Standard nail			7		
	002	6.9	Other iron	Standard nail				1	
	002	2.3	Other iron	Standard nail		1			
	002	4.2	Other iron	Standard nail	1				
	002	9.7	Other iron	Standard nail	1				
	002	12.2	Other iron	Standard nail	2				
Total Trench 15	**Total 002**	**75.2**			**5**	**2**	**7**	**4**	**Total 9**
16	002	1.7	Wrought iron	Standard nail	1				
	002	0.7	Wrought iron	Standard nail		1			
	002	3.8	Other iron	Standard nail	1				
	002	1.5	Wrought	Clout	1				

	002	4.4	Other iron	Standard nail	1				
	002	4.9	Other iron	Varman's Type II (1890s)	1				
	002	3.6	Other iron	Varman's Type II (post 1870s-1880s)	1				
	002	4.1	Other iron	Standard nail	1				
	002	45	Other iron	Varman's Type II (1870s-1880s)	5				
	002	44.5	Other iron	Varman's Type I (early 1890s)	6	2			
	002	0.5	Wrought iron	Standard nail	1				
	002	7.3	Other iron	Varman's Type II (1870s-1880s)	2				
	002	2.2	Wrought iron	Standard nail	1				
	002	13	Other iron	Varman's Type I (early 1890s)	5	2			
	002	10.7	Other iron	Varman's Type II (1870s-1880s)	6				
	002	3.4	Other iron	Standard nail	2				
	002	3.3	Other rion	Standard nail	2				
	002	39.1	Wrought iron	Standard nail	11	2			
	002	2.5	Wrought iron	Standard nail	2				
	002	1	Other iron	Standard nail	1				
	002	8.8	Wrought iron	Standard nail		3			
	002	4	Other iron	Standard nail		1			
	002	7.2	Other iron	Standard nail				4	
	002	5.3	Other iron	Standard nail	2				
	002	2.3	Other iron	Standard nail				2	
	002	12.9	Other iron	Standard nail		7			
	002	2.1	Other iron	Standard nail		1			
	002	10.9	Other iron	Varman's Type II (post 1880)	1				
	002	8.5	Other iron	Standard nail	2				
	002	2.6	Other iron	Standard nail	1				
	002	3.7	Other iron	Standard nail	1				
	002	4.2	Lead/other iron	Lead headed nail	1				
	002	2.8	Other iron	Screw			1		
	002	19.7	Other iron	Standard nail			15		
	002	2.7	Other iron	Standard nail			5		
	002	1.8	Other iron	U nail	1				
	002	3.9	Other iron	Standard nail		4			
	002	1	Other iron	Standard nail		1			
	002	6	Other iron	Standard nail		2			

	002	16.3	Other iron	Standard nail				10	
	002	6.6	Other iron	Standard nail				3	
	002	2.9	Other iron	Standard nail				1	
	002	0.6	Other iron	Standard nail				2	
	002	1.1	Other iron	Standard nail				1	
	002	1.1	Other iron	Standard nail	1				
	002	1.3	Other iron	Standard nail	1				
	002	3.1	Other iron	Standard nail	1				
	002	2.3	Other iron	Standard nail	1				
	002	9.5	Other iron	Standard nail	1				
	002	5.3	Other iron	Varman's Type II (post 1880)	1				
	002	7.6	Other iron	Varman's Type II (post 1880)	1				
	002	3.3	Other iron	Standard nail	1				
	002	3	Other iron	Screw	1				
	002	6.5	Lead/other iron	Lead headed nail	1				
	002	7.6	Other iron	Varman's Type II (post 1880)	2				
	002	22.4	Other iron	Varman's Type II (post 1880)	3				
	002	2.8	Other iron	Clout	1				
	002	1.9	Other iron	U nail	1				
	002	3.4	Other iron	Clout	2				
	002	0.6	Other iron	Standard nail	1				
	002	8.2	Other iron	Standard nail		1			
	002	22.7	Other iron	Varman's Type II (post 1880)	4				
	002	19.3	Other iron	Varman's Type II (post 1880)	3				
	002	7.1	Other iron	Standard nail	1				
	002	7.4	Other iron	Standard nail	2				
	002	8.1	Other iron	Varman's Type II (post 1880)	1				
	002	6.9	Other iron	Standard nail	1				
	002	9.7	Other iron	Varman's Type II (post 1880)	1				
	002	20.8	Lead/other iron	Lead headed nail	3				
	002	7	Lead/other iron	Lead headed nail	1				
Total Trench 16	**Total 002**	**534**			**97**	**27**	**21**	**23**	**Total 124**
18	002	10.8	Other iron	Standard nail	1				

Total Trench 18	**Total 002**	**10.8**			**1**	**0**	**0**	**0**	**Total 1**
STP		9	Other iron	Standard nail				1	
		7.1	Lead/other iron	Lead headed nail	1				
		1.6	Other iron	Standard nail			1		
	Total STP	**17.7**			**1**		**1**	**1**	**Total 2**
Overall total		**3323.83 (g)**							**Total MNI 727**

Table A13.2 Summary of non-structural nails, all trenches

Trench	Context	Weight in (g)	Metal Type & manufacure method	Fastener Type	Complete	Head	Shank	Point	NMI
1	**Total 002**	2.3	Other iron	Rivet		1			
Total Trench 1		**2.3**				**1**			**Total 1**
4	001	1.4	Brass/copper alloy	Clout	1				
	001	3	Brass/copper alloy	Boot lace hooks	3				
	001	0.6	Other iron	Small nail	1				
	Total 001	**5**			**5**				**5**
	002	0.6	Other iron	Horseshoe nail	1				
	002	4.8	Other iron	Rivet	1				
	002	0.1	Other iron	Tack				2	
	002	0.2	Other iron	Tack		1			
	Total 002	**5.7**			**2**	**1**		**2**	**4**
Total Trench 4		**10.7**			**7**	**1**		**2**	**Total 9**
7	001	3.6	Brass	Rivet	1				
	001	2.7	Other iron	Horseshoe nail		1			
	001	0.7	Other iron	Horseshoe nail		1			
	001	3.3	Other iron	Horseshoe nail	1				
	001	0.2	Unidentified (wood?)	Screw			1		
	001	3	Other iron	Horseshoe nail	3				
	001	1.1	Other iron	Horseshoe nail	1				
	001	2	Other iron	Horseshoe nail	1				

	001	0.5	Other iron	Small nail/tack	1				
	001	0.9	Other iron	Small nail/tack	1				
	001	0.8	Unidentified	Rivet	1				
	001	2	Other iron	Horseshoe nail		1			
	001	5.4	Other iron	Horseshoe nail		2			
	001	3.8	Unidentified	Clout with flat tip	1				
	Total 001	**30**			**11**	**5**	**1**	**0**	**16**
	002	3.2	Other iron	Horseshoe nail		1			
	002	4.6	Other iron	Horseshoe nail		2			
	002	3.4	Brass	Rivet	1				
	002	3.4	Brass	Rivet	1				
	002	9	Other iron	Horseshoe nail		8			
	002	6.2	Other iron	Horseshoe nail		36			
	002	31.5	Other iron	Horseshoe nail	13				
	002	2.8	Other iron	Horseshoe nail	1				
	002	86.5	Other iron	Horseshoe nail		42			
	002	2.4	Other iron	Horseshoe nail	1				
	002	4.2	Other iron	Horseshoe nail		2			
	002	2.8	Other iron	Horseshoe nail	1				
	002	1.1	Brass	Boot nail	3				
	002	0.7	Brass	Pins	2				
	002	1.5	Other iron	Horseshoe nail		1			
	002	0.2	Brass	Boot nail	1				
	002	0.2	Brass	Safety pins				2	
	002	5.6	Other iron	Horseshoe nail		2			
	002	1	Other iron	Horseshoe nail		1			
	002	2.3	Other iron	Horseshoe nail		1			
	Total 002	**172.6**			**23**	**96**	**0**	**2**	**119**
Total Trench 7		**202**			**34**	**101**	**1**	**2**	**Total 135**
10	002	3.1	Unidentified	Rivet	1				
	002	1	Unidentified	Rivet		1			

	002	6	Other iron	Horseshoe nail	2				
	002	18	Other iron	Horseshoe nail		12			
	002	1.5	Other iron	Horseshoe nail		2			
	Total 002	**29.6**			**3**	**15**	**0**	**0**	**18**
	003	7	Unidentified	Rivet	2				
	003	14	Other iron	Horseshoe nail			23		
	003	6	Other iron	Horseshoe nail				2	
	003	2.5	Other iron	Horsehoe nail			3		
	003	13	Other iron	Horseshoe nail		13			
	003	32.3	Other iron	Horseshoe nail		15			
	003	7.8	Other iron	Horseshoe nail	2				
	003	0.9	Brass	Small nail	1				
	003	5.3	Other iron	Horseshoe nail			5		
	003	1.7	Other iron	Horseshoe nail				3	
	003	8.3	Other iron	Horseshoe nail		4			
	003	3	Other iron	Horseshoe nail	1				
	003	1.7	Other iron	Horseshoe nail	1				
	003	3.1	Brass/copper alloy	Rivet	1				
	003	6	Other iron	Horseshoe nail			8		
	003	5.9	Other iron	Horseshoe nail		4			
	003	14.7	Other iron	Horseshoe nail		6			
	003	0.8	Brass	Small nail	1				
	003	1	Other iron	Horseshoe nail		1			
	003	4.5	Other iron	Horseshoe nail	1				
	003	2.4	Other iron	Horseshoe nail	1				
	Total 003	**141.8**			**11**	**43**	**39**	**5**	**54**
Total Trench 10		**171.4**			**14**	**58**	**39**	**5**	**Total 72**
11	001	2	Other iron	Horseshoe nail			2		

Total Trench 11	**Total 001**	**2**			**0**	**0**	**2**	**0**	**Total 2**
12	002	2.6	Brass/copper alloy	Rivet	1				
Total Trench 12	**Total 002**	**2.6**			**1**	**0**	**0**	**0**	**Total 1**
13	002	0.6	Other iron	Horseshoe nail		1			
Total Trench 13	**Total 002**	**0.6**			**0**	**1**	**0**	**0**	**Total 1**
16	002	1	Brass/copper alloy	Tack		1			
	002	0.1	Brass/copper alloy	Hook and eye (hook portion)	½				
	002	0	Brass/copper alloy	Hook and eye (eye portion	½				
	002	3.9	Other iron	Horseshoe nail		1			
	002	3.2	Other iron	Horseshoe nail	1				
	002	0.1	Brass	Boot nail	1				
	002	0.3	Brass	Hook and eye (hook portion)	1				
	002	0.5	Brass	Boot nail	1				
	002	9.4	Other iron	Horseshoe nail	2				
Total Trench 16	**Total 002**	**18.5**			**7**	**2**	**0**	**0**	**Total 9**
Overall total		**410.1 g**							**Total MNI 230**

Table A13.3 Summary of spikes, all trenches

Trench	Context	Weight	Metal Type	Head Shape	Complete	Head	Shank	Point	MNI
4	001	13.5	Wire	Unidentified	1				1
	002	48.3	Unidentified	Flat	1				1
Total Trench 4		**61.8**			**2**	**0**	**0**	**0**	**Total 2**
7	001	81.5	Wrought iron	Flat		1			
	001	8.7	Wrought iron	Unidentified				1	
	001	1.6	Wrought iron	Unidentified				1	

	001	96.5	Wrought iron	Other		1			
	001	5.9	Unidentified	Flat	1				
	001	23.1	Wire	Unidentified	1				
	001	34.9	Wire	Facetted	1				
	001	16.9	Wire	Facetted	1				
	001	14.7	Wire	Rose	1				
	001	18	Wire	Facetted	1				
	001	10.9	Unidentified	Facetted	1				
	Total 001	**312.7**			**9**	**2**	**0**	**2**	**11**
	002	8.8	Wire	Flat	1				
	002	10.3	Wire	Flat	1				
	002	33.8	Wire	Rose	1				
	Total 002	**52.9**			**3**	**0**	**0**	**0**	**3**
Total Trench 7		**365.6**			**12**	**2**	**0**	**2**	**Total 14**
10	003	13.8	Unidentified	Unidentified	1				
Total Trench 10		**13.8**			**1**	**0**	**0**	**0**	**Total 1**
13	003	21.7	Unidentified	Facetted	1				
Total Trench 13		**21.7**			**1**	**0**	**0**	**0**	**Total 1**
15	002	236.8	Wrought iron	Flat; L shaped	1				1
Total Trench 15		**236.8**			**1**	**0**	**0**	**0**	**Total 1**
16	002	49.3	Wire	Flat	1				
	002	6	Unidentified	Flat	2				
	002	31.2	Wire	Facetted	1				
	002	29.3	Wrought	Flat	1				
	002	17.2	Wire	Rose	1				
	002	25.2	Wire	Facetted	1				
Total Trench 16		**158.2**			**7**	**0**	**0**	**0**	**7**
STP		434.3	Unidentified	Other	1				
		201.8	Wrought	Flat	1				
		17.2	Cut	Facetted	1				
Total STP	**STP total**	**653.3**			**3**	**0**	**0**	**0**	**Total 3**
Overall total		**1511.2 g**			**27**				**Total MNI 29**

Appendix 14. Metal objects

Table A14.1 shows the MNI metal objects that were identifiable within all trenches.

Table A14.1 MNI metal objects all trenches

Trench	Context	Object	MNI
Boralga	000	Notched shingling hatchet	1
	000	Bulldog clip	1
	000	'shell eye' winker mould	1
Total			**3**
1	002	Wire	1
	002	Metal ring	1
	002	Structural fastener	1
	002	Non-structural fastener	1
Total			**4**
2	002	Structural fasteners	15
Total			**15**
3	000	Horseshoe	3
	000	Single jointed Bridle bit	1
	001	Wire	1
	001	Metal ring	1
	002	Structural fastener	7
Total			**13**
4	001	Single jointed bridle bit	1
	001	Wire	9
	001	Lead foil	3
	001	Copper pipe	1
	001	Harness buckle	1
	001	Buckle	1
	001	Structural fastener	49
	001	Non-structural fastener	5
	001	Spike	1
	002	Wire	33
	002	Thimble	1
	002	Harmonica	1
	002	Kerosene lamp	2
	002	Horseshoe	1
	002	Lock plate	1
	002	Drawer handles	2
	002	Early battery?	1

	002	Ornate lead handle	1
	002	Kettle spout	1
	002	Knife handle	1
	002	Buckle	2
	002	Hames collar ring	1
	002	Small brass/copper alloy ring	1
	002	Structural fasteners	70
	002	Non-structural fasteners	4
	002	Spike	1
Total			**195**
5	001	Structural fasteners	1
	002	Structural fasteners	21
	002	Lead sheeting	1
Total			**23**
6	001	Structural fastener	1
Total			**1**
7	001	Snake belt buckle	1
	001	Horse harness buckle	3
	001	Uniform buckle	1
	001	Buckle	4
	001	Lead sheeting	7
	001	Thimble	2
	001	Wire	22
	001	Cable	5
	001	Tin whistle	1
	001	Brass washer	1
	001	Hames collar ring	1
	001	Lock plate	1
	001	Axe head	1
	001	Structural fasteners	312
	001	Non-structural fasteners	16
	001	Spike	11
	002	Buckle	7
	002	Horse harness buckle	9
	002	Uniform buckle	1
	002	Lead sheeting	1
	002	Thimble	1
	002	Brass sewing pins	2
	002	Wax vestas box	1
	002	Hames collar ring	1
	002	Brass ring	1
	002	Brass shield/plate	2
	002	Horse harness part	1

	002	Wire	2
	002	Brass spring	1
	002	Horseshoe	1
	002	Structural fasteners	24
	002	Non-structural fasteners	119
	002	Spike	3
	003	Hames collar ring	1
Total			**567**
8	001	Wax vestas box	1
	001	Structural fasteners	5
	002	Child's popgun	1
	002	Structural fasteners	6
Total			**13**
9	001	Structural fastener	1
Total			**1**
10	001	Wire	1
	002	Washer	1
	002	Pack saddle hook	1
	002	Horse harness buckle	1
	002	Gate hinge	1
	002	Hoof rasp	1
	002	Horseshoe	12
	002	Wire	2
	002	Structural fasteners	19
	002	Non-structural	18
	003	Horseshoe	14
	003	Washer	3
	003	Harness buckle	2
	003	Hoof rasp	1
	003	Stirrup	1
	003	Structural fasteners	31
	003	Non-structural	54
	003	Spike	1
Total			**164**
11	001	Structural fastener	4
	001	Non-structural fastener	2
Total			**6**
12	001	Wire	7
	002	Cattle brand	1
	002	Wire	5
	002	Structural fasteners	7
	002	Non-structural	1
Total			**21**

13	000	Shaft-tugs	1
	002	Structural fasteners	11
	002	Non-structural fasteners	1
	003	Spike	1
Total			**14**
14	001	Structural fasteners	2
	002	Structural fasteners	4
Total			**6**
15	002	Structural fasteners	9
	002	Spike	1
Total			**10**
16	002	Earring?	1
	002	Harness buckle	6
	002	Buckle	3
	002	Kerosene lamp	1
	002	Horseshoe	5
	002	Wire	5
	002	Lead sheeting	17
	002	Wax vestas box	1
	002	Hames collar ring	5
	002	Turnbuckle	1
	002	Brass/copper alloy ring	1
	002	Shoe grommet	12
	002	Cork screw	1
	002	Stout bottle label	1
	002	Thimble	1
	002	Brass hinge	1
	002	Fork	1
	002	Tin lid	1
	002	Spring	1
	002	Structural fasteners	119
	002	Non-structural fasteners	9
	002	Spike	7
Total			**200**
18	001		1
Total			**1**
STP		Saucepan	1
		Horseshoes	2
		Structural fasteners	2
		Spike	3
Total			**8**
Total MNI			**1265**

Appendix 15. Shaft-tugs

Figure A15.2 demonstrates the application of shaft-tugs similar the set recovered from Boralga, Trench 13, Context 000 (Figure A15.1). Figure A15.3 is an advertisement demonstrating that the shaft-tugs and barrel were patented by Matassl's. Shaft-tugs attached to the pulling shaft at the front of a dray, and consisted of a metal bar inserted through 3 hooks. As these were a surface find, they may be stock camp overlay.

Figure A15.1 Shaft-tugs recovered from Boralga, Trench 13, Context 000

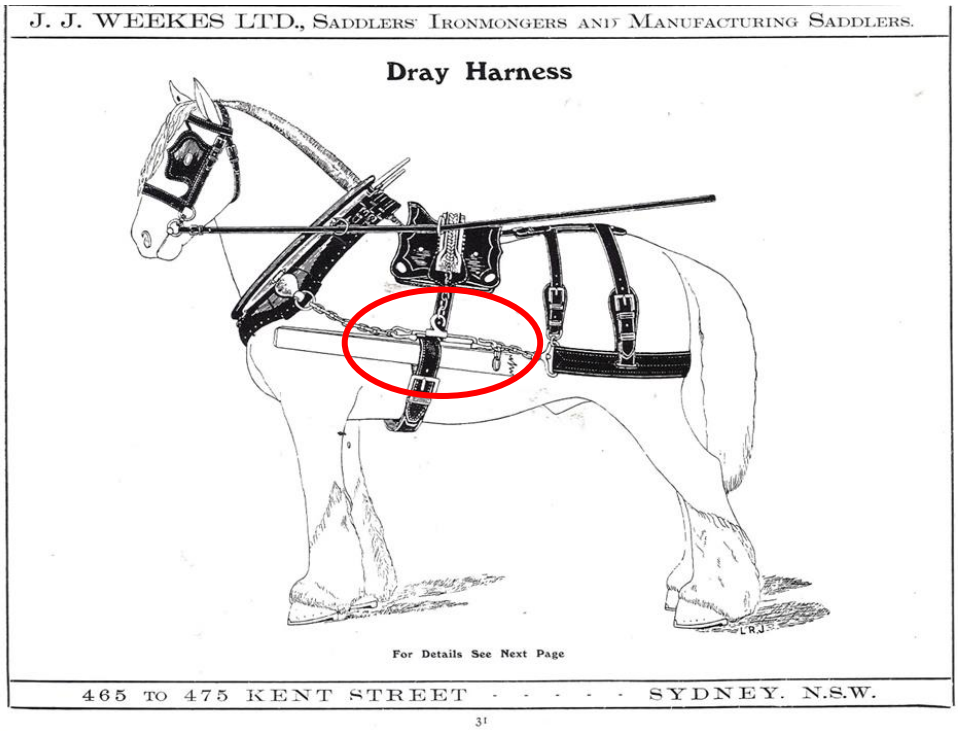


Figure A15.2 Horse in harness demonstrating location of Shaft-tugs
(*JJ Weekes Ltd Catalogue*, Sydney 1916, reproduced by Stephen Dobell-Brown, the Dene Bindery 1983).

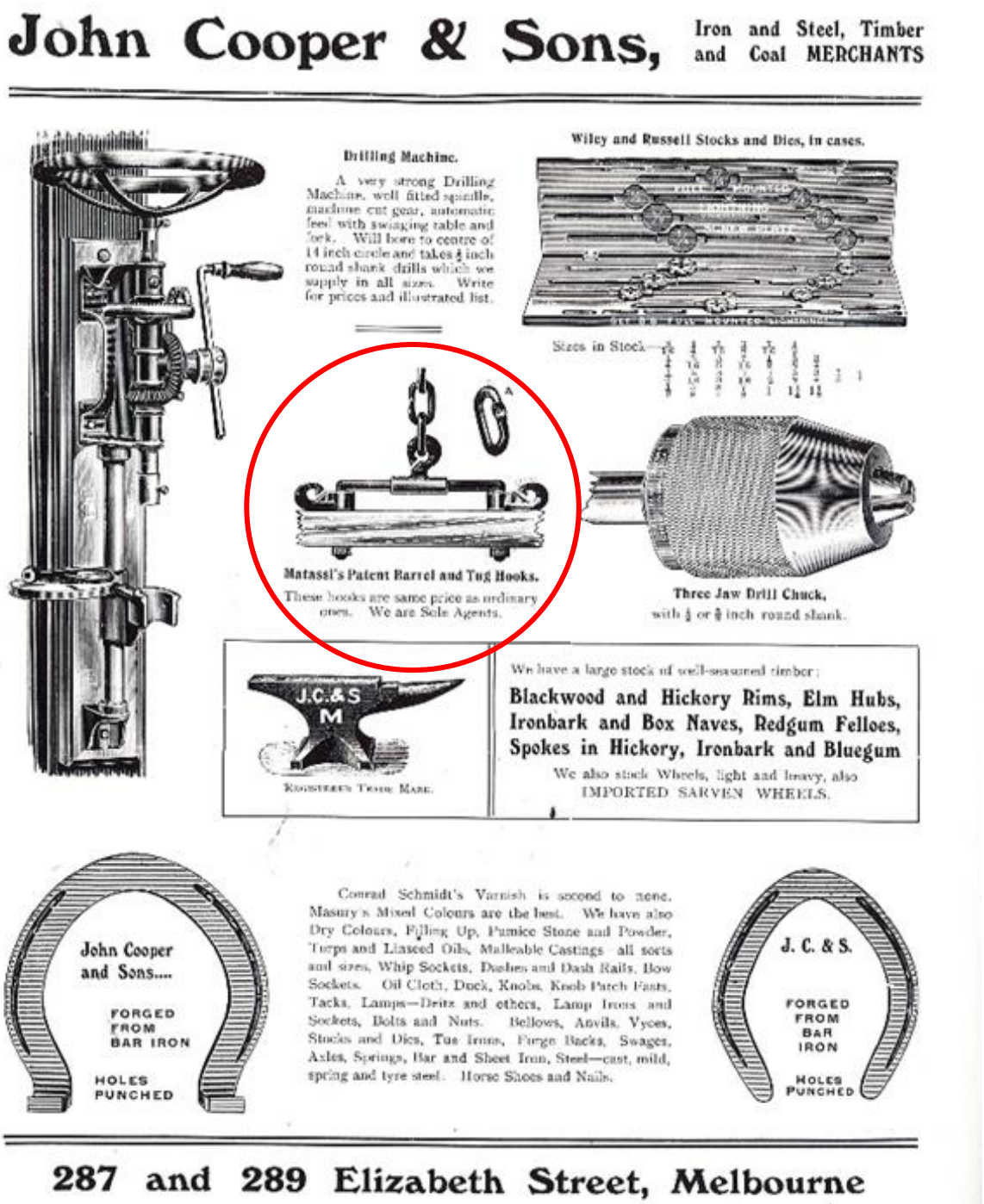


Figure A15.3 Iron monger ad showing the shaft-tugs patent by Mattasl's
(The Australasian Coachbuilder Book of Designs: Second Edition,
JE Bishop & Co, Sydney and Melbourne, 1909:256)

Appendix 16. Data base recording fields for metal

Native Mounted Police in Queensland Metal

Form produced by Leanne Bateman on 26-Jun-2019

Details

01. Catalogue number [required]
This gets automatically generated for new records. It can be edited afterwards if required.

Any text can be entered.

---

02. Total station object number

A whole number. Decimal points are not allowed.

---

03. ID number

Any text can be entered.

---

04. Related site

A list of items is presented in a drop down box. A single item can be selected from the list.

Barcoo River, Battle Camp, Bloomsbury, Boralga NMP camp, Boulia NMP camp, Cambridge Downs Homestead, Carl Creek NMP camp, Coen NMP camp, Collaroy, Corella Creek NMP camp 2, Dunrobin NMP camp, Eleutha NMP camp, Eyre's Creek/Cluney NMP camp, Fort Cooper NMP camp, Frome NMP camp, Garden Creek, Glenroy NMP camp, Highbury NMP camp, Hilary Creek, JC Waterhole and hotel, Mackenzie River, Marion Downs Stone Huts, Marlborough, Maytown, Mistake Creek NMP camp, Mosman's Well, Mt Coolon (previously known as Koala) Police Station, Mt McConnell, Murdering Lagoon, Murrays Lagoon, Musgrave NMP camp, Nigger Creek NMP camp, Normanby Homestead (and Police Camp), Oak Park NMP camp, Old Fairlight station, Original Riversleigh Homestead, Peak Downs NMP camp, Puckley Creek NMP camp, Twin Hills telegraph station, Wondai Gumbal NMP camp

05. Related excavation context

The system has too many available options to list out. Provide the answer(s) below, with reference to the options available in the system.

---

06. Metal type

Provide a check next to all suitable answers. More than one answer can be provided.

Brass, Brass/copper alloy, Cast Iron, Copper, Corrugated or ripple iron (galvanised or non-galvanised), Forged or wrought iron, Galvanised iron (non-corrugated, incl wire), Gold, Lead, Nickel silver (or other base metal), Other Iron, (e.g. flat iron, wire), Platinum, Silver, Steel, Tin, Unidentified

07. Metal completeness

A list of items is presented in a drop down box. A single item can be selected from the list.

Complete (95-100%), Fragment (0-50%), Fragment (51-95%)

08. Length (units: mm)

Any numeric value.

---

09. Width (units: mm)

Any numeric value.

---

10. Thickness (units: mm)

Any numeric value.

---

11. Weight (units: g)

Any numeric value.

---

12. Maker's Marks/Trademarks

Any text can be entered.

---

13. Date range

Any text can be entered.

---

14. Description/General notes

Text can be entered into the area provided. Tools presented above the area are used to format and layout the text.

---

15. References

Text can be entered into the area provided. Tools presented above the area are used to format and layout the text.

---

16. Photograph

A file path is expected. An image file (jpg, gif, tif, png) can be selected by clicking the 'Browse' button. The selected file can reside on the local computer, external hard drive, SD card or USB stick prior to uploading.

Object

17. Clothing fastener
Provide a check next to all suitable answers. More than one answer can be provided.

Buckle, Hook/eye, Other, Rivet, Shoe grommet, Stud/press stud

18. Sewing paraphernalia

Provide a check next to all suitable answers. More than one answer can be provided.

Needle/bodkin, Other, Pin, Thimble

19. Construction fastener

Provide a check next to all suitable answers. More than one answer can be provided.

Bracket, Building nail/screw/bolt/tack etc, Other, Spike, Strapping, Upholstery/furniture tack/rivet etc, Washer, Wire

20. Jewellery

Provide a check next to all suitable answers. More than one answer can be provided.

Bracelet, Brooch, Cufflink, Necklace, Ring, Watch

21. Building/furniture hardware

Provide a check next to all suitable answers. More than one answer can be provided.

Door knob/plate/hinge/lock, Furniture knob/plate/hinge/lock, Key, Other, Vent, Window handle/hinge/catch

22. Cutlery

Provide a check next to all suitable answers. More than one answer can be provided.

Fork, Knife, Spoon

23. Accessories/containers

Provide a check next to all suitable answers. More than one answer can be provided.

Clock/components, Coin/token, Cooking pot/pan/components, Document fastener (e.g. bulldog clip, paper clip), Food can/tin (e.g. sanitary, hole-in-cap, sardine etc), Lamp/components, Other container (e.g. flour tin, kerosene tin), Plate/cup/bowl, Stove/components, Tobacco tin, Wax vestas box

24. Saddlery/horse harness

Provide a check next to all suitable answers. More than one answer can be provided.

Bit/bridle, Buckle, Hames/collar, Horseshoe, Horseshoe nail, Other harness, Other horse related (e.g. curry comb), Rivet or other fixture, Spurs, Stirrup/saddle/components

25. Portion/component

Any text can be entered.

---

26. Modification/Re-use

A list of items is presented in a radio button list. A single item can be selected.

N/A No Unknown Yes

27. Other object (specify in description)

Text can be entered into the area provided. Tools presented above the area are used to format and layout the text.

Nails/structural fasteners only

28. Form
Provide a check next to all suitable answers. More than one answer can be provided.

Bolt, Brad, Clout, Ewbanks, Horseshoe, Other, Rivet, Roofing nail, Screw, Spike, Standard nail, Tack, Unidentifiable

29. Head shape

Provide a check next to all suitable answers. More than one answer can be provided.

Clasp, Facetted, Flat, Horseshoe (bevelled and tapered), Jolt, L-shaped, Other, Rhomboid, Rose/rosette, Unidentifiable

30. Shaft shape

Provide a check next to all suitable answers. More than one answer can be provided.

2 sides taper, 4 sides taper, No taper, Round, Unidentifiable

31. Manufacture method

Provide a check next to all suitable answers. More than one answer can be provided.

Cut (rectangular cross section), Unidentifiable, Wire (round or square cross section), Wrought (hand forged)

32. Size class

Provide a check next to all suitable answers. More than one answer can be provided.

Nail (>10mm-99mm), Spike (≥100mm length & ≥10mm width), Tack (<10mm length), Unidentifiable

33. Shaft cross-section

Provide a check next to all suitable answers. More than one answer can be provided.

Rectangular, Round, Square, Unidentifiable

34. Features

Provide a check next to all suitable answers. More than one answer can be provided.

Burrs on diagonal faces of shaft, Burrs on same face of shaft, Clasp 'pinch' under head, Cross hatching on head, Diagonal brackets under head, Grip marks on neck under head, Other, Perpendicular brackets under head, Shear striations

Buckles

35. Frame type
A list of items is presented in a drop down box. A single item can be selected from the list.

Double, Single

36. Frame shape

Provide a check next to all suitable answers. More than one answer can be provided.

Circle, D-shape, Other, Rectangular, Square, Trapezoid

37. Pin

Provide a check next to all suitable answers. More than one answer can be provided.

Part of frame, Separate

38. Tongue

Provide a check next to all suitable answers. More than one answer can be provided.

Double, Single

39. Decoration type

Provide a check next to all suitable answers. More than one answer can be provided.

Cast/Moulded, Enamelled, Engraved, Filigree, Jewel/inlay, Other, Stamped

40. Decorative motifs

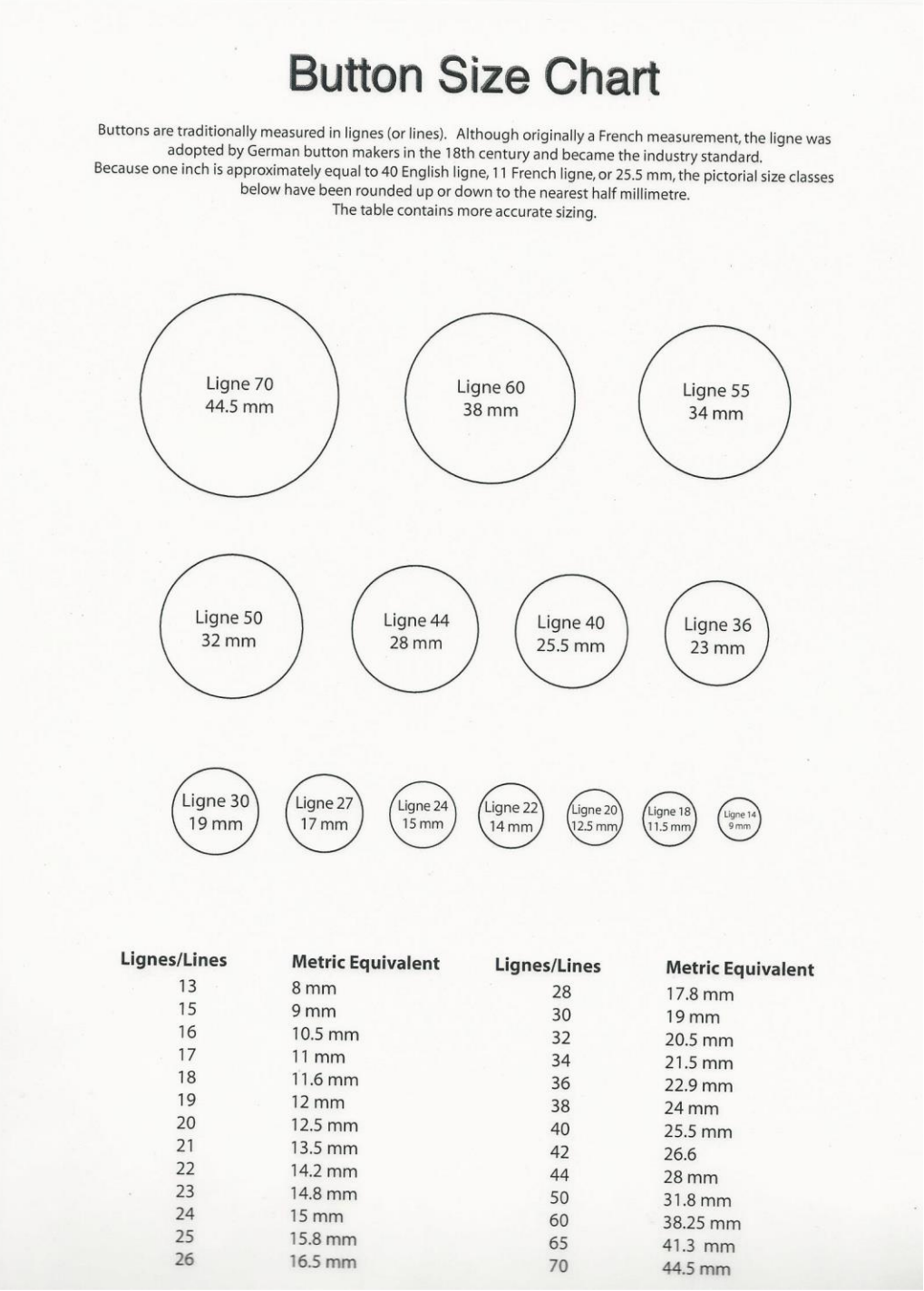
Provide a check next to all suitable answers. More than one answer can be provided.

Beaded, Foliate, Geometric, Lettering, Military, Other, Ribbed, scrolls

Figure A15.1 Metal database recording fields 1-40

Appendix 17. Button ligne chart

Button sizes were classified according to the 'Button size chart' chart in Figure A16.1 below.



Lignes/Lines	Metric Equivalent	Lignes/Lines	Metric Equivalent
13	8 mm	28	17.8 mm
15	9 mm	30	19 mm
16	10.5 mm	32	20.5 mm
17	11 mm	34	21.5 mm
18	11.6 mm	36	22.9 mm
19	12 mm	38	24 mm
20	12.5 mm	40	25.5 mm
21	13.5 mm	42	26.6
22	14.2 mm	44	28 mm
23	14.8 mm	50	31.8 mm
24	15 mm	60	38.25 mm
25	15.8 mm	65	41.3 mm
26	16.5 mm	70	44.5 mm

Figure A16.1 Button ligne chart

Appendix 18. Data base recording fields for Buttons

Native Mounted Police in Queensland Button

Form produced by Leanne Bateman on 26-Jun-2019

01. Catalogue number [required]

This gets automatically generated for new records. It can be edited afterwards if required.

Any text can be entered.

---

02. Total station object number

A whole number. Decimal points are not allowed.

---

03. Related site

A list of items is presented in a drop down box. A single item can be selected from the list.

Barcoo River, Battle Camp, Bloomsbury, Boralga NMP camp, Boulia NMP camp, Cambridge Downs Homestead, Carl Creek NMP camp, Coen NMP camp, Collaroy, Corella Creek NMP camp 2, Dunrobin NMP camp, Eleutha NMP camp, Eyre's Creek/Cluney NMP camp, Fort Cooper NMP camp, Frome NMP camp, Garden Creek, Glenroy NMP camp, Highbury NMP camp, Hilary Creek, JC Waterhole and hotel, Mackenzie River, Marion Downs Stone Huts, Marlborough, Maytown, Mistake Creek NMP camp, Mosman's Well, Mt Coolon (previously known as Koala) Police Station, Mt McConnell, Murdering Lagoon, Murrays Lagoon, Musgrave NMP camp, Nigger Creek NMP camp, Normanby Homestead (and Police Camp), Oak Park NMP camp, Old Fairlight station, Original Riversleigh Homestead, Peak Downs NMP camp, Puckley Creek NMP camp, Twin Hills telegraph station, Wondai Gumbal NMP camp

04. Related excavation context

The system has too many available options to list out. Provide the answer(s) below, with reference to the options available in the system.

---

05. Material

Provide a check next to all suitable answers. More than one answer can be provided.

Bakelite, Bone, Ceramic, Glass, Horn, Metal, Other, Plastic, Shell, Unidentified

06. Attachment method

Provide a check next to all suitable answers. More than one answer can be provided.

Sew-through, Shanked

07. Ligne size

Any text can be entered.

---

08. Manufacture method

Provide a check next to all suitable answers. More than one answer can be provided.

Cast, Cut, Moulded, Other, Stamped,

09. Construction

A list of check box items are presented. Multiple items may be checked and added to the current selected items. If the list of available options is extensive, a search string may be used to filter the list of options.

Composite (more than two pieces), One piece, Two piece

10. Shank type

Provide a check next to all suitable answers. More than one answer can be provided.

Alpha, Birdcage, Box, Cloth shank, Cone, Cut end/wedge, Drilled eye, Loop, Omega, Other (specify), Pin, Rosette, Sanders, Self-shanked

11. Sew through type

Provide a check next to all suitable answers. More than one answer can be provided.

Linen (blank), Linen (eyeletted), Other, Standard, Thread/Dorset thread

12. Number of eyes

Any numeric value.

---

13. Motifs

Text can be entered into the area provided. Tools presented above the area are used to format and layout the text.

---

14. Maker's Marks/Trademarks

Text can be entered into the area provided. Tools presented above the area are used to format and layout the text.

---

15. Description/General notes

Text can be entered into the area provided. Tools presented above the area are used to format and layout the text.

---

16. Date range

Any text can be entered.

---

17. References

Text can be entered into the area provided. Tools presented above the area are used to format and layout the text.

---

18. Photograph

A file path is expected. An image file (jpg, gif, tif, png) can be selected by clicking the 'Browse' button. The selected file can reside on the local computer, external hard drive, SD card or USB stick prior to uploading.

A17.1 Button database recording fields 1-18

Appendix 19. Data base recording fields for ammunition

Native Mounted Police in Queensland Weapons and ammunition

Form produced by Leanne Bateman on 26-Jun-2019

Basic details

01. Catalogue number [required]

This gets automatically generated for new records. It can be edited afterwards if required.

Any text can be entered.

---

02. Total station object number

A whole number. Decimal points are not allowed.

---

03. Related site [required]

A list of items is presented in a drop down box. A single item can be selected from the list.

Barcoo River, Battle Camp, Bloomsbury, Boralga NMP camp, Boulia NMP camp, Cambridge Downs Homestead, Carl Creek NMP camp, Coen NMP camp, Collaroy, Corella Creek NMP camp 2, Dunrobin NMP camp, Eleutha NMP camp, Eyre's Creek/Cluney NMP camp, Fort Cooper NMP camp, Frome NMP camp, Garden Creek, Glenroy NMP camp, Highbury NMP camp, Hilary Creek, JC Waterhole and hotel, Mackenzie River, Marion Downs Stone Huts, Marlborough, Maytown, Mistake Creek NMP camp, Mosman's Well, Mt Coolon (previously known as Koala) Police Station, Mt McConnell, Murdering Lagoon, Murrays Lagoon, Musgrave NMP camp, Nigger Creek NMP camp, Normanby Homestead (and Police Camp), Oak Park NMP camp, Old Fairlight station, Original Riversleigh Homestead, Peak Downs NMP camp, Puckley Creek NMP camp, Twin Hills telegraph station, Wondai Gumbal NMP camp

04. Related excavation context

The system has too many available options to list out. Provide the answer(s) below, with reference to the options available in the system.

---

05. Object

A list of items is presented in a drop down box. A single item can be selected from the list.

Cleaning tool, Gun flint, Gun manufacturing tool, Gun/component (weaponry), Gunpowder flask, Maintenance tool, Other, Percussion cap, Projectile mould, Projectile/component (ammunition), Reloading tool

06. Completeness

A list of items is presented in a drop down box. A single item can be selected from the list.

Complete (95-100%), Fragment (0-50%), Fragment (51-95%)

07. Material

Provide a check next to all suitable answers. More than one answer can be provided.

Brass, Copper, Iron, Lead, Other, Steel

08. Length (units: mm)

Any numeric value.

---

09. Width (units: mm)

Any numeric value.

---

10. Thickness (units: mm)

Any numeric value.

---

11. Weight (units: g)

Any numeric value.

---

12. Weight (grains) (units: grains)

Conversion - 1 gram = 15.4324 grains

Any numeric value.

---

13. Gun part

Provide a check next to all suitable answers. More than one answer can be provided.

Barrel bands, Barrel/muzzle, Bayonet, Butt/stock, Lock/trigger/breech, Other

14. Crown/head stamps

Text can be entered into the area provided. Tools presented above the area are used to format and layout the text.

---

15. Other trademarks

Any text can be entered.

---

16. Description/General notes

Text can be entered into the area provided. Tools presented above the area are used to format and layout the text.

---

17. Date range

Any text can be entered.

---

18. References

Text can be entered into the area provided. Tools presented above the area are used to format and layout the text.

19. Photograph

A file path is expected. An image file (jpg, gif, tif, png) can be selected by clicking the 'Browse' button. The selected file can reside on the local computer, external hard drive, SD card or USB stick prior to uploading.

Projectiles

20. Projectile type

Provide a check next to all suitable answers. More than one answer can be provided.

Cartridge case only (fired cartridge), Conical projectile (bullet), Other, Spherical projectile (ball, shot)

21. Deformation

A list of items is presented in a radio button list. A single item can be selected.

N/A No Unknown Yes

22. Rifling grooves

A list of items is presented in a radio button list. A single item can be selected.

N/A No Unknown Yes

23. Mould seams (sprue marks)

A list of items is presented in a radio button list. A single item can be selected.

N/A No Unknown Yes

24. Number of grooves

Any numeric value.

Cartridges

25. Base

A list of items is presented in a drop down box. A single item can be selected from the list.

Flat base, Hollow base

26. Body

A list of items is presented in a drop down box. A single item can be selected from the list.

Bottle necked, Straight walled

27. Firing mechanism

A list of items is presented in a drop down box. A single item can be selected from the list.

Centre fire, Pin fire, Rim fire

Figure A18.1 Ammunition database recording fields 1-27

Appendix 20. Trench summary of miscellaneous objects

Table A18.1 Trench summary of miscellaneous objects

Function	Material	Trench	Context	Count	MNI
Stationary					
Writing slate	Stone	4	001	30	1
Writing slate	Stone	4	002	71	2
Writing slate	Stone	7	001	21	1
Writing slate	Stone	7	002	2	1
Writing slate	Stone	10	002	1	1
Writing slate	Stone	11	001	1	1
Writing slate	Stone	16	002	2	1
Slate pencil	Stone	4	002	2	1
Slate pencil	Stone	8	001	3	2
Slate pencil	Stone	10	001	1	1
Slate pencil	Stone	10	003	1	1
Hygiene					
Toothbrush (Handle)	Bone	16	002	2	1
Toothbrush (Head)	Bone	7	002	7	1
Toothbrush (Head)	Bone	4	001	4	1
Recreation					
Harmonica reed	Unidentified	16	002	5	1
Alcohol bottle stopper	Cut crystal	4	002	1	1
Accessories					
Long, turned bead	Unidentified	16	002	1	1
Tools					
Pocket knife	Metal (non-ferrous)	STP 06	-	3	1
Personal					
Hair comb	Celluloid	4	002	1	1
Costume jewellery	Metal/Unidentified	4	002	1	1
Human waste (not coprolite as not fossilised)	Faeces	7	002	1	1
Human waste (not coprolite as not fossilised)	Faeces	10	003	1	1
Human waste	Faeces	15	002	1	1

(not coprolite as not fossilised)					
Coarse material	Fabric	7	002	1	1
Kitchen					
Pestle	Stone	4	002	2	1
Food					
Nut	Wood	12	002	1	1
Camp quarters					
Lamp decoration	Cut crystal	4	002	1	1
Lamp decoration (faux diamond)	Cut crystal	4	001	1	1
Path	Concrete/stone	9	000	1	1
Total					**31**

Appendix 21. Data base recording fields for miscellaneous objects

Native Mounted Police in Queensland Miscellaneous object

Form produced by Leanne Bateman on 26-Jun-2019

01. Catalogue number [required]

This gets automatically generated for new records. It can be edited afterwards if required.

Any text can be entered.

---

02. Total station object number

A whole number. Decimal points are not allowed.

---

03. Related site

A list of items is presented in a drop down box. A single item can be selected from the list.

Barcoo River, Battle Camp, Bloomsbury, Boralga NMP camp, Boulia NMP camp, Cambridge Downs Homestead, Carl Creek NMP camp, Coen NMP camp, Collaroy, Corella Creek NMP camp 2, Dunrobin NMP camp, Eleutha NMP camp, Eyre's Creek/Cluney NMP camp, Fort Cooper NMP camp, Frome NMP camp, Garden Creek, Glenroy NMP camp, Highbury NMP camp, Hilary Creek, JC Waterhole and hotel, Mackenzie River, Marion Downs Stone Huts, Marlborough, Maytown, Mistake Creek NMP camp, Mosman's Well, Mt Coolon (previously known as Koala) Police Station, Mt McConnell, Murdering Lagoon, Murrays Lagoon, Musgrave NMP camp, Nigger Creek NMP camp, Normanby Homestead (and Police Camp), Oak Park NMP camp, Old Fairlight station, Original Riversleigh Homestead, Peak Downs NMP camp, Puckley Creek NMP camp, Twin Hills telegraph station, Wondai Gumbal NMP camp

04. Related excavation context

The system has too many available options to list out. Provide the answer(s) below, with reference to the options available in the system.

---

05. Object

Text can be entered into the area provided. Tools presented above the area are used to format and layout the text.

---

06. Material

Provide a check next to all suitable answers. More than one answer can be provided.

Bone, Brick, Canvas, Cement, Ceramic, Crystal, Fabric, Hair, Lead, Leather, Metal, Other, Plastic, Shell, Stone, Unidentified, Wood

07. Length (units: mm)

Any numeric value.

---

08. Width (units: mm)

Any numeric value.

---

09. Weight (units: grams)

Any numeric value.

---

10. Thickness (units: mm)

Any numeric value.

---

11. Maker's Marks/Trademarks

Text can be entered into the area provided. Tools presented above the area are used to format and layout the text.

---

12. Date range

Any text can be entered.

---

13. Description

Text can be entered into the area provided. Tools presented above the area are used to format and layout the text.

---

14. Photograph

A file path is expected. An image file (jpg, gif, tif, png) can be selected by clicking the 'Browse' button. The selected file can reside on the local computer, external hard drive, SD card or USB stick prior to uploading.

Figure A20.1 Miscellaneous objects database recording fields 1-14

Appendix 22. Data base recording fields for lithics

Native Mounted Police in Queensland Lithic

Form produced by Leanne Bateman on 26-Jun-2019

Default

01. Catalogue number [required]

This gets automatically generated for new records. It can be edited afterwards if required.

Any text can be entered.

---

02. Related site

A list of items is presented in a drop down box. A single item can be selected from the list.

Barcoo River, Battle Camp, Bloomsbury, Boralga NMP camp, Boulia NMP camp, Cambridge Downs Homestead, Carl Creek NMP camp, Coen NMP camp, Collaroy, Corella Creek NMP camp 2, Dunrobin NMP camp, Eleutha NMP camp, Eyre's Creek/Cluney NMP camp, Fort Cooper NMP camp, Frome NMP camp, Garden Creek, Glenroy NMP camp, Highbury NMP camp, Hilary Creek, JC Waterhole and hotel, Mackenzie River, Marion Downs Stone Huts, Marlborough, Maytown, Mistake Creek NMP camp, Mosman's Well, Mt Coolon (previously known as Koala) Police Station, Mt McConnell, Murdering Lagoon, Murrays Lagoon, Musgrave NMP camp, Nigger Creek NMP camp, Normanby Homestead (and Police Camp), Oak Park NMP camp, Old Fairlight station, Original Riversleigh Homestead, Peak Downs NMP camp, Puckley Creek NMP camp, Twin Hills telegraph station, Wondai Gumbal NMP camp

03. Excavation context

The system has too many available options to list out. Provide the answer(s) below, with reference to the options available in the system.

---

04. Total station object number

A whole number. Decimal points are not allowed.

---

05. Date

A date is recorded by selecting a day from the calendar that is shown after clicking in the box. The forward and back arrows change the month displayed on the calendar.

---

06. Weight (units: g)

Any numeric value.

---

07. Material

Provide a check next to all suitable answers. More than one answer can be provided.

Chalcedony, Chert, Crystal quartz, Fine grained quartzite, Other, Quartz, Quartz grained quartzite, Sandstone, Silcrete, Unidentified, Volcanic,

08. Colour

Provide a check next to all suitable answers. More than one answer can be provided.

Banded, Black, Colourless, Dark Brown, Dark Grey, Flecked, Light Brown, Light Grey, Mid-Brown, Mid-Grey, Mottled, Orange, Other, Pink, Red, White, Yellow

09. Artefact type

Provide a check next to all suitable answers. More than one answer can be provided.

Core, Flake, Flaked Piece, Ground, Hammerstone, Manuport

10. Photograph

A file path is expected. An image file (jpg, gif, tif, png) can be selected by clicking the 'Browse' button. The selected file can reside on the local computer, external hard drive, SD card or USB stick prior to uploading.

Hammerstone

11. Maximum length (units: mm)
Any numeric value.

---

12. Maximum width (units: mm)

Any numeric value.

---

13. Maximum thickness (units: mm)

Any numeric value.

---

14. Battering present

A list of items is presented in a radio button list. A single item can be selected.

N/A No Unknown Yes

15. Location

Any text can be entered.

---

16. Approximate %

A list of items is presented in a drop down box. A single item can be selected from the list.

0%, 10%, 100%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90%

17. Other comments

Text can be entered into the area provided. Tools presented above the area are used to format and layout the text.

Ground

18. Maximum length (units: mm)
Any numeric value.

---

19. Maximum width (units: mm)

Any numeric value.

---

20. Maximum thickness (units: mm)

Any numeric value.

---

21. Type

Provide a check next to all suitable answers. More than one answer can be provided.

Edge ground axe, Millstone, Muller, Pestle/Top-stone, Portable grinding stone,

22. State

A list of items is presented in a drop down box. A single item can be selected from the list.

Broken, Complete

23. Number of surfaces

A list of items is presented in a radio button list. A single item can be selected.

1, 2

24. Number of grooves

A list of items is presented in a drop down box. A single item can be selected from the list.

1, 10, 2, 3, 4, 5, 6, 7, 8, 9

25. Other comments

Text can be entered into the area provided. Tools presented above the area are used to format and layout the text.

Manuport

26. Maximum length (units: mm)
Any numeric value.

---

27. Maximum width (units: mm)

Any numeric value.

28. Maximum thickness (units: mm)

Any numeric value.

---

29. Other comments

Text can be entered into the area provided. Tools presented above the area are used to format and layout the text.

Flaked piece

30. Maximum length (units: mm)
Any numeric value.

---

31. Maximum width (units: mm)

Any numeric value.

---

32. Maximum thickness (units: mm)

Any numeric value.

---

33. Other comments

Text can be entered into the area provided. Tools presented above the area are used to format and layout the text.

Core

34. Maximum length (units: mm)
Any numeric value.

---

35. Maximum width (units: mm)

Any numeric value.

---

36. Maximum thickness (units: mm)

Any numeric value.

---

37. Type of core

Provide a check next to all suitable answers. More than one answer can be provided.

Bidirectional, Bifacial, Multidirectional*, Unidirectional,

38. Multidirectional

A list of items is presented in a drop down box. A single item can be selected from the list.

1, 10, 2, 3, 4, 5, 6, 7, 8, 9

39. Number of complete scars

A list of items is presented in a drop down box. A single item can be selected from the list.

1, 10, 2, 3, 4, 5, 6, 7, 8, 9

40. Total number of scars

A list of items is presented in a drop down box. A single item can be selected from the list.

1, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 2, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 3, 30, 30+, 4, 5, 6, 7, 8, 9

41. Bifacial

A list of items is presented in a radio button list. A single item can be selected.

N/A No Unknown Yes

42. Other comments

Text can be entered into the area provided. Tools presented above the area are used to format and layout the text.

Flake

43. Flake state

A list of items is presented in a drop down box. A single item can be selected from the list.

Broken, Complete

44. Break details

Provide a check next to all suitable answers. More than one answer can be provided.

LBF, LBF-Medial, TBF and LBF, TBF-Distal***, TBF-Medial, TBF-Proximal

45. Maximum length (units: mm)

Any numeric value.

---

46. Maximum width (units: mm)

Any numeric value.

---

47. Maximum thickness (units: mm)

Any numeric value.

---

48. Other comments

Text can be entered into the area provided. Tools presented above the area are used to format and layout the text.

---

49. Retouch

A list of items is presented in a radio button list. A single item can be selected.

N/A, No Unknown Yes

50. Termination type

Provide a check next to all suitable answers. More than one answer can be provided.

Feather, Hinge, Plunging, Step

51. Retouch

A list of items is presented in a radio button list. A single item can be selected.

N/A No Unknown Yes

52. Platform type

Provide a check next to all suitable answers. More than one answer can be provided.

Focalised, Gull Winged, Incomplete, Wide

53. Platform width (units: mm)

Any numeric value.

---

54. Platform thickness (units: mm)

Any numeric value.

---

55. Overhang removal

A list of items is presented in a radio button list. A single item can be selected.

N/A No Unknown Yes

56. Percussion length (units: mm)

Any numeric value.

---

57. Maximum length (units: mm)

Any numeric value.

---

58. Maximum width (units: mm)

Any numeric value.

---

59. Maximum thickness (units: mm)

Any numeric value.

---

60. Termination type

Provide a check next to all suitable answers. More than one answer can be provided.

Feather, Hinge, Plunging, Step

61. Platform type

Provide a check next to all suitable answers. More than one answer can be provided.

Focalised, Gull Winged, Incomplete, Wide

62. Platform surface type

Provide a check next to all suitable answers. More than one answer can be provided.

Cortical, Crushed, Multiple, Single

63. Platform width (units: mm)

Any numeric value.

---

64. Platform thickness (units: mm)

Any numeric value.

---

65. Dorsal cortex %

A list of items is presented in a drop down box. A single item can be selected from the list.

10%, 100%, 15%, 20%, 25%, 30%, 35%, 40%, 45%, 5%, 50%, 55%, 60%, 65%, 70%, 75%, 80%, 85%, 90%, 95%

66. Overhang removal

A list of items is presented in a radio button list. A single item can be selected.

N/A No Unknown Yes

67. Retouch

A list of items is presented in a radio button list. A single item can be selected.

N/A No Unknown Yes

68. Retouch location

Provide a check next to all suitable answers. More than one answer can be provided.

Both lateral margins, Distal margin, Dorsal surface, One lateral margin, Platform, Ventral surface

69. Formal type

Provide a check next to all suitable answers. More than one answer can be provided.

Backed blade, Bifacial flake, Retouched flake, Scraper, Tula adze, Unifacial flake

70. Number of dorsal flake scars

A list of items is presented in a drop down box. A single item can be selected from the list.

1, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 2, 20, 20+, 3, 4, 5, 6, 7, 8, 9

Figure A21.1 Lithics database recording fields 1-70

Appendix 23. Rules for the NMP

The following newspaper excerpt is from the Government Gazette vol. VII, dated 10 March 1866, and outlines the rules and discipline for the NMP authorised by R. R Mackenzie from the Colonial Secretary's Office.

of the Executive Council, has been pleased to make the following appointments :—

HENRY GEORGE SIMPSON, Esquire, Commander Royal Navy, Harbor Master and Marine Surveyor at Somerset, Cape York,

to be Customs Officer for the same Port ;

MR. MATTHEW S. RUNDLE, Harbor Master and Shipwright Surveyor, Rockhampton,

to be Shipping Inspector for the same Port ;

Mr. PETER HARDIE,

to be Boatman Pilot, Rockhampton ;

Mr. JOHN B. CASEY,

to be Acting Pilot at Port Hinchinbrook.

The above appointments to take effect from 1st February, 1866.

By His Excellency's Command,

JOSHUA P. BELL.

Colonial Secretary's Office,
Brisbane, 8th March, 1866.

REFERRING to a Notice, dated from this Office the 22nd of November, 1866, intimating that application had been made by the Trustees of the Land granted for the purposes of a Servants' Home in North Brisbane for permission to Mortgage and Lease the said Land for the purpose of obtaining funds for the erection of the necessary buildings thereon, in conformity with the terms of the Grant: His Excellency the Governor, with the advice of the Executive Council, now directs it to be notified, that as no objection has been lodged with the Colonial Secretary to the granting of the leave sought, he has been pleased, in terms of the Act 28 *Victoria*, No. 22, to authorise the said Trustees to Mortgage and Lease the said Land for the purpose named.

By His Excellency's Command,

R. R. MACKENZIE.

Colonial Secretary's Office,
Brisbane, 2nd March, 1866.

HIS Excellency the Governor, with the advice of the Executive Council, has been pleased to direct the publication of the following Rules for the general government and discipline of the Native Mounted Police Force.

By His Excellency's Command,

R. R. MACKENZIE.

THE following instructions are published for the information and guidance of the officers of the Native Mounted Police Force :—

2. It is impossible to give precise directions for the execution of every duty which the force may be required to perform, or to anticipate every difficulty which its members may have to encounter, as, from the nature of the service, its duties must vary, and consequently the mode of execution must vary with them, and be directed by the circumstances of each particular case. Each member of the force should therefore endeavor to become acquainted with the nature of every duty which he may be called on to perform, and by zeal, energy, discretion, and intelligence, make every effort to supply the unavoidable deficiency in general instructions.

3. The officers will, however, be held strictly responsible for the execution and observance of all orders and regulations; for any deviation from which, and for their own acts and orders in such cases as may not or cannot be provided for by these instructions, they will be held responsible.

4. In the performance of their duty they are distinctly to understand that their efforts should be principally directed to the *prevention* of crime, which will tend far more effectually towards the

security of person and property than the *punishment* of those who have violated the laws; and the very best evidence that can be given of their efficiency will be the *absence of crime* in their districts.

5. All officers are studiously to observe a strict neutrality in political matters.

6. Every officer of the Native Mounted Police Force should bear constantly in mind how essential it is to cultivate a proper regard for the honor and respectability of the force, and should be governed by the principle that the more they can raise those above or below them in public estimation, the more they elevate their own official position, and with it the general character of the force.

7. All commands devolve on the senior officer present. As the responsibility attaching to a superior *may* at any time devolve on the next in rank, it is essential that the members of each grade be acquainted with the duties that circumstances *may* call on them to discharge, in order to guard against injury to the public service.

8. Every subordinate is to receive the lawful commands of his superior with deference and respect, and to execute them to the best of his power; and every superior, in his turn, is to give his orders in the language of moderation and of regard to the feelings of those under his command.

9. The obedience and respect which are here required must be observed throughout the force generally, and not be understood in any partial or confined sense.

10. The conditions of admission into the force are stated here that no reason for complaint may exist upon their being enforced. It is to be understood at the same time that the power is reserved to the Commissioner, subject to the approbation of His Excellency the Governor in Council, to alter or amend any of these conditions, and also to make such new rules as may be found expedient:—

(1.) Every officer must devote his whole time to the service.

(2.) He shall serve and reside wherever he is ordered.

(3.) He shall promptly obey all lawful orders which he may receive from the persons placed in authority over him.

(4.) He shall conform himself to all the regulations which may be made from time to time for the good of the service.

(5.) Three months' notice of his intention to resign his appointment must be given to the Commissioner; and he shall, on no account, absent himself from his station, unless specially permitted by writing under the hand of his immediate commanding officer.

(6.) Any officer who shall be dismissed cannot again be admitted into the Police Force, nor any other branch of the Government service.

(7.) Every officer shall, before leaving the service, deliver up all Government property that may be in his charge; and any such property that may have been lost or damaged by the neglect of the officer in whose charge it was, will be made good by deduction from his pay.

11. The officers are not to allow any person unconnected with the Native Police Force to interfere with or accompany them, or give orders to any of the troopers under their command.

12. They must be very careful of the health of their men; not to allow them to wear their jackets in hot weather; not to allow them to put on their newly-washed clothes before they are dry; nor to camp in low spots conducive to fever and ague; nor to camp upon ground wet from rain, but cause them to strip back to put under them.

13. The arms, clothes, and accoutrements must be inspected as often as possible. No excuse will ever be admitted for dirty arms or accoutrements, as with a very little trouble they are easily kept clean.

14. Whenever an opportunity occurs, such as a day or two's rest, or a short stage, the officers are to practice the troopers in the usual drill and no other.

15. Before leaving the police station, the officer in command will see that such clothing as may not be wanted on patrol is carefully put away.

16. A daily account of all rations received and issued will be kept in a book supplied for the purpose.

17. The object in sending out patrol parties is principally that the hostile blacks, from the frequent visits of the police, may be deterred from murder and felony—this is the meaning of a preventive force.

18. It is however certain that, occasionally, the officers will have to endeavor to apprehend persons who have committed felony. When the officer holds a warrant his duty is very clear if he can identify the individual named therein, or has reasonable grounds to believe he can do so; and if he meets with resistance in the execution of such warrant, he is justified in making use of force against the man he wishes to apprehend, and any person assisting him. When he holds no warrant, if he can prove that a felony has been committed, and that he has reasonable cause to suspect an individual, he is justified in apprehending him, and using force if resisted. With white persons it is not difficult to prove all this, but blacks are so much alike, and the evidence is generally so faulty, that officers must be very cautious. It has been frequently found that the statements made by individuals differed very widely from the affidavits when made out on oath by the same persons. When an officer sees a felony or an assault being committed, as a matter of course, he is obliged to take all the offenders in charge. In every case the same law applies to blacks as to whites, and if the officers go beyond the law they do so at their own risk. The blacks cannot be considered as men armed for illegal purposes, because their weapons are their principal means of obtaining food.

19. The officers must be very particular in always avoiding indiscreet discussions.

20. Upon returning from patrol, officers in charge of parties will report to the officer in command of the district everything concerning any collision that may have taken place, and give him full information, in order that he may collect any necessary evidence.

21. When a trooper is transferred, a return is to be sent with him, signed by the officer who sends him, of the arms, accoutrements, clothing, &c., sent with him; this return is to be countersigned by the officer to whom the trooper is sent, and by him forwarded to the Inspector of the district.

22. Officers in charge of districts and detachments will be careful that under no circumstances are blacks, not being troopers, to be allowed in the police camp; and they will use every exertion to prevent the troopers from having any communication whatever with the aborigines of the district in which they may be stationed, or through which they may be passing; they will also be held responsible that no trooper keeps a gin without permission from head-quarters.

23. Every officer will keep a journal of all incidents happening in the course of public duty, whether during patrol or in camp, and of any circumstances that may have occurred within his district, in which he may have acted in his official capacity. He will also keep a diary of the duty performed on patrol, stating time of arrival at and departure from each station he may visit, to which, when possible, he will obtain the signature of the proprietor or person in charge.

24. He will be particular in collecting and forwarding, at the close of each month or quarter, all accounts against his own, or any outstanding accounts belonging to any other detachment that may have passed through his district; the accounts must be made out on proper vouchers, and officers must be very careful that all the necessary signatures are attached thereto.

25. He will be held responsible for the general duty of his detachment, and the proper fulfilment of the separate duties of the subordinate officers under his command.

26. He will be careful to instruct his acting Sub-Inspectors as to the duties they will be required to perform, which are principally as follows:—

(1.) To take charge of the stores, and serve out rations to the troopers night and morning, and keep a strict account of all stores and rations issued to the detachment, to be laid before the officer in charge at any time he may wish to inspect the same.
(2.) To drill the troopers every day they are in camp, until they are perfect in their exercise, mounted or on foot.
(3.) And perform any camp duties which may be considered necessary by the officer in command.

27. Officers and troopers will at all times wear correct uniform when on parade, patrol, or other duty; and in this respect it is particularly necessary that the officers should be careful in showing a proper example: as thorough cleanliness in person, clothing, and accoutrements must be rendered compulsory on the part of the troopers, every inducement should be held out to them to assume a smart and soldierlike appearance.

28. In no case are any of the native troopers to be allowed to take spirits from any one, except their officer or medical man in case of sickness.

29. No cartridges are to be expended by the troopers without the order of their officers.

30. The whole of the horses are to be mustered regularly every morning by the troopers in turn, and a note to be made in the officer's journal of any horses absent; their backs must be carefully attended to, and should always be washed upon the troopers dismounting, and well rubbed down before saddling; the saddles should be examined frequently by the officer in charge, and the saddle cloths and girths kept clean.

31. It is the duty of the officers, at all times and opportunities, to disperse any large assembly of blacks without unnecessary violence; such meetings frequently lead to depredations and murder, and mistaken kindness or misbehavior of the officers in command only serves to inspire the blacks with sufficient confidence to commit outrages. The officers will, therefore, see the necessity of teaching the aborigines that no outrage or depredation shall be committed with impunity, but, on the contrary, that retributive justice will speedily follow the commission of crime; nevertheless the officers will be careful in receiving reports against the blacks, as it frequently happens that mistakes are made as to the identity of the aggressors. In case of any collision with the aborigines a report is to be forwarded to the Commissioner without delay.

32. Officers in charge of districts and detachments will make themselves, as soon as possible, acquainted with the general features of the country in their respective districts and vicinities, so as to enable them to take every advantage of any information they may receive as to the route or hiding-places of any aborigines whom it may be necessary to apprehend, and to enable them to patrol their districts without keeping on the beaten tracts.

33. They will be careful to see the men's arms and ammunition placed where they can lay their hands on them at night for attack or defence.

34. The greatest care is to be observed in the preservation of the men's arms and ammunition; and as much injury is done to the locks of the carbines by taking them to pieces, it is directed that this shall be done as seldom as possible, and always under the superintendence of an officer.

35. The men will be fully armed on all duties when mounted.

36. The men at out stations, when in quarters, will, invariably, parade on Sundays in full dress.

37. A compliance with this order will be entered in the monthly return of duties.

38. When in quarters, there will be a daily parade of horses; and officers will take advantage of those men who have been drilled to instruct their detachments in riding, as well as in the carbine, pistol, and sword exercises, on foot and on horseback.

39. The Native Mounted Police will at all times afford the magistrates and constables a ready assistance in the execution of their duty; but it is to be distinctly understood that, except in cases of special necessity, they are not to be employed in performing any of the duties of ordinary constables.

40. When escorts or orderlies are furnished by the Native Mounted Police, they will always, when practicable, be relieved at the nearest stations.

41. Whenever men die or become non-effective, the officer in charge of the station will immediately take charge of the spare horses, arms, and appointments, and preserve them in the best order.

42. Officers commanding stations will inspect all return patrols, and immediately report any irregularity they may observe in men or horses arriving at their posts.

43. The men of the Native Mounted Police are forbidden to appear in the streets unless dressed strictly according to order, and at all times they are expected to be smart and clean.

44. When not interfering with duty, each officer is permitted to employ a trooper as groom, but it is to be understood that he is to be always armed, appointed, and ready for any service that may be required. He is not on any account to be dressed in livery, or to be employed in any way unconnected with the officer's duties.

45. Every trooper shall have two horses, suited to his weight, told off to him, for which he will be held responsible in all respects. The trooper is not to be deprived of his horses, except for misconduct; nor are they to be changed, except on urgent necessity, without previous reference to head-quarters.

46. Officers in charge of detachments will be held responsible that the saddles are kept in good repair, and fit the horses so as not to injure their backs.

47. Upon the exertion and example of the officers mainly depends the efficiency of the force; their duties are never ending; their presence is required everywhere, and it is solely by their intelligence, unceasing vigilance, and watchful superintendence of the men, that the protection, which is the main object of the force, can be afforded. This can in no way be more effectually carried out than by the constant personal supervision of their different stations on the part of the Inspectors in command of districts, and more than ordinary care in visiting and patrolling the haunts of the aborigines by the officers in command of detachments.

48. When any trooper has been incapable of duty for a considerable time from sickness, a special report must be made, in order to his being brought to head-quarters for medical treatment, or removed from the force.

49. The particular attention of officers is directed to the different returns required to be furnished to head-quarters. If those returns are not carefully prepared, it is impossible to arrive at a correct knowledge of the state of the force, as well as of the stores, ammunition, equipments, and supplies required.

50. All returns and reports are to be made as full as possible, so as to afford every information.

51. In the monthly return of duties performed, the number of men on duty each day, the place visited, the number of miles travelled, as well as the nature of the duty on which employed, whose order, and any occurrence of an extraordinary nature, are to be entered.

52. The expenses of the corps must be kept within the narrowest limits consistent with efficiency. No expense, except of the most trivial nature, or under circumstances of emergency to justify it, is to be incurred without previous application to and authority from head-quarters; and in making requisitions the probable amount is to be stated, as well as the work required to be performed.

53. It is expected that the fences of the paddocks as well as the barracks, will, in a great measure, be kept in order by the men themselves.

54. On the first of each month every officer in command of a detachment will send to head-quarters a copy of the *diary kept by himself*, according to form, stating where he has been each day during the preceding month, the duties performed, occurrences, and any steps taken in consequence, detailing what stations he has visited during the month, the state of each, the condition of the horses, and if any of them are lame or other-

wise inefficient, the state of the arms, ammunition, appointments, clothing, and necessaries, the general conduct and discipline of the troopers, and if they appear to have been attentive to their duties and careful of their horses.

55. Officers in charge of detachments are not to hand over their detachments without written authority.

56. Officers, *except on duty, will not quit their* districts without leave of absence, obtained in writing.

57. Applications for leave of absence are to be made in time to allow an answer to be returned before the leave requested shall commence.

58. The Government horses are to be kept strictly for the use of troopers.

59. When horses are taken to the forge, an officer is always to accompany them.

60. All saddlery repairs must be inspected, in order to ascertain that the charge is fair and reasonable.

61. The following returns will be sent to the officers in command of divisions, immediately after the first of the month, or quarterly :—

(1.) Return of horses, half-yearly.
(2.) Return of rations issued, monthly.
(3.) Officer's diary, monthly.
(4.) Return of arms, stores, &c., quarterly.

62. And whereas it is essential to the good government and discipline of the Native Police Force to prevent and punish certain offences, and that the following rules should be in force for the purposes aforesaid :—

(1.) Any person who shall by any means wilfully induce, or attempt to induce any trooper of the Native Police Force to desert from the service, or who shall knowingly harbor, aid, or assist any trooper of the Native Police Force who shall desert, or attempt to desert from the service, or who shall by any means wilfully interfere with, or obstruct the discipline of the Native Police Force, shall be liable to pay a penalty not exceeding £20, and in default of payment thereof to be imprisoned with or without hard labor for any period not exceeding three calendar months, or at the discretion of the justices before whom any such complaint shall be heard, to be imprisoned without fine for any such period as aforesaid.

(2.) It shall be lawful for any two or more Justices of the Peace to hear and determine in a summary way any complaint under the preceding section.

68. The following are the Dress Regulations :—

DRESS REGULATIONS.

When officers attend, as spectators, any review or public ceremony at which His Excellency the Governor is present, they are to appear in uniform.

Officers are not *required* to procure the *full dress*, but they will not be permitted to ornament the undress in any way.

Officers in mourning, when dressed in uniform, are to wear a piece of black crape round the left arm above the elbow.

DISTINCTIONS OF RANK.

Commissioner.—Sleeve ornament in treble cord.
Inspector.—Sleeve ornament in double cord.
Sub-Inspector.—Sleeve ornament in single cord.

FULL DRESS.

Jacket.—Dark blue cloth, Garibaldi pattern; standing collar, rounded in front, and edged all round with round gold cord; two rows of round gold cord down the front, one-quarter inch apart; Austrian knot of round gold cord on sleeve; round gold cord shoulder-straps.
Trousers.—Dark blue cloth, with two stripes of gold lace, oak leaf pattern, half an inch wide and quarter an inch apart, down outer seam.
Boots.—Wellington.
Spurs.—Steel, crane neck.
Sword.—Light cavalry, scabbard steel.
Sword-knot.—Gold cord, with acorn end.
Sword-belt.—Cavalry pattern, pale Russia leather, snake clasp.
Pouch-belt.—Pale Russia leather, two and a-half inches wide.
Pouch-box.—Pale Russia leather, Q.P. in gilt on flap.
Sabretache and three Slings.—Pale Russia leather, Q.P. in gilt.
Gloves.—White leather.
Head Dress.—Blue cloth forage cap, with black oak leaf band, Q.P. in gilt in front, straight peak.

UNDRESS.

Jacket.—Same as full dress, except that red cord is substituted for gold.
Trousers.—Dark blue cloth, with two stripes of red cloth, half an inch wide, quarter an inch apart, on outer seam.
Or
Pantaloons.—Drab cord.
Boots.—With trousers, Wellington boots, with box spurs, steel crane neck; with pantaloons, Napoleon boots and hunting spurs.
Sword-knot.—Black leather.
Sabretache.—None.
Head-dress.—Same as full dress.
Gloves.—White leather.

HORSE FURNITURE.

Saddle—Hunting.
Holster wallets.—Brown leather.
Bridle.—Brown leather, cavalry pattern.
Log-chain.—Plaited green hide, steel swivels and rings.
Breastplate and Crupper.—Brown leather with leather hearts.
Saddle cloth.—Blue cloth.

Patterns of the above are deposited at the office of the Commissioner of Police.

Acting Sub-Inspectors are to wear the uniform provided by Government.

Colonial Secretary's Office,
Brisbane, 9th March, 1866.

NOTICE is hereby given, that Tenders will be received at this Office, until Twelve o'clock, on SATURDAY, the 31st day of March next, for furnishing for the Colonial Service in the several districts the Supplies undermentioned, in such quantities as may be required for the period commencing 1st June and ending 31st December, 1866, upon the conditions hereafter specified.

Printed forms of Tender may be obtained at this Office, and from the Clerks of Petty Sessions in the several districts; and at the foot of every Tender there must be a memorandum signed by the party tendering and two responsible persons as sureties, agreeing to be responsible for the due performance of the Contract in the event of the Tender being accepted, and undertaking in that event that they will severally execute and deliver within one month from the usual notification of acceptance, a Bond to Her Majesty for securing such performance, otherwise such Tender will not be taken into consideration. The Tenders to contain the names of the Tenderers and their Sureties, and place of residence at length. Each Tender must be in the proper printed form, and marked "*Tender for Provisions, &c.*"

Further particulars and information may be obtained on application at this Office, and to the several establishments for which the supplies are required.

Separate Tenders will be required for the articles enumerated under Nos. 1, 2, 3, and 4, respectively.

It is to be distinctly understood that the Government will not necessarily accept the lowest or any Tender.

The towns and places for which Contracts will be required are as follows:—

"Brisbane"	"Dalby"
"Ipswich"	"Maryborough"
"Drayton"	"Rockhampton"
"Warwick"	"Bowen" *
"Woogaroo."	

* From 1st September to 31st December 1866 only.

Figure A2.1 Rules for the NMP

Appendix 24. Troopers recorded as shot dead

The following table A23.1 is an account of Aboriginal troopers shot dead, mostly by officers (Richards 2008:171)

Table A23. 1 Troopers recorded as being shot dead by police

Name	Date and place	Circumstances
Gulliver	1860, Dee River	Shot dead by Lieutenant Walter Powell while escaping
Alma	1860, Fitzroy River	Shot dead by Constable Canning while escaping
Jacky	1863, Tieryboo	Shot dead by Lieutenant Frederick Carr
Wallace	1863, Yatton	Shot dead by Lieutenant Marmaduke Richardson
Unknown	1871, Somerset	Shot dead by Inspector Frank Jardine
Echo	1875, Mt Cornish	Shot dead by Sub-Inspector John Carroll
Jacky	1788, Clarke River	Shot dead by Sub-Inspector Reginald MacNeill
Ned	1877, Unknown	Shot dead by unknown
Brandy	1880, Norman River	Shot dead by Constable Hedges by mistake
Sam	1880, Herbert River	Shot dead by unknown
Peter	1888, Barron River	Shot dead by Cadet Afflick