Layered Landscapes: An historical archaeology of Maria Island's industrial periods

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A thesis submitted in fulfilment of the requirements
for the degree of Master of Arts (Research)

Faculty of Arts and Social Sciences
The University of Sydney

2020

This is to certify that to the best of my knowledge the content of this thesis is my own work. This thesis has not been submitted for any degree or other purposes.

I certify that the intellectual content of this thesis is the product of my own work and that all the assistance received in preparing this thesis and sources have been acknowledged.

Pamela Chauvel
27 November 2020

Abstract

Company towns are part of the narrative of entrepreneurial industrialism in Australia. Many sprang up quickly to take advantage of a particular resource but were soon abandoned. This research project is the study of one such town, Darlington on Maria Island. The former convict settlement was transformed in the 1880s by the entrepreneur Diego Bernacchi and the Maria Island Company, and then again in the 1920s by National Portland Cement Limited (NPCL) company. Landscapes are palimpsests, constantly being made and remade as each layer reshapes, and is shaped by, the one before it. At Darlington, the convict landscape and its hierarchical structure of surveillance and control were overlaid with an industrial landscape with a new form of order and control. The company provided accommodation and facilities for its workers, motivated by a desire for financial success and underpinned by paternalism. During the second period of economic development, the style of management became more corporate and detached from its workforce.

My research employs a multi-scalar approach, beginning with an examination of the landscape of Darlington to investigate the role of the settlement's spatial layout in transmitting ideologies of paternalism, social status and belonging within a company town in the late nineteenth and early twentieth centuries. The created landscape encouraged the development of a community and interactions between people outside of work while maintaining hierarchies and distinctions between different groups. I then turn to the scale of the household, specifically the yards of a row of workers' cottages known as the Twelve Apostles. While the houses were built by the company to a standardized design, material remains of paths, surfaces and other features reveal differences between the yards. Small acts of resistance and connections are evident in the additions and modifications that residents made to suit themselves. While the documentary evidence tends to present a version of the past from the point of view of the industrialist and their supporters, archaeological evidence provides a way to interrogate a broader and more inclusive historical narrative.

Acknowledgements

Maria Island is a special place: From wombats disturbing our survey baselines to Tasmanian Devils disturbing our sleep, from possums fighting over dinner scraps to Cape Baron geese asserting themselves, fieldwork on Maria Island was memorable for its wildlife, its landscape and its archaeology. Post-contact buildings, ruins, and pathways evoke the layers of work and lives of people of the past. I was fortunate to have the assistance of many wonderful people on this project.

I would first like to thank Dr James Flexner for his enthusiasm, encouragement and insightful feedback. Also, for his support in the field, his patient teaching and wrangling of the total station, as well as his culinary contribution of camp baked bean enchiladas. I'm extremely grateful to the field teams, for surviving on a diet of tinned legumes and red wine, for putting in long hours with good humour, and for their dedicated and meticulous fieldwork. Thank you, Janelle Bray, Kathleen Carmichael, Mikhaila Chaplin, Alison Fenwick, Rebekah Hawkins, and Simon Wyatt–Spratt. Also thank you for encouragement and advice from the Triabunna dig teams, especially Dr Catherine Frieman and Dr Ash Lenton. For help with managing the data, I'd like to thank Guy Hazel for GIS and surveying advice and Maddie Robinson for creating the photogrammetry models.

Thank you to Parks and Wildlife Tasmania, particularly Pete Lingard and Peter Rigozzi; to Maureen Ferris at the Glamorgan Spring Bay Historic Society for locating photographs, oral histories and sources not available elsewhere; and to the staff in the Hobart Library History Room for research assistance and patiently bringing out box after box from the archives.

I am grateful for funding support for this research from the Carlyle Greenwell Research Grant and Tom Austen Brown Research Fund.

Finally, thank you to John, Harry and Katie for their support and for seeing this project through with me.

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1. Introduction

In 1884, Italian entrepreneur Diego Bernacchi acquired the lease of Maria Island off the east coast of Tasmania for the purpose of establishing wine and silk industries. Two years later, in the spring of 1886, dignitaries and members of the press were invited by Bernacchi to inspect "the improvements, the additions and the innovations that he had effected" (*Tasmanian News,* 18 October 1886:2). As the SS Warrentina drew into Darlington Bay, an extravagant display of rockets, squibs, crackers and coloured lights greeted the visitors and a path of coloured Venetian lanterns led them up the hill to Bernacchi's residence for an al fresco dinner on the verandah. The next day, following a tour of the vineyards and settlement, an employee gave a speech,

> tendering our sincere thanks to Signor and Signora Bernacchi for their thoughtful care of those that are dependent upon them by their unceasing efforts to promote harmony and increase our pleasure and comforts, the relations between us being more of a kind father and his family than the usual one of master and servants, and we trust that they may long be spared to conduct the supervision of affairs here and look after our welfare.

The speech ended with a ditty celebrating "'King Diego Bernacchi' … his wines and charming lady and his paradisal [*sic*] island home" (*Mercury,* 18 October 1886:3). The story illustrates the themes that will be explored in this thesis: industrial paternalism, the link between work and home life in a company town, and the role of community during Maria Island's industrial periods.

The site

Maria Island lies off the east coast of Tasmania. The island is approximately 20 km from north to south, divided by a narrow isthmus. North of the isthmus the landscape is dominated by a steep ridgeline that reaches its highest point on Mount Maria at 709 m, and to the west of the range in the north-west corner of the island, lies the settlement of Darlington (Figure 1).

Figure 1: Location map.

The identity of a place is bound up with the dominant history told about it (Massey, 1995). Until the late nineteenth century, the main narrative about Maria Island was the story of the rebellious Irish aristocrat, Smith O'Brien, and the harsh convict system. To a large extent this is still the case. Darlington is inscribed on the World Heritage List (2010) as part of the Australian Convict Sites World Heritage Property for its significance as the most representative and intact example of a convict Probation Station in Australia. Consequently, previous studies have tended to focus primarily on the convict periods.

Yet overlying Darlington's convict history are two periods of industrial development in the late nineteenth and early twentieth centuries when it became one of the first landscaped industrial villages in Australia (Figure 2). Remnants such as four large

cement silos stand as testimony to the industrial era's narrative of possibility and progress, and buildings such as the Coffee Palace serve as reminders of Bernacchi's vision for the island. However, many of the post–convict buildings are gone. The removal of the Grand Hotel, the workers' cottages, the school, the tramway and other structures is an erasure that affects the stories that are told, the aspects of the island's past which are most visible, and what is seen as important.

Figure 2: Darlington settlement.

Research questions

This research project takes a multi-scalar approach to landscape archaeology (see McCoy and Codlin, 2016; Mate, 2013). It investigates the settlement of Darlington during its industrial periods (1884–1886, 1920–1930) by asking the following research questions:

a) What was the role of the settlement's spatial layout in transmitting ideologies about paternalism, social status and belonging?

b) How are workers' responses reflected in the material remains of their houses?

I examine the settlement's patterns, changes and continuities, and the ideologies behind them. My research considers the ways in which the earlier convict eras shaped the landscape and influenced the later settlement. Specifically, I examine systems of

capitalism, power relationships, and paternalism. I then turn to the smaller scale of the household in order to focus on the lives of the workers within the settlement as domestic life is not separate from other aspects of industrial life but simply another aspect of it (Wood, 2004:210) is particularly in a company town such as Darlington.

The company town

Company towns are part of the narrative of nineteenth century entrepreneurial industrialism in Australia but have not been the subject of much previous archaeological research. In Australia, archaeological studies of industrial townships have tended to focus on mining settlements (Gibbs, 1997; 2010; Lawrence, 1995; 2000; Mate, 2013; 2014a; 2014b; Prangnell and Quirk, 2009). Darlington shares some similarities with mining towns in that it was established for the specific purpose of exploiting natural resources, but it was primarily a company town, created by the entrepreneur, Diego Bernacchi and the Maria Island Company, within a paternalistic framework.

Company towns emerged in the nineteenth and early twentieth centuries as products of industrial capitalism, usually characterised by a style of management "in which social relations between employer and employee [were] constructed upon the notion of patriarchal authority and/or mutual obligation" (Metheny, 2007:5). The "extension of the company's control beyond the limits of production and the consequences of that enlarged power for labor-capital relations … define the specific nature of company towns" (Borges and Torres, 2012:10). The company owned and had control over both work and residential spaces; and in return for job security and housing, workers were expected to abide by the company's rules. However, within this framework, workers had agency in how they lived their lives, and their choices and responses to the system can be seen in the material remains of their houses.

The landscape of company towns

In line with Metheny's (2012) definition of landscape archaeology, my research is concerned with both the conscious and unconscious shaping of the land. By examining how space is ordered and how the symbolic content of landscape shapes human

behaviour, the research builds on the archaeological investigation and interpretation of other company towns, primarily in the United States and United Kingdom. Seminal work by Beaudry and Mrozowski at the Boott Cotton Mills in Lowell, Massachusetts, (Beaudry, 1986; 1989; Beaudry and Mrozowski, 1988) demonstrate how ideologies of industrial capitalism and corporate paternalism regulated the lives of workers and their homes and are reflected in the built environment. This thesis continues and contributes to existing research of other working-class archaeologies. It does not set out to present a dramatic confrontation between labour and capital (McGuire, 2006) but focuses on the details of working class lives and experiences within the setting and constraints of a company town.

Previous archaeological studies and reports on Maria Island

Previous archaeological reports and surveys of Maria Island contextualised the site and provided a valuable starting point for my research. A number of heritage studies of Maria Island have been undertaken for Parks and Wildlife Tasmania for the purpose of heritage management (ERM, 2007; 2008; Forward, 1984; Gilfedder and Associates, 1997; Godden and Mackay, 1992). These studies have largely focused on convict era history, on individual buildings rather than the site as a whole, and on standing structures rather than archaeological remains. Where archaeological test excavation has been undertaken, it has been in conjunction with building maintenance and consequently, small in scale and limited in scope (Kithbrook 1998, 1999 described in ERM, 2008). Notably and most recently, a drain, possibly dating to the Bernacchi era, was discovered after the timber floorboards were lifted during conservation works on the Assistant Superintendent's Quarters (*World Heritage Australian Convict Sites* Facebook 30 April 2020).

In 1984, Forward Consultants assessed the significance of Darlington in order to suggest policies for conservation. The report noted the irony that the most recent development on Maria Island, for the National Portland Cement Limited (NPCL) Company in the 1920s, has the fewest remaining structures (Forward, 1984:104). In assessing the structures from this era, it rated the cement works as important to Australian industrial heritage but the domestic architecture as having low significance. This bias towards industrial machinery and processes is also present in McFie's (1991)

history of the first cement works (1888–1892). McFie's report reflects how historical archaeology, at the time, tended to value industrial relics, technology and manufacturing processes, over social aspects of work and everyday life (see Mate, 2014a). The distinction creates an artificial separation between work and domestic life rather than viewing the whole as a cultural landscape.

The physical setting of Darlington is addressed in Gilfedder and Associates (1997) and Godden Mackay's (1992) reports. Gilfedder and Associates assessed heritage plantings from the convict period to the present and found little remaining evidence of the 1880s vineyards or domestic gardens. However, both reports identified the important legacy of avenues and other tree plantings. Specifically, Godden Mackay attributed the picturesque setting of Darlington to the first convict era and noted the role of vistas in conferring status within the hierarchy of the settlement.

The most recent archaeological assessment was conducted by Environmental Resources Management (ERM). The report links Maria Island's industrial history to its convict beginnings and observes that the later industrial development of the island is integral to understanding the heritage values of Darlington and its significance. Darlington's industrial period demonstrates "how late nineteenth century entrepreneurs set up landscaped 'company' towns complete with residential, educational and external tourism facilities, in the manner of the model British industrial town precedents" (ERM, 2008:58). The aim of my thesis is to investigate and develop this claim.

Methods and approach

My thesis draws on the ideas of Branton (2009) in combining symbolic and material interpretations as a framework for understanding how people shaped their environments and how their environments shaped them. It combines documentary evidence, archaeological survey and spatial analysis to explore how past landscapes and contemporary ideas about improvement and paternalism shaped the development of Darlington township, and examine aspects of industrial paternalism from the perspective of both industrialist and workers.

Historical sources, particularly newspaper articles, photographs and maps, provided much of the background information regarding the landscape of Darlington prior to 1930, when the cement works closed, as well as insights into perspectives and attitudes at the time. These historical sources built a picture of the public figure of Bernacchi, his entrepreneurial ambitions and paternalistic vision, but the voices of his employees are rarely heard in the newspaper reports and official documents. Consequently, one of the objectives of this research project was to use mapping and spatial analysis to identify the physical traces of people's lives in their household yards and find a counterpoint to the scale of the company town and industrial paternalism. While excavation was not possible in the World Heritage area, there were other practical and theoretical reasons behind the choice of survey and mapping to answer the research questions. Survey is non-destructive and therefore does not involve the ethical dilemma of destroying a site in order to understand it, or the challenge of what to do with the site afterwards (Keay, 2013:336).

Figure 3: Aerial photograph of Darlington highlighting key historical sites.

Archaeological investigation of the site began at the scale of settlement. Historic aerial photographs and images from Google Earth provided an overview of the settlement and of the relationships between buildings that could be investigated during fieldwork (Figure 3). Then, over ten days during January 2017, the initial archaeological survey strategy was to understand the topography and layout of the settlement, the form and location of domestic and communal buildings, the pathways and vistas within and

between places, and the practical and cultural determinants of the townscape. The survey distinguished the layers of modification and change in the landscape during both industrial eras and identified areas for more detailed investigation the following year.

The focus of the survey then turned to the hillside behind the settlement, to the ruins of the Twelve Apostles workers' cottages (Figure 4). The cottages were mapped with sketch plans and total station in order to identify patterns of habitation and use. The initial survey revealed substantial variation between the superficially uniform rear yards of each company-built house (Figure 5). This led to us undertaking a more focused survey of the rear yards in 2018. Total station coordinates recorded topographic data and enabled individual household features to be accurately projected into ArcGIS and drawn up as plans in Adobe Illustrator. The plans afforded a means of visualising the data that, together with photogrammetry, provided an overview of the site and enabled spatial analysis of the differences and individual choices made by the residents, as well as the communal decisions and connections between the houses (see McCoy and Ladefoged, 2009:265).

Figure 4: The surface remains of the Twelve Apostles. View east. Remains of House 8 chimney base in the foreground.

Figure 5: ***12 Apostles, Maria Island,*** **c.1892 (Tasmanian Archives NS1013/1/1440).**

Thesis outline

This thesis begins by positioning my study within the archaeological and theoretical approaches to company towns and industrial paternalism. It presents details of how these concerns have been theorised at two different scales, that of landscape and household. I look at comparative sites and the ways in which social aspects of landscape have been studied within the Australian context.

Chapter Three presents the historical background for Darlington settlement on Maria Island and the changes it has undergone since European settlement. The historical background was synthesised from documentary sources including newspapers, maps, photographs and government documents, as well as more personal perspectives such as oral histories, letters to newspaper editors and diaries.

Chapters Four and Five present the findings of two seasons of fieldwork. *Chapter Four* focuses on the archaeology of landscape. It presents an overview of the layers of meaning embedded in Darlington's historical landscape, and the ideologies and

influences on the development of the settlement during its industrial eras. I argue that the underlying attitudes of paternalism and improvement have material expression in the landscaping, architecture, pathways and vistas. The second half of the chapter takes a thematic approach to investigate aspects of community life and work at Darlington during its industrial periods by looking at school, medical and other facilities, sport and socialising.

The row of workers' cottages built by the Maria Island Company (1888), known as the "Twelve Apostles," is the focus of *Chapter Five*. While photographs from the time show a row of twelve identical houses (Figure 5), the chapter discusses how traces of surfaces, paths and steps, identified during survey, reveal differences between them. These details provide insights into the adaptations people made and allow a glimpse into their daily routines, rituals and resistance.

The final chapter considers the implications of these research findings and demonstrates how the case study of Darlington can add to our understanding of company towns. It concludes by outlining opportunities for further research.

2. Landscape, Capitalism and Paternalism: a multi-scalar approach

Company towns in the nineteenth century were built on a philosophy of benevolent paternalism, predicated on assumptions about the "working class" and used as a way to increase control and profit. Work and everyday life in these company towns were inextricably linked: The company that employed workers also provided their housing and set the rules. Particularly in remote locations, industry and work structured people's lives and shaped their identity. However, residents within these communities often responded in ways that were not officially expected or sanctioned by the company.

This chapter investigates how responses to industrial paternalism have been theorised at two scales, that of landscape and household. The chapter begins with a brief overview of approaches to landscape archaeology. It looks at the ways in which landscapes reinforce corporate hierarchies and power relations specifically in relation to industrial paternalism. I argue that while industrial landscapes are often the constructed ideal of the industrialist, evidence of how workers made changes to suit themselves can be found in the household remains. The second half of the chapter discusses how the concept of household has been theorised. By examining workers' lives within systems of industrial paternalism a "top-down" approach is avoided, whereby workers are seen as merely part of the system, instead revealing how workers "negotiate the rules, resources, constraints, and opportunities" (Silliman, 2006:153; Fleming, 2016).

Layered landscapes

In popular culture, in art or literature, "landscape" is understood as describing a view or vista. In archaeological thought, this more abstract understanding is combined with the idea that landscape is also acted on and lived within. Human actions alter landscape, leaving a "layered and inscribed record of human activity in temporal and spatial terms" (Strang, 2008:52) that can reveal information about past cultural ideas and practices. On Maria Island, the convict landscape structured the initial layout of Darlington. Inevitably, buildings were added during subsequent development, altered and removed, yet the shape of the settlement and its power structure remained, overlaid with ideals of industrial paternalism, improvement and profit.

Landscape in historical archaeology has been defined as "the inhabited or perceived environments of human communities in the past and present incorporating both natural and artificial elements" (Lynch 1972 in Holtorf and Williams, 2006:235). This definition highlights important dualities in the way landscape is understood and studied. Landscape is a physical place that we inhabit or pass through, but it is also how we see and understand that landscape. A landscape archaeology approach investigates not only the natural and built features of a place, but also how people perceive and interact with the landscape both now and in the past, including the scholarly traditions that have been imposed on it (Johnson, 2007:4).

The shift from understanding landscape as merely a backdrop to human action towards understanding landscape as an object of investigation in its own right began in the 1970s (David and Thomas, 2008). Critical archaeologists used ideology as a way to conceptualise the ways in which elites created landscapes by employing symbolic systems to legitimise and negotiate power relations (De Cunzo and Ernstein, 2006:256). Paynter (1982) argued that settlement patterns in nineteenth century Massachusetts reinforced and reflected social stratification and inequality, while Leone (1984) looked at how the social order was reflected and reinforced in William Paca's garden in Annapolis. These influential studies demonstrated that landscapes, while often perceived by inhabitants as being simply a reflection of the natural order, play an important role in reinforcing social structures. However, they were also criticised for assuming that subaltern groups were "duped" (De Cunzo and Ernstein, 2006:255). More nuanced understandings view them as active participants and focus on the diversity of people's experiences rather than taking a 'top-down' approach. For example, Beaudry and Mrozowski (1988) investigated the personal landscapes of workers' lives within the structure of the company town, in particular, their appropriation of spaces that were out of sight, and in defiance of the company rules. Similarly, Yentsch (1994) considered the diverse experiences of those who are often overlooked, women, slaves and working people. The elite may have created landscapes that visually conveyed their authority but everyone within that landscape acted and interacted within it. Landscape is situated and contested and is often seen very differently by the inhabitants (Cowie, 2011; Herod, 2011; Metheny, 2007) as shown by Karskens (2003) who challenged the idea that the Rocks area in Sydney was merely a working-class slum by presenting evidence of aspiration and hygienic practices in the

material culture left behind. In summary, human behaviour is both material and symbolic, shaped by social structures and bounded by the individual's viewpoint or perspective (Lewis, 2016:24-5).

Conceptualising landscape as having both material and symbolic expression (Bender, 1993; Johnson, 2007; Tilley, 2008) is often framed in terms of the difference between place and space whereby meaning-laden landscape can be seen as "place", somewhere with social and cultural value, as distinguished from "space," the physical setting within which everything occurs (Preucel and Meskell, 2007:215). This stark distinction is challenged by Ingold (1993; 2016) who argues against the tendency to take either a naturalistic (landscape as neutral backdrop) or culturalistic (landscape as symbolic space) approach. Instead, he urges archaeologists to take a "dwelling perspective" whereby landscapes can be understood as encompassing the layers and rhythms of past lives in a continuum into the present. He warns against severing the present from a completed past and reminds us that the practice of archaeology is itself a form of dwelling. Similarly, Whitridge (2004) observes that while binaries such as place and space, global and local, or frameworks such as surveillance and domination, have been useful in opening up new ideas in archaeology (such as phenomenology, or social and reflexive approaches rather than economies and ecologies), they are simplistic and artificial distinctions. Preucel and Meskell (2007:215) agree. They argue that archaeology needs to go beyond defining the distinction between space and place to interpreting the ever-changing meanings within a given social context. In other words, landscape is a continuum of place/space (Mate, 2014b), interconnected and subject to the perceptions of the individual, both by people living in that place in the past and by archaeologists studying it in the present.

Therefore, there can be no "objective" experience of landscape (Tilley, 2010:27-8). Each person will experience a landscape differently depending on their memories and what they bring to it (culture, knowledge, identity). It is up to the researcher to be self-reflexive (Johnson, 2012:276) and avoid assumptions that human bodily experience is universal or that the modern researcher, in walking across the landscape, will understand past experiences.

Landscape in Australian historical archaeology

In Australia, landscape archaeology approaches to nineteenth and early twentieth century industrial sites have largely focused on mining towns (Silliman, 2006:153). These Australian studies (Gibbs, 1997; 2010; Lawrence, 2000; Fleming, 2011; 2016; Edgar, 2014; Mate, 2014b) provide important theoretical and contextual background to understanding short lived remote settlements that were created to exploit specific resources and were lived in by residents who came specifically to work that resource. The mobility and transient character of these mining communities created very different settings to the social and economic continuity of more permanent rural communities (see Casella, 2012). While archaeological work on Australian mine sites has generally focused on excavation and artefact analysis (Fleming, 2016; 2011; Lawrence, 2000), others (Gibbs, 1997; Mate, 2014b; Davies, 2006), emphasise the importance of context and use a landscape approach.

At the Gwalla mine site in Northampton, Western Australia, Gibbs combined archaeological survey, documentary evidence and oral histories to examine the motives and influences behind the idealised industrial settlement created by Joseph Horrocks. He views this planned landscape as reflecting the ideologies of industrial capitalism and corporate paternalism held by its charismatic creator (Gibbs, 1997:55). However, to examine the motives of a single individual, regardless of how influential they were, is only part of the picture. Within the constructed industrial landscape, the workers had agency. Modifications, however small, provide material evidence of their choices and responses.

Like Gibbs, Mate (2014b) found that settlement layout is not only determined by practical considerations, such as topography, water availability, transportation routes and worksite location, it is also underpinned by cultural traditions and assumptions. In this case, the cultural values of nineteenth century rural communities. Mate began by investigating the "compartmentalised components": spaces, structures, boundaries and artefact scatters. These smaller components provided insights into social meanings within the landscape (Mate, 2014b). She found a recursive relationship between social and industrial landscapes in which the context (gold mining) created meaning and identity for the residents of Mt Shamrock in Queensland. Mate (2014a) argues for using

socially based frameworks to investigate industrial landscapes by examining areas of social activity and interaction (school, church, sports oval) that contribute to constructing the social identity of a community.

However, assessing people's sense of community can be complex, as demonstrated in Davies study (2006) of Henry's Mill, an early twentieth-century timber town in Victoria, Australia. Davies found that workers were often divided on the grounds of politics, religion and employment status but united in their sense of isolation in a challenging location. The industry, timber milling, was the only reason for the town's existence. It influenced every aspect of daily life and gave the town its identity: From the noises of the mill and the steam engines driving the saws to the routine imposed by the mill whistle signalling the start of the day, lunch break and knock off time; from the appearance of the surrounding landscape modified by felled trees, to the sight of bullock teams hauling logs. He noted that, typical of Australian mill camps at the time, family housing was separated from the huts of single men which reinforced social distinctions (Davies, 2006:69). Workers' housing, which was owned by the company, was cheaply constructed with local timber, and burlap walls. Regular turnover of employees meant there was little incentive to improve the houses; although, there was evidence that some people had invested in their homes by planting trees and cultivating gardens. While local sports (football, cricket) teams and school activities provided a focus for a sense of community, on the whole, the sense of community was destabilised by the transient nature of the working population.

By contrast, the town of Armidale, NSW had a stable population by the late nineteenth century. Burke (1999) explored the ideologies behind the spatial layout and the physical structures within the town. Her study focused on the style and scale of individual buildings, their settings, external elements such as the façade and 'pre-entry' (fences, gates, gardens and landscaping), and design choices such as symmetry and asymmetry. Burke demonstrates how individuals display their status and social identity through the types of materials and design choices for their houses. The location of a house in the landscape, its views and vistas, and whether it is overlooking or overlooked, shape the experience of the inhabitants and the response of others. Burke shows how within capitalism, membership in a group is created within the tensions of an unequal society. Architectural style is linked to ideology as part of the process by which people construct

their social identity in relation to other groups. Burke's study focuses on the ideology of the people who built the houses. My research is interested in company towns, where the town's layout and buildings reflect both the ideology of paternalism and the social identities of the occupants.

Capitalism and company towns

Company towns in Europe and North America emerged during the industrial revolution to enable a stable workforce for manufacture and mineral extraction in areas that were often remote (Borges and Torres, 2012:2). The character of these towns varied according to the economic activity, the source of capital (public or private investors), the origin of the labour force (local or immigrant), the topography and setting, but what they had in common was that the company was both employer and landlord. The establishment of company towns was motivated by economic, social and ideological imperatives, specific to each time and place, but also part of the broader patterns of global capitalism.

Historical archaeology is often claimed to be the archaeology of capitalism (Leone, 1995; Johnson, 1996; Fracchia and Brighton, 2015; Leone and Knauf, 2015). Capitalism became an important focus within historical archaeology from the 1980s, largely influenced by Marxist political economic theory (Orser, 2010:120). It has been used as a framework to understand what was happening at a local level in the creation of industrial societies, the formation of class identity, the nature of modernity, and the economics and development of modern consumerism (Wood, 2004; Metheny, 2007; Tarlow, 2007; Casella, 2012). Capitalism shapes the landscape, the buildings and the artefacts that remain because capitalism has material expression and influences all material practice and social relations (Johnson, 1996; Tarlow, 2007:8). Therefore, any study of a site where people lived and worked, produced and consumed in the modern world is concerned with capitalism.

Capitalism has been defined as "foremost an economic system in which those who provide the capital [money, tools, machinery, fields, etc.] control the production of goods" (Orser, 1996). Yet it is not solely an economic system, it is also a social one (Wurst and Mrozowski, 2016:82). Three key aspects of capitalism demonstrate the

social and economic exchange: the reliance on wage labour; the circulation and consumption of goods; and the distinction between those who own the means of production and those who do not (Wolf 1997, cited in Lewis, 2016:26). The imbalance of power between the industrialist or company in charge and the people who worked for them is particularly visible in a company town.

Leone and Knauf (2015) add a fourth characteristic of capitalism, the continuous expansion of production in order to increase profit, which results in technical changes and alters the structure of labour and consumption. Therefore, capitalism is not a fixed state but is dynamic and changing. Lewis (2016:27) argues there is no "capitalist society" but rather there are societies in which "the capitalist mode of production predominates". The implication for archaeology is that there are many different manifestations of capitalism and they change over time. Therefore, each site needs to be assessed within its context. Archaeology can "explore the borders, margins, orders and disorders created and perpetuated by capitalist economies and resistance to them" (Leone and Knauf, 2015:4).

One problem, as Tarlow (2007) points out, is that archaeologies of capitalism tend to ask the same questions about relationships of power and their material expression. She advocates for a broader view that also encompasses belief, culture, aspiration and ways of understanding the world not only by those in power but also the workers. Within a system of corporate paternalism, workers created subcultures and a "social order derived from labor, routine, isolation and company imposed rules and policies" (Garner, 1992:4). The problem with focusing on power and inequality within a framework of ongoing class struggle is that workers are often seen as victims of the economic process whose only recourse is resistance. As Orser (2011:538) warns, focusing on human adaptability and resilience in the face of oppression potentially ignores the reasons why struggle and resistance are necessary in the first place and may inadvertently provide "support for oppression and inequality today by neutralising it in the past". Orser urges an approach that incorporates economics, race, class and power, and the interactions between them at a local and global scale, acknowledging both the specific socio-historical context and the wider capitalist context.

Historical archaeology can explore the social relations of capitalism and the cultures, aspirations and ways of understanding the world that underpin the processes of capitalism within society (Wurst and Mrozowski, 2016:82; Casella and Symonds, 2005; Beaudry and Mrozowski, 1988; Tarlow, 2007). If capitalism is taken as the starting point for understanding the context of the social and material culture that results, how responses to this system are viewed influence how the archaeology is interpreted. Fracchia and Brighton (2015) take this further and argue that historical archaeologists have a responsibility to use the material and spatial record of early industrial towns and their workers to understand the process of capitalism at a local level. They believe that studying the processes of capitalism in the past can provide understandings of exploitation, inequalities and social divisions in the present. The archaeology of capitalism is a useful framework for understanding the place of company towns within a global context, the economic motives and power structures that underpinned them, and the social, symbolic and moral structures within which they operated.

As Borges and Torres point out, creating company towns took planning and the investment of capital. They ask why entrepreneurs would choose to make this investment (Borges and Torres, 2012:2-3). Company towns made sense economically, as a way to increase profit and attract workers to what was often a remote location, but there was often a moral motivation as well. The upheavals and appalling conditions in English factories and slums during the industrial revolution led to debates about the physical and moral improvement of workers, and the obligations of industrialists (Visentin, 2016:580). A product of the Enlightenment's emphasis on individual rationalism, choice and progress, the ideology of improvement was moral and middle class (Tarlow, 2007:192). It influenced the development of company towns and the social structures within them. Simultaneously a set of practices (improvements) and a way of thinking about the world (improved/unimproved), the term was used in relation to both land and people. Improvement had material, spatial, symbolic and social expression (Lewis, 2016:29, 5). Physically, the influence of improvement could be seen in the changes to the landscape brought about by the scientific management of agriculture by wealthy farmers, merchants and nobility during the rural transition to capitalism, and in the changing townscapes. In Australia, the European perception of improvement can be seen in the ways landscapes were given meaning and shape

through widescale clearance and the erection of fences, and through the exploitation of resources (Ireland, 2003).

Consequently, company towns were often places of experimentation and improvement, characterised by a paternalistic style of management "in which social relations between employer and employee [were] constructed upon the notion of patriarchal authority and/or mutual obligation" (Metheny, 2007:5). A famous and early example is the Scottish mill town of New Lanark and the benevolent paternalism of Robert Owen. Along with workers' housing and other facilities, he created the Institute for the Formation of Character (with schools, a library, an assembly room and non-denominational chapel). Owen believed in the value of improving workers' material, moral and intellectual environment, and that workers' welfare and the maximisation of profits were interdependent (Siméon, 2017). Not all company towns provided as many facilities and benefits for their workers as New Lanark, but all were driven by the need for profit. The tension between the two imperatives of improvement and profit was a defining feature of company towns and the social structures within them.

Industrial paternalism

Although the term "paternalism" was only coined in Britain in 1873, its origins are older (Siméon, 2017). Siméon argues that it is rooted in Christian ideals of charity and feudalism which combine ideals of benevolence and authority. Those with wealth have a duty to provide for their dependents and in return for such protection, the poor owe the rich unquestioning deference (Siméon, 2017). Visentin argues that the origins of paternalism are even older, linking it to the idea of "cosmopolitanism" whereby virtuous citizens were created who in turn had obligations to society (Visentin, 2016). As examples, he cites classical Greek political theory, Rousseau's educational theory and German bildungsroman (novels about the moral and psychological formation of a protagonist). Paternalism involves notions of class difference and the idea that for society to function, everyone has an obligation to know their place and play their part. In the industrial age, these ideas were layered beneath capitalist ideals of efficiency and profit in the context of rapid modernisation.

Yet how these ideas were manifest in the paternalism of eighteenth and nineteenth century company towns varied. Garner (1992) identifies a difference between English and American paternalism. In England, there was a desire for moral reform by improving the material conditions of workers' lives, influenced by thinkers such as Jeremy Bentham and his ideas of utilitarianism and evident in the model company towns of New Lanark, Letchworth, New Earswick, Port Sunlight and Bourneville. In America, paternalism did not seek to reform the labouring class so much as attract and retain them in order to create a profitable business, such as the Boott boardinghouses at Lowell. However, this distinction is somewhat simplistic. In reality, all company towns, consciously or unconsciously, were shaped by the ideas of the person(s) in charge, and all were driven by the pursuit of profit and desire to add value to the capital investment.

While paternalism was an organising principle in the development of company towns, the specific role and style of paternalism varied. Each site can be viewed as a particular response to industrial capitalism (Visentin, 2016; White, 2017) and to its specific context. Scranton (1984) categorises the broad patterns of industrial paternalistic relationships as formal, fraternal or familiar. Formal paternalism was a highly controlled style of management that tended to apply in larger and more impersonal settings. The Boott Cotton Mill in Lowell, Massachusetts is an example of this (Beaudry, 1989). Fraternal paternalism was a style of noncorporate industry with skilled craftspeople working as peers. Familiar paternalism was more typical in smaller, more rural, industrial centres that emphasised paternal relations between employer and employee, such as Bernacchi's enterprises on Maria Island. Within this style of paternalism, the entrepreneur builds housing and provides community services and in turn gains social control, status and prestige. Scott (1985) calls this exchange whereby the landowner passes off self-interested investments as benevolence, the "euphemization of economic power". Yet workers have agency to decide what is in their best interest, what to go along with and what to resist, even if this resistance is limited.

A number of studies have examined the role of company towns, the impact of corporate paternalism on workers, and how the workers responded and negotiated this system (Beaudry, 1989; Beaudry and Mrozowski, 1988; Berry, 1992; Casella, 2012; Cowie, 2011; Davies, 2006; Metheny, 2007; Pappas, 2004; Scranton, 1984). Collectively, these

studies show that while in theory companies provided clean and affordable housing for workers and in return gained their workers' appreciation and obligation (Ford, 2011:738) in reality, the situation was more complex.

In the 1980s, Beaudry and Mrozowski's (1988) excavation of the company owned boardinghouses of the Boott Cotton Mill in Lowell, Massachusetts highlighted the contrast between the stated company policy of concern for welfare and the reality of workers' living conditions. Class differences were pronounced in the way yards were fenced and used (Beaudry, 1989) and artefacts provided evidence of the occupants' leisure activities, food and alcohol consumption, ornaments and other possessions. The study offered insights into the lives of people who were largely invisible in the historical record. Company policy provided rules for behaviour, but the archaeological evidence indicates that people did not always obey these rules particularly regarding alcohol consumption. Attempts to enhance the yards of their regulated, standardised accommodation were evident in the presence of flowerpot fragments (Beaudry, 1989). Overall, the study found a contrast between what was expected by the company and the ways that workers actually lived their lives.

In some places, companies were even more active in imposing restrictions. At Berwind Colorado, the Colorado Fuel and Iron Company actively worked to prevent groups from forming within the community by allocating workers' housing in a way that divided ethnic groups (Wood, 2004). Yet people found ways to make everyday connections and create a community within the constraints imposed upon them. Casella (2012) also explored issues of communal identity and belonging within a paternalistic context. At the Hagg Cottages in the north of England, she found that community life is shaped by the everyday experiences of shared labour and social interactions within a local landscape. In both cases, it was through the rituals of everyday life that people shaped their identities individually and as a community.

Spatially engineered landscapes

Although the majority of company towns were new settlements, created near natural resources to develop one specific industry, sometimes a company town was created within an inherited townscape. The ancient town of Piazzola sul Brenta in Italy was

transformed into a company town during the 1890s (Visentin, 2016). Its centrally located grand villa became the industrialist's home and remained a focal point in the arrangement of the town enhanced by a boulevard of trees. In this way, the inherited material and symbolic patterns of hierarchy, power and status were adapted by the industrialist and continued within the company town.

Purpose built company towns used landscape and built structures in order to create distinctions of status and power. The California logging camp at Soap Creek Pass provided housing for single men or families that reflected their status and aligned with the company's paternalistic values (Pappas, 2004). Housing for single men was located on an undulating and awkward site that seemed to make no sense given that there were larger and more level areas nearby. However, the choice of location enabled surveillance by the superintendent and company management, as did the central mess hall where rules and hierarchies were imposed during mealtimes. On the other hand, employees with families had more autonomy and status. Their houses were grouped to form small communities, removed from management surveillance. Unlike the single men, families were able to modify their dwellings. Similarly, the settlement of Ely, a copper mine town in Vermont, was structured to reflect the paternalistic goals of the company (Ford, 2011:738). Libraries and meeting rooms provided visible evidence of the company's philanthropy and reinforced the value of personal "improvement" of the workers. Regardless of a company town's origins, the choices that the company or industrialist make concerning the physical layout of a settlement reinforce the established order and make paternalism appear as the natural order rather than an imposed management strategy (Pappas, 2004:172). While the layout of a settlement reinforces messages about roles and divisions within the community, company housing provides a means of social control whereby the company sets rules for housing rental and can use the reward of better housing as leverage.

In the examples above, in what Visentin (2016) calls "spatially engineered landscapes," landscape was used to symbolic effect to reinforce ideas of social status. Landscapes "can be manipulated to invite interaction between groups in some contexts and discourage others; it can be used to link the activities of the home with those of work or to sharply split them" (McGuire, 1991:108). However, this approach has been challenged by Garner who views an emphasis on corporate control and resident

dependence as only part of the picture. Instead, he chooses to focus on the role of human agency, misstep and chance in how settlements change over time (Garner, 1992). He proposes that rather than presupposing similarities between company towns, we should focus on uncovering and explaining difference (Garner, 1992:6). Yet these approaches are not mutually exclusive but complementary in understanding ideologies and motivations behind the construction of company towns while acknowledging the roles and responses of individuals in the evidence of everyday practices within their homes.

House and home

In the 1980s, processualist approaches to households within historical archaeology viewed households as measurable socio-economic units of the wider community (Allison, 1999:1) . Archaeologists focused on patterns of behaviour, which in turn came to be used as a cataloguing tool and imposed a degree of uniformity on individual households (Brandon and Barile, 2004:8). More recent approaches to household archaeology have explored other aspects such as consumption, gender, agency and power, identity, ethnicity, ritual and symbolism (Beaudry and Mrozowski, 1988; Casella, 2012; Metheny, 2007; Murray and Crook, 2005; Pluckhahn, 2010; Spencer-Wood, 2004; Wood, 2004). Rather than focusing on the dwelling per se, these studies emphasise the importance of looking at the everyday practice of dwelling in the house (Beaudry, 2015:12). In other words, dwelling as a verb rather than a noun.

Pluckhahn (2010:332) focuses on ritual and symbolism in household behaviour and characterises households as "social groups with material presence defined not only by buildings but also by the remains of routine activities and habitual practices". Her description highlights dual aspects of the material remains: Although the initial construction of housing in company towns was designed and built by the company rather than the occupant, evidence of everyday practices provides insights into the occupants' lives. What is considered to be "everyday" or routine, can also be daily "rituals" (Allison, 1999:11). For example, drinking a cup of tea can be routine but it can also be a ritual of daily life and have symbolic meaning.

Wood (2004) looks at the evidence of daily life in working-class efforts to resist capitalist oppression at Berwind, Colorado. She points out that studies of the nature of

housework tend to be based on middle class experience using written evidence such as cookbooks, magazines and other literature for middle class consumption. Middle class is seen as the norm and the ways that the working class used material culture is measured against this. One example is tea drinking, a middle-class social ritual using matching tea sets, which is often the focus of historical archaeology assemblages. Wood found that at Berwind, coffee was a more important beverage and that plain whiteware dominated the assemblage. Coffee drinking was part of informal quotidian rituals of hospitality and friendship. Despite the company's policy of allocating housing so that ethnic groups were separated, women took in boarders and created their own communities. By working within the gender constraints of household labour they made enough profit to buy mass produced, and more expensive, tinned food, as revealed in the stratigraphy of the rear yard rubbish deposits. Cowie (2011:185) characterises this as "constrained agency". That is, within the existing organisational structures and corresponding power relationships, individuals find creative strategies to assert agency.

Houses can simultaneously serve as shields of social conformity while also providing security within which individuals can chose their own forms of interaction. "Dwellings serve both 'to reveal and display' and 'to hide and protect'" (Carsten and Hugh-Jones 1995 in Allison, 1999:1). At Helvetia, a coal mining town in Pennsylvania (1891 – 1947) the workers' daily lives were structured by the operations of the industry and their housing was perhaps "the most obvious statement of corporate power and ideology" (Metheny, 2007). Even so, the working-class families who lived in company housing played an active role in creating and altering their living environment and backlot. They brought their own cultural practices, traditions and beliefs, furnished and altered their homes, and created a community.

Households are both representative and unique. When viewed with a wide lens as part of a cultural whole, groups of households are often viewed as representative or typical of a particular social group. When studied individually, the unique response of each household to their environment within the context of existing social and spatial structures can be explored (Hendon 1996:46; Tringham, 1995:95). Wilk and Rathje (1982) describe it as bridging the mid-level theory gap between large scale theories of social change and the detailed study of artefacts. I agree with Hendon (1996:46) that although households, situated within the same physical and social environment,

perform the same basic tasks, each has a unique response. The rhythms of everyday life can be found in the material remains. Archaeology provides information that written records do not, often because some information was considered "too commonplace at the time to be worthy of record" (Hoskins 1959 in Johnson, 2007:161).

Conclusion

The motivations and influences behind the creation of company towns are complex and specific to each site. This chapter has shown how the pursuit of profit and adding value to investment is a driving force behind paternalistic capitalism. Yet alongside these capitalist goals there often exists altruistic or moral ideals, which in turn is reflected in the landscape. In company towns, the houses, shops, and recreational areas as well as the industrial buildings, are owned and managed by the company. Industry influences social identities and networks. It provides access to income and opportunities. It permeates every aspect of workers' lives, the noise and the smells, the daily comings and goings and the layout and buildings within the landscape (Wood, 2004:210). While there is an undeniable power imbalance within company towns, this is only one way to characterise the social dynamic. Cowie differentiates between two types of power in social relationships: power over others and power to change one's circumstances (Cowie, 2011:32; Also see Spencer-Wood in Sweely, 1999). People get on with their lives, they make choices and changes that suit them within the context in which they live. While many people may not be very visible in the official records, archaeology has the potential to provide glimpses of their daily lives. This thesis sets out to describe how individuals on Maria Island during its industrial eras constructed meaningful lives, while also critiquing the systems of inequality in which they lived and worked.

3. Other and more profitable uses: a history of Darlington, Maria Island

Following European settlement, in the century between the 1820s and the 1920s, Maria Island underwent several transformations: from Aboriginal landscape to small whaling and sealing stations, to penal settlement, to Probation Station, to farming and pastoral use, to vineyards and early industry, to cement works. The landscape of Darlington is a palimpsest of these changes, with each transformation retaining something of what had gone before, reimagined, and reworked. This chapter outlines the history of the island in order to provide a context for the focus of my research, the two industrial phases from 1884–1886 and 1920–1930.

The purpose of this chapter is not to present a comprehensive history of Maria Island but rather to provide the background for understanding the factors that shaped the township of Darlington, specifically the influence of the convict landscape and contemporary ideas of progress and paternalism. This selective history has been prepared in line with my research aims which focus on the role of the settlement's spatial layout in transmitting ideologies about paternalism, social status and belonging. It provides a context for exploring how work and life in a remote company town shaped people's everyday lives, and what we can learn about their responses. Later chapters will consider how this was materialised in the architecture, spatial relationships and landscape design of Darlington.

Maria's Eylandt

The first European record of Maria's Eylandt was by Abel Tasman in 1642, named by him after Maria van Diemen, wife of the Governor-General of the Dutch East India Company. Early accounts by European explorers described encounters with the local Aboriginal people, the Tyreddeme people (for a discussion of these encounters see Anderson, 2001). These accounts described the rugged rocky coastline on the east and the sheltered bays on the west, the tall trees, native wildlife and grasslands (Péron, 1809). By the early nineteenth century, sealers and whalers had set up temporary camps on the island: at Haunted Bay in the south; at Isle du Nord to the north; at Darlington between the convict periods; and at "Whalers Cove" on the southern coast of the north

island, where the only whaling camp archaeological remains have been identified (Nash, 2003). All whaling operations on the island were instructed to cease when the Probation Station was established in 1842.

A penal settlement for the reception of convicts 1825–1832

Maria Island was chosen as a settlement for convicts "whose cases were not of a sufficiently aggravated nature to be sent to Macquarie Harbour" (Lempriere, 1839:52). The location was considered sufficiently isolated, yet close enough to Hobart to facilitate communications. A site in the north-west of the island was selected for its fertile soil, abundant timber, proximity to a sheltered bay and the "rivulet of excellent water" that ran through the valley (Lempriere, 1839:53). The settlement, named Darlington, after the governor of New South Wales, was expected to be self-sufficient, and the convicts kept occupied in useful industries. Workshops were set up around a millstream diverted from the main creek near the settlement where convicts worked at dying, weaving, and sewing wool (spun at the Cascades Female Factory in Hobart) into prison garments and blankets, or as blacksmiths, carpenters, tanners or shoemakers. According to a report by Peter Murdoch, the first Commandant of Darlington, wheat, barley, potatoes, peas, beans and possibly tobacco and hops would be grown, and the convicts would be employed in clearing land and building fences (Morris, 1964:162).

Like other convict settlements, the layout of Darlington was designed to ensure the separation, and hence security, of convicts and stores, and to emphasise the graded status of the non-convict members of the community (Kerr, 1984:114) (Figure 6). The Commandant, Commissariat Clerk (in charge of stores and second in command), and Assistant Surgeon formed the elite of the settlement. The elevated position of the Commandant's quarters on a hill south of Darlington, provided a vantage spot that allowed him surveillance of the settlement and harbour, while clearly setting himself and his family apart from its everyday workings. The Commissariat was located beside the harbour to receive, store and guard supplies. Along with the Assistant Surgeon's house (marked as the Doctor's house in Figure 6) it was set apart, to the north of the convict barracks and workshops, with military barracks in between. Convicts lived and worked on lower ground which reflected their status and made it easier to monitor their behaviour. They slept in the Penitentiary. Built with bricks made at the settlement, this

long, shingle-roofed building was divided into six rooms with three tiers of bunk beds in each (66 men per room). Each room had a single window facing into a yard enclosed with a 10 foot brick wall (Brand, 1974:136).

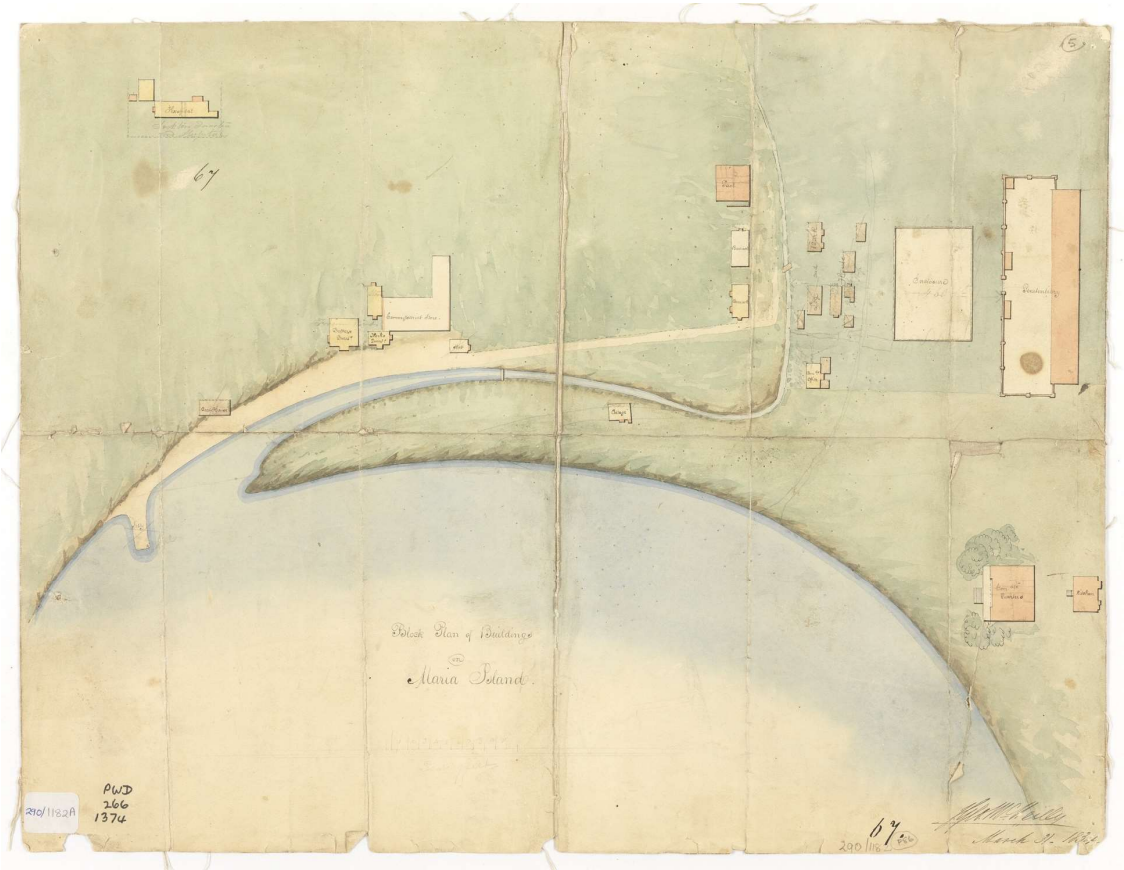


Figure 6: *Plan—Maria Island—Block Plan of Buildings at Darlington Station,* 1834 (Tasmanian Archives PWD266/1/1374). Oriented east.

The penal settlement at Darlington failed because it was too easy for convicts to escape, being close to the mainland with ample timber for making canoes and because the military force deployed to patrol the coastline was inadequate (Lempriere, 1839:55). In 1832, the penal settlement closed and the remaining convicts were sent to Port Arthur or assigned to settlers (Ludeke, 2005:23).

Probation Station Era

In 1838, a direction came from Britain that the convict assignment system was to be abolished following a report by Molesworth that the system was too lax, too inconsistent and did little to deter crime (Brand, 1990). A new system, unique to Van Diemen's Land, was introduced and in 1842 Darlington once again became a place of convict confinement. The new regime of convict management was Probation, a system

of punishment and reform through hard work, instruction and self-reflection. Convicts were divided into three classes, based on the severity of their crime, with segregated sleeping, eating, workspaces and tasks. They were expected to work their way up through the classes, eventually earning a ticket of leave.

The settlement became an enclosed, inward looking quadrangle, with officials and overseers placed at the entrance (Figure 7). Distance from the muster yard was an indication of rank (Godden and Mackay, 1992). The Commandant resided on the hillslope to the south, overlooking the settlement. The hospital, Surgeon's House and Religious Instructor's house were built on a hill facing the sea for the fresh breezes that were considered to be more healthful. The elevated position of these buildings delineated their status, in keeping with the hierarchical structure of the settlement, while allowing surveillance over the prisoners by those in charge. The Penitentiary for the first and second class convicts was altered so that each prisoner lay "with his feet to the outer wall and his head to the centre of the room like a bottle in its bin" (Mundy and Baker, 1852, Vol III:143). Opposite the Penitentiary, a two-storey building with 205 rooms was built for the third-class prisoners. Known as the Separate Apartments, this U-shaped building enclosed and dominated the quadrangle. Prisoners whose behaviour required more extreme punishment were locked in the adjoining solitary cells in complete isolation, silence and darkness.

La Trobe's 1847 report is largely favourable regarding Darlington Probation Station. He lists the natural advantages of Maria Island, good soil and water, natural resources of timber, limestone and paving stone and no settlers, and concludes that it was the "best situated and best arranged Station in Tasmania" (La Trobe, 1847 in Brand, 1990:179). Over 300 acres of wheat, hops, flax, potatoes, turnips and other vegetables were being cultivated. There was a windmill with miller's accommodation and an "excellent bakehouse" with locally cut flagstones. Although plans were drawn up for a church in 1847, it was never built. Instead, the day room next to the Penitentiary served as a chapel but was considered by La Trobe to be "a most wretched building" (Brand, 1990:178). On the whole, Maria Island was viewed as less harsh than other Probation Stations in Tasmania, and the prisoners better behaved.

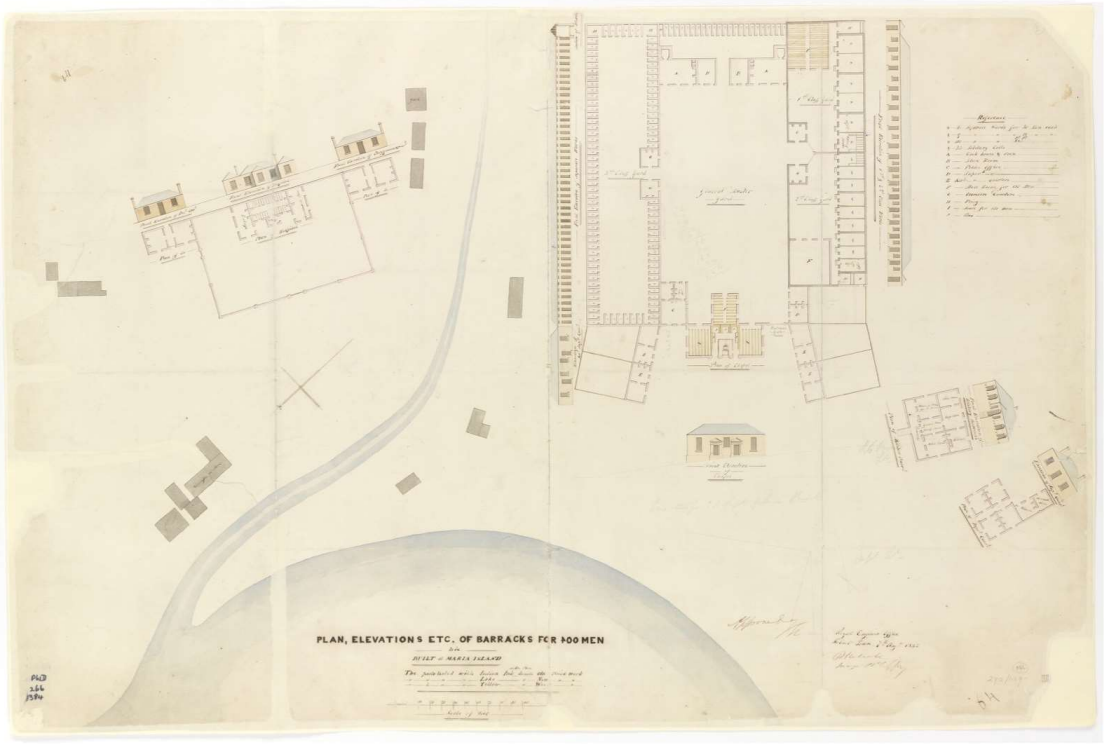


Figure 7: 'Plan—Maria Island—Plans and elevations of a barracks for 400 men', 1842 (Tasmanian Archives PWD266/1/1384)

The Probation system at Darlington lasted eight years and was beset by problems of isolation, discipline and escapes. Following the station's closure in 1850, Maria Island became home to a small number of farming families. The convict buildings were abandoned, and Darlington was left to go to ruin. By the 1870s, it had "a mournful aspect, bringing forcibly to one's mind a city of the dead". In the Separate Apartments, the "prisoners are now pigs!" (*Mercury,* 23 March 1876:3). In the post-convict period, narratives of visits to the island invariably referred to Smith O'Brien, the Irish nationalist and aristocrat, who was incarcerated (in his own cottage) for nine months during 1849–1850 before being moved to Port Arthur. Visitors shuddered at the harsh convict system that contrasted dramatically with the island's natural beauty while enjoying the gothic romance of the old buildings and stories of O'Brien, a rebel and a gentleman. There was rarely any mention of Aboriginal history or occupation.

The "sunny decade"

The end of convict transportation in 1853 and the discovery of gold in Victoria and New South Wales had led to labour shortages in Tasmania but new mineral discoveries

and a boom in wool prices in the 1880s led to improved confidence, diversification of Tasmanian industries such as mining, fruit and jam, potatoes and hops and government investment in transport and communications (Meikle, 2014:155). After an extended period of economic depression, it was "one of Tasmania's most sunny decades" (Reynolds, 2012:198). In 1882 *An Act To Further Amend The Immigration Act 1855*, was passed which set the cost of bounty tickets. This was the culmination of a series of schemes to attract and keep immigrants that the government of Tasmania had introduced with various levels of success. One ongoing problem was immigrants leaving the colony for more lucrative opportunities on the mainland without repaying the cost of their passage. However, the 1882 scheme met with greater success and over the next three years, 2000 immigrants arrived in Tasmania, some of whom made their way to Maria Island.

For the first time since the 1840s more people arrived than left, wages increased, opportunities expanded, and the domestic economy improved. The west coast became a focus of mineral exploration and development. In 1871 tin was discovered at Mt Bischoff, silver-lead ore at Zeehan in 1882, and in 1892, the Mt Lyell Mining Company was established to mine copper. Tasmania was seen as a frontier with resources for the taking if one just had the imagination and enterprising spirit to find and develop it. Maria Island was seen as "a proper place for capital to join hands with labour" and become "a densely inhabited productive appanage, instead of, as heretofore, a mere fluky sheep run" (*Mercury,* 23 August 1884:1). Signor Angelo Giulio Diego Bernacchi (Figure 8) was the right man in the right place.

The "right man in the right place"

Bernacchi embodied imagination and an enterprising spirit. Described as someone who put "his whole heart and soul in the work" with "indomitable pluck, energy, and perseverance" (*Daily Telegraph,* 19 October 1886:3), Bernacchi was an excellent self-promoter, ambitious and entrepreneurial:

> the resident representative of the company, who is not inaptly styled the king of the island. Signor Bernacchi is a courteous and cultured gentleman, whose sole emblem of regal authority, if any is to be found, is in his top boots. These, it is possible, give him with the islanders an influence equal to that wielded by the latest wearers of Hessians [German military riding boots with ornamental tassels] (*Argus,* 10 April 1890:7).

Figure 8: Photograph—Photographic portrait of BERNACCHI, Diego of Maria Island, c.1910 (Tasmanian Archives PH30/1/2315).

Bernacchi was born on 1 July 1852, at Lozza, in the Como district, Lombardy. He attended the Technical School of Varese, Italy and spent four years studying in Prussia during the Franco-German war. He went on to work in the north of France as a representative for French and Italian silk spinners, establishing branches in Belgium, France and England (*Launceston Examiner,* 18 January 1896:14). In 1882, Bernacchi, his Belgian wife Barb and their three children left their home in Manchester and travelled to Australia as part of the assisted migrant scheme. A description of their arrival romantically compares Bernacchi's arrival to Robinson Crusoe, with "his devoted wife, willing to go with him to the world's end… the children, accustomed to the restraints of a city, the hope of perpetual picnic" ("Dio", 1888:31).

Soon after arriving in Tasmania, Bernacchi succeeded in securing a ten year lease of Maria Island on "most advantageous terms" for sericulture and viticulture (*Argus,* 23

January 1885:6). He was to pay 1 shilling per year. Although not yet surveyed, the estimated area was 23,000 acres, much of which had been cleared by prison labour. Surviving convict structures such as the windmill, lime kilns, dam and other buildings could be repurposed. The lease was conditional that he spent not less than £5,000 within five years.

Bernacchi's economic vision for his island kingdom involved two agricultural enterprises, not only untried on Maria Island but virtually untested in Tasmania. Bernacchi planned to produce lighter wine, similar to that consumed in continental Europe. He claimed this would be more "conducive to temperance and health" than the "heady and doctored alcoholic compounds" that Tasmanians tended to favour. In a sober wine-drinking country, he asserted, temperance organisations like "Blue Ribbon" would be unnecessary (*Daily Telegraph,* 2 April 1885:2). At the time wine was considered a bourgeoise drink of temperance and respectability, while hard alcohol (doctored with spirits and sugar) was associated with a roughness of character (Hannickel, 2010:291).

Bernacchi considered the climate on the east coast of Tasmania to be favourable for vine-growing, comparable to the south of France and Italy. The *Daily Telegraph* agreed up to a point, "Mr Bernacchi is making a bold venture, seeing that the cultivation of the vine has never been tried in this colony on an extensive scale and on scientific principles" (2 April 1885:2). In Europe, Bernacchi had worked as a merchant, not as a primary producer, yet he was confident that he could create successful wine and silk industries in a matter of years. Why did he choose viticulture and sericulture and why was the Tasmanian government so keen to support him? For Bernacchi, along with the appeal of running a whole island and his optimistic ambition, perhaps it was the romance of the crops themselves. In the nineteenth century "wine was allied with tea, silk manufacture and a few other specialty crops in that they were [perceived as] elegant, beautiful goods ideally cultivated by small-scale, skilled country gentlemen" (Hannickel, 2010:284).

Figure 9: ***View of vineyard including Bernacchi's residence*****, 1880s (Tasmanian Archives PH30/1/2089).**

As for the government, perhaps it was the promise that Bernacchi would develop a new industry and provide employment in their state. However, while they were willing to grant him a cheap lease and agreed to build a new 520 foot jetty in Darlington Bay (as long as the Maria Island Company supplied the piles) they drew the line at some of Bernacchi's other requests. A petition from the Maria Island Company in July 1888 (Tasmanian Archives TRE1/1/1660) requesting the installation of a submarine cable to improve communications, that Darlington be designated as a point of entry, able to collect customs revenue, and that a bill be passed to make Maria Island a municipality so the company would no longer have to pay rates to Spring Bay demonstrates Bernacchi's vision of an autonomous and profitable island enterprise.

San Diego

With a settler's desire to improve, exploit and possess (Ireland, 2003), Diego Bernacchi renamed the settlement San Diego in 1888, the creek became Bernacchi's Creek and, according to "Dio" (1888), the "inharmonious name" of the island would soon be

changed to Bernacchi. (It never was.) Words both reveal and influence how we perceive our environment (Seddon, 1997:27). “San Diego” was part of Bernacchi’s rebranding. It symbolised a break from the convict past, and the start of a modern, progressive township. While the name San Diego lasted only as long as the ill-fated Maria Island Company, it revealed Bernacchi’s ambition to legitimise and reimagine this landscape. He brought contemporary ideals about how the settlement should look and function, as well as personal aspirations and desire to gain recognition as an entrepreneur.

Under Bernacchi’s management, the settlement of San Diego underwent a significant transformation. Hillslopes were planted with rows of grapevines (Figure 9). The footprint of the convict quadrangle was retained, reimagined as a sort of town square (Figure 10). To the north, the two-storey Separate Apartments, those “abodes of [convict] misery and crime” (*Daily Telegraph,* 4 April 1888:2) were demolished and the Coffee Palace, a “spacious well-lighted and well-furnished temperance hotel,” (*Mercury,* 13 October 1888:3) built in its place. Opposite the Coffee Palace, the Penitentiary was converted into accommodation for the single male workers who would take their meals in the Mess Hall next door. Other convict buildings within the quadrangle were brought back into use as a store and shopkeeper’s residence, post office, bakery and butcher’s shop. A row of cottages, known as the Twelve Apostles, was built for workers with families and more substantial housing built for the vineyard overseers. By 1888 Darlington had been transformed and renamed, San Diego.

Figure 10: Darlington after demolition of the separate apartments and prior to construction of the Coffee Palace (1888). View south (Tasmanian Archives PH30/1/9950).

Set apart and overlooking the settlement and the bay, Bernacchi chose the religious instructor's house as his family home. The adjacent convict hospital and Surgeon's House were demolished and a Grand Hotel, in the Swiss Chalet style, was built, designed to entice visitors with its European sophistication. The hotel had 30 bedrooms, billiard and dining salons, a smoking room and drawing rooms. The grounds in front were to be "laid out in beautiful ornamental gardens with several jet fountains and grottos, the whole giving a most fairy like aspect" (*Mercury,* 22 October 1887:1). Staff would include French cooks, and Swiss and Italian maids "attired in the costumes of their native lands minister[ing] to the wants and comforts" of guests (*Mercury,* 25 October 1887:3). However, the hotel's amenities and the island's attractions were not enough to ensure its success as a tourist destination and the Grand Hotel was not well patronised. Possibly it was too remote and those with money and time preferred to go elsewhere. In the 1920s the hotel became offices for the NPCL (Figure 11) and in the 1930s, was dismantled and taken to the mainland (Figure 12).

Figure 11: The Grand Hotel in 1935 after the closure of NPCL (Tasmanian Archives NS479/1/92).

Figure 12: The remains of the Grand Hotel.

Bernacchi planned to sell wine on the local market even though, at the time, there was little demand for table wine, or appreciation for the flavour of cool climate wine (Walker, 2012:9). Inspired by his visit to Swiss immigrant, Charles Hubert de Castella's vineyard on the Yarra in Victoria, Bernacchi noted that "a good many of [St Huberts] best vignerons are Italian". He saw the value in using overseas expertise, engaging a Swiss vigneron (*Daily Telegraph,* 19 October 1886:3) and European immigrant workers with vineyard or farm experience. Among these were Germans who came to

Australia on the assisted immigration scheme which ended in 1890. Those who worked on Maria Island came on the *Procida* from Hamburg in 1885, recruited by Fredrick Buck (Watt, 2016). The majority were small farmers or rural workers who emigrated because of economic recession, poor harvests, political unrest and lack of agrarian reform, but most soon moved on to establish their own properties and farms on the mainland. The "mixed population" of Maria Island's workers was considered worthy of note by the *Tasmanian News*:

> by whose honest toil this charming retreat is being reclaimed and converted into a modern Paradise, and the more so, as in spite of the different nationalities, the inhabitants are a well behaved and productive community. There are representatives of Italy, Belgium, Switzerland, Germany, France, Denmark, Sweden, Norway; there are English Scotch, Irish, Welsh, and last but not least "the Heathen Chinee [*sic*]" (18 October 1886:2).

The last reference is possibly to Ah Sing, described in 1876 as "a good-natured Celestial" married to a "blooming Tasmanian lass" (*Mercury,* 23 March 1876:3). Prior to Bernacchi's lease of the island, some Chinese men were living at Chinaman's Bay, making their living "catching and curing mutton-fish [abalone] for the China market." It seems that at least one stayed on. Mr Sling [*sic*] is mentioned in Ballard's (1893) account of an Easter visit to the island. The visitors requested a guide and were directed to a gentleman from the "Flowery Land" who kept his hands in his pockets the whole time and demonstrated no interest in showing them around. He told them that he had a £160 mortgage on the island and would not leave until he got his money.

"Summer isle of Eden"

To begin with, all seemed to be going well. One year into his lease, Bernacchi petitioned parliament to bring forward an agreement in the lease that allowed him to purchase 500 acres of land for a modest £1/acre (*Daily Telegraph,* 19 October 1886:3). This would have made investing in the Maria Island Company, once it was formed, even more attractive. At the Tasmanian pavilion at the Centennial International Exhibition in Melbourne in 1888, Maria Island's products and produce were put on show. The sauvignon wine and a collection of stones both received third prize. Bernacchi commissioned a pamphlet to accompany the Maria Island exhibit which described it as a "summer isle of Eden", and compared it to the south of France and Italy for its natural beauty, mild climate, and the luxury and convenience of a resort comparable to the most fashionable establishments on the Riviera, perfect for consumptive patients. The

pamphlet asserted that Bernacchi had "expended enough capital …. to silence the captious criticisms of those who would shut out of Tasmania all that was foreign, whether enterprise, or capital, or skill" ("Dio", 1888:43).

Despite glowing reports in the press during the first few years, ultimately the viticulture and sericulture ventures were not a success. Bernacchi had chosen the wrong site for his vineyards (Walker, 2012:77). The vines did not thrive or produce wine in sufficient quantities for him to claim the £2,000 bonus for producing £5,000 worth of marketable silk or wine within the first 20 years. According to a report presented to the Tasmanian Legislative Council, by 1886 the 400 white mulberry trees (*Morus alba*) were doing well, and silkworm eggs were to be imported from Lombardy (Weidenhofer, 1977:35). However, it seems that this never happened. Sericulture is not mentioned in the 1887 Maria Island Company prospectus, and it is possible that Bernacchi never seriously intended developing this industry but rather used it as a bargaining tool to convince the Tasmanian government to support his bid for developing Maria Island. The mulberry trees that had been planted were abandoned "owing to the saltness [*sic*] of the atmosphere, being too close to the seashore" (*Launceston Examiner,* 18 January 1896:13).

The "flag of modern industry and science"

In 1887 the Maria Island Company was formed with Bernacchi as resident managing director, six Melbourne and two Tasmanian directors. By now Bernacchi's focus had moved away from the luxury industries of silk, wine, and tourism towards a more practical, and potentially more lucrative, opportunity. He planned to produce Portland cement using the island's supposed "inexhaustible deposits of marble and limestone" (Maria Island Company Limited, 1887). At the time, Portland cement was not manufactured in Australia but was imported from Britain at twice the price (James and Chanson, 2000). It was anticipated that the export of hydraulic lime and cement would result in fast returns.

Figure 13: The initials "DB" inscribed in cement on the wall of the c1890s cement works.

The foundation stone of the cement works, on the site of the old convict brickworks, was laid by Signora Bernacchi, in September 1889. According to its chief engineer, the Maria Island Company had "hoisted on a spot situated at the antipodes of the old world, the flag of modern Industry and Science" (*Tasmanian News,* 5 September 1889:2). It was one of the first Portland cement works in Australia. Bernacchi told the newspapers that "a thoroughly competent engineer" experienced in managing "large and profitable cement works in France and also in Cochin China by authority of the French Government of that colony" had been engaged, and that machinery had been imported (*Mercury,* 15 August 1889:3). Initials carved in cement spatter on an exterior wall may be Bernacchi's (Figure 13), a small statement of ownership and optimism.

However, the cement works were beset by problems. Only five of the planned 17–20 lime kilns were built (Weidenhofer, 1977:40) and already these vertical kilns were outdated, following the invention of the rotary kiln in 1885 (MacFie, 1991:5). Charles Adkins, the cement works manager, died from fume inhalation in June 1890, and the loss of an experienced operator could have contributed to the failure of the industry

(MacFie, 1991:11). There was also dissatisfaction with working conditions, being paid "at town wages at a rough country job, and subject to all weathers, with board and lodging higher than town prices, and bad at that … and bad food (no vegetables)" (*Daily Telegraph,* 2 May 1888:3), that was exacerbated when the company proposed reducing work hours, prompting threats of a strike.

Bernacchi claimed that the failure of the cement works was due to bad construction but others believed that it lost capital through poor management (Beattie, 1902 cited in MacFie, 1991). Probably it was a combination of factors, including that it was a speculative venture, using borrowed capital and undertaken with inadequate planning. (MacFie, 1991:13). Bernacchi had focused on the resource, obtaining tests in Australia and overseas on the hydraulic properties of the limestone but had neglected the practicalities of production, such as shipping and equipment.

Dark days

The boom of the 1880s was short-lived in Tasmania: "Dark days were hovering near" (*News,* 15 July 1924:4). Following the failure of Van Diemen's Land Bank in August 1891, markets shrank, wages fell, the government reduced expenditure and public works, unemployment rose and Tasmania entered a period of economic depression (Reynolds, 2012:198). The Maria Island Company went into liquidation on 8 February 1892 (Weidenhofer, 1977:40). All its assets were handed over to the Bernacchi Patent Natural Portland Cement Company Ltd, registered in Victoria in 1892 (*Mercury*, 24 December 1896:4). Bernacchi then returned to England to seek investors for a new company and obtain the backing necessary to register the Land Development and Cement Company of Tasmania Ltd in London. In a newspaper interview, Bernacchi's secretary Tom Bower stated that the new company had been floated with a capital of £60,000 in debenture shares and that a new cement factory would soon be up and running (*Launceston Examiner,* 3 November 1893:3). He also claimed that the vineyards were "looking magnificent" and that they were expecting a large grape crop.

The picture painted by Bower was overly optimistic. Financial support from England did not eventuate. In 1896, the Land Development and Cement Company of Tasmania Ltd went into receivership, along with many other companies during the 1890s.

According to Bernacchi, due to "unfortunate and unforeseen circumstances, and more especially to the intense Australian financial crisis … together with some legal difficulties, matters were allowed to drag … [and] intending investors in London became afterwards tired and indifferent to the whole concern" (*Mercury*, letter to the editor, 24 December 1896:4). Activity on Maria Island once more shrank to a small number of pastoral landholdings.

Post-war Tasmania

The years immediately following World War I (1918–1922) were marked by inflation and a decline in real wages, class conflict, and industrial turmoil. The war had made the government realise just how dependent Australia was on imports. Consequently, it sought ways to make Australia self-contained and supported new manufacturing industries. Many companies reformed their working environments in the belief that it would decrease worker unrest and increase worker efficiency (Barton, 1989). In this way, individual efficiency and cooperation between employer and worker were linked to Australia's progress as a nation.

In Tasmania, this approach can be seen in the developments of company towns such as the Electrolytic Zinc Company of Australia Pty Ltd (E.Z.) and Cadbury-Fry-Pascall (Cadbury). Both built model industrial villages and instituted welfare benefits such as medical and pension schemes, sport and recreational activities, that they believed would result in a more content, committed and efficient workforce (Barton, 1989), and both received generous government assistance, both federal and state.

The National Portland Cement Limited (NPCL)

The NPCL Company on Maria Island was established around this time. The prospectus (1920) listed the island's ideal conditions for attracting employees:

a) Numerous comfortable residences already erected (and owned by the Company).
b) Rich soil for the production of foodstuffs.
c) Cheap and abundant supply of fuel for domestic purposes.
d) Copious fresh water reticulated to dwellings.
e) Abundance of fish in coastal waters.
f) Climate temperate and congenial.

Even more importantly, the company offered employment. Frank Hood's diary reveals the hope of employment and opportunity represented by the prospect of the cement works (Tasmanian Archives NS568/1/1). In 1919, Frank's family moved to Maria Island for 5 months and even though the family were living in abject poverty, Frank's father "wanted to hang on for Bernacchi and this glorious island of his! He had already seen Bernacchi and been promised a job" (25 November 1919). After three months with no word, Bernacchi came to the island. "Before Bernacchi came the people said he was no good, he would not do anything. But now he has come they are all excited" (1 February 1920). However, Bernacchi told Frank's father that he could do nothing at present because of the strike (15 February 1920). With no assurance that construction on the cement works would happen soon, the family gave up waiting and left the island in April 1920.

Figure 14: National Portland Cement Works (Tasmanian Archives NS479/1/124)

Whereas previously industry on Maria Island had been small scale, this renewed attempt to harness the natural resources of Maria Island for profit in the 1920s saw the construction of a substantial cement works factory (Figure 14). Well documented in photographs, and heralded in the press, the construction of the cement works during a time of high unemployment represented an optimistic symbol of progress and prosperity. Construction began in 1921 and focused on the factory and related infrastructure, such as tramways to the quarries and a new longer jetty in deeper water

(Figure 15). The complex of buildings, silos and chimneys dominated the settlement and dwarfed the two-storey Commissariat building beside it. Seventy men were employed building the cement works, including about fifteen with families. They were paid 11–14s/day but wet wintery conditions meant that often they were only able to work 2–4 days in the week. Accommodation for single men was shared, four men to a hut at 2s/week each. They paid 6d/week for crockery breakage, 1s/week for a first aid man and 31s/week for boarding house meals. Long term resident of Maria Island, Fanny McRae provided letter updates regarding life on Maria Island to the *Launceston Weekly Courier* (1904–1922) under the pen name "Ardintoul". On 30 June 1921, she reported that there were now enough men to field a (Australian rules) football team, but women were in shorter supply. Consequently, for the post-match social at Darlington, ladies were invited from Triabunna.

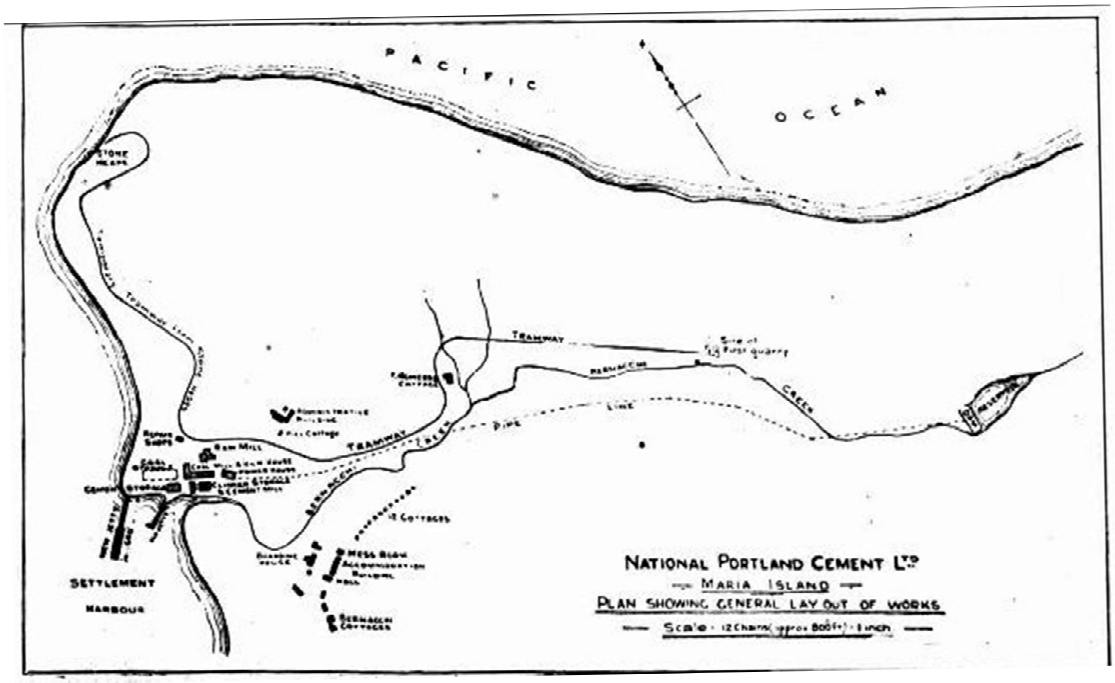


Figure 15: Map of Darlington (*Mercury*, 26 February 1923:5)

Development of the settlement was rapid (Figure 18). As had been done in the past, buildings were repurposed to suit the needs of the new development. The Grand Hotel became offices for the NPCL Company. The Twelve Apostles cottages, which had become dilapidated, were repaired. Drainage was put in by the company along with a regular sanitary service. Garbage bins were provided and "cleaned regularly" and electric lights were connected. Rent was 7s/6p per week (*Examiner*, 9 February

1924:15). The company provided a billiards room, and the village had a general store, post office and Commonwealth Bank (*Examiner*, 21 July 1922:4). More trees were planted to continue the avenue of poplars that lead to Darlington from the jetty "and with some white paint about 'our town' is beginning to look quite smart" (Ardintoul, 2000). Local residents Fanny McRae and Rose Adkins, along with two NPCL managers, Mr H. C. Bird (Engineer-in-charge) and Cecil E. Taylor (secretary), applied to the Education Department for a State School at Darlington in October 1920 (Tasmanian Archives ED10/1/367). Their application stated that the company was anxious to employ married men and was currently fitting up the first 26 cottages for them. The local children aged 8–12 years were currently not attending any school. The following year Darlington school opened in one of the company-owned buildings in the quadrangle and the teacher, Miss Kelly, lodged in the company's boarding house. A few years later, a new state school was erected on land still known as Bernacchi's vineyard to accommodate the growing number of children (*Mercury,* 19 September 1925:7).

The cement works opened on 8 February 1924. The jetty was decorated with bunting and over 100 mainland (Victorian) and Tasmanian visitors attended. In a popular genre for the time, photographs taken on the day show the workforce gathered outside their workplace (see Connell and Irving, 1992:277). Women and children at the front of the picture, convey the impression that this enterprise involved the whole community, reinforcing the value that the company placed on family men (Figure 16). The day was "almost wintry" (*World,* 9 February 1924:8) which could explain the fur collar worn in midsummer by Mrs Bowes Kelly (wife of the chairman) as she unlocked the door and switched on the island's steam generated electricity (Figure 17), a utility that also benefitted residents whose houses received electricity before Triabunna.

Signor Bernacchi's speech received cheers and a rendition of "for he's a jolly good fellow" (*World,* 9 February 1924:8). Referring to the difficulties he had encountered thirty years earlier he said, "People had to have a stout heart to start an industry on such an island. He had had a stout heart, but not the long purse." While he may have had a stout heart, Bernacchi was becoming increasingly unwell and he died in Melbourne the following year at the age of 72 and "there passed away one of the most picturesque figures in the history of the East Coast of Tasmania" (*Mercury,* 18 March 1925:6).

Bernacchi's involvement had been an important influence in shaping the character of the township. In the 1920s, the directors ran the cement company from Melbourne, and industrial relations between workers and management changed.

Figure 16: ***Exterior view of the crowd at the official opening of cement works*****, 1924 (Archives Office of Tasmania PH30-1-2040)**

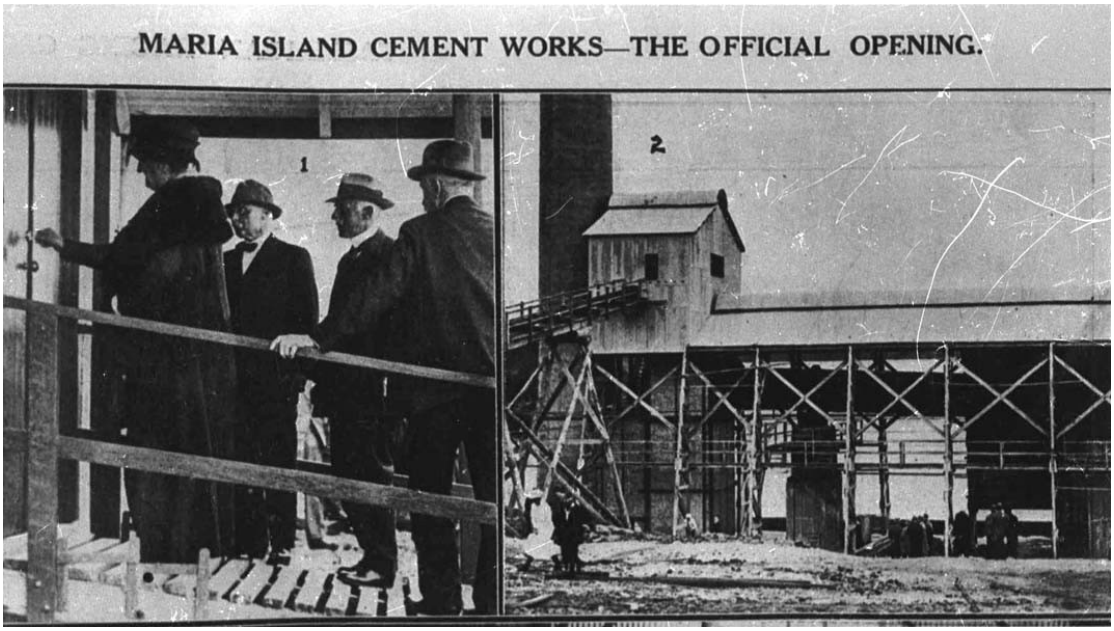


Figure 17: ***Official opening of the cement works in February 1924*** **(Archives Office of Tasmania PH30-1-2038).**

Issues related to the isolated location and nature of the work soon emerged. In 1923, work stopped for a day over dissatisfaction over increased charges for board and food at the company's mess house, particularly for employees who had no other option. Management agreed to reduce the price of food and W.H. Reece, state organiser of the Australian Workers Union (AWU) claimed it as a moral rather than financial victory because while not everyone was as affected by the charges, the workers had stood together (*World*, 13 October 1923:4). The following year, Reece reported that "union matters [were] progressing very satisfactorily on the island" and he found complaints from the workmen far less numerous than usual for such a large industry (*Mercury,* 22 July 1924:2). However, he found that cement dust in the bagging department of the factory posed a hazard to workers' health that he believed, could not be adequately compensated with higher wages to the affected employees (*Mercury,* 22 July 1924:2).

In addition, the cement works experienced operational problems. The letterbooks of Strudwicke, resident chemist from 1924–1926 (Tasmanian Archives NS998) reveal that obtaining suitable limestone in reasonable qualities was a problem from the start and that there were continuous complaints from Sydney regarding the slow setting of concrete. The main impediments to cement production were the poor quality of the raw material and bad weather. Impurities in the limestone cliffs meant that greater quantities of limestone had to be removed in order to create a fraction of the cement required to ensure a profit. Rough weather and high seas hampered shipping transportation as well as quarrying. Consequently, the cement works only lasted six years before the business failed in 1929, having sustained losses of £15,000 a year (Robson, 1991:422). The business was taken over by the Australian Cement Company, Victoria. Valuable machinery was removed from the cement works and put into use in Victoria, and the buildings left to decay. After the island became a national park in June 1972, many of the cement works buildings were deemed unsafe and were demolished in 1977. The remaining cement silos are a reminder of an optimistic and ambitious enterprise that was ultimately a failure.

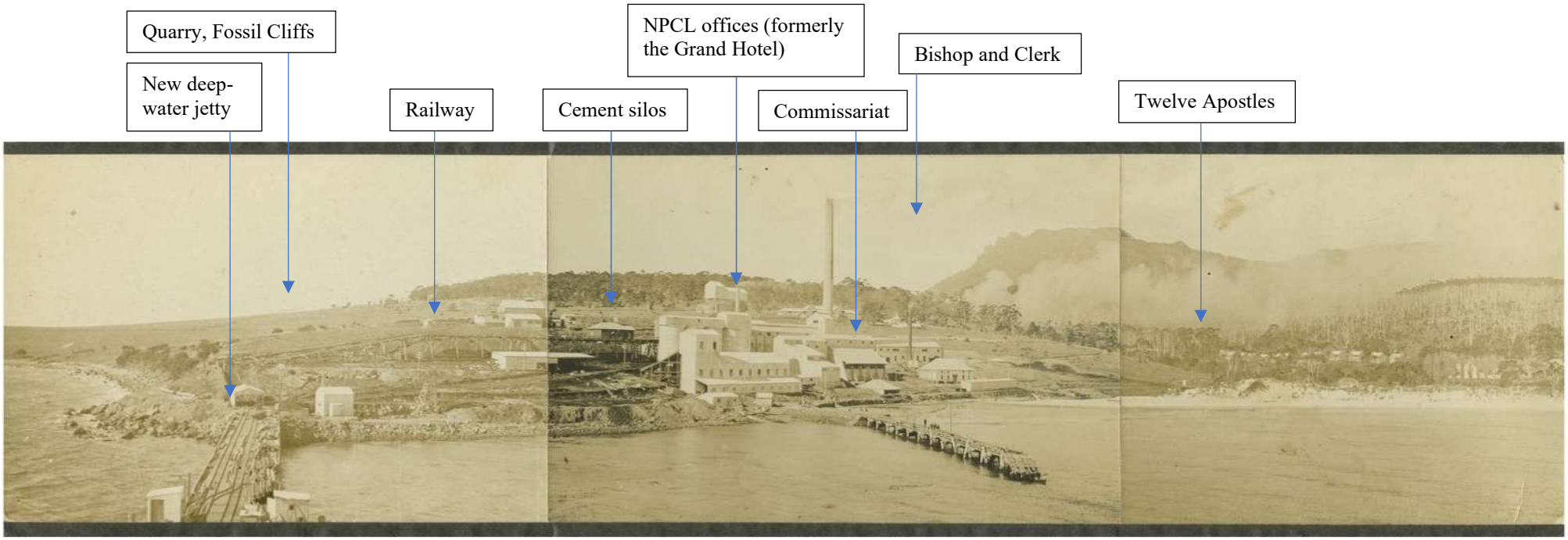


Figure 18: *Maria Island Cement Works* 1920s (Tasmanian Archives NS479/1/94).

4. Darlington's layered landscape

On disembarking the ferry, the first sight that greets visitors to Maria Island are the remnants of the 1920s NPCL cement silos, dwarfing the nearby two storey sandstone Commissariat store (c.1825) (Figure 20). These two structures span the hundred years of Darlington's development and bookend Darlington's convict and industrial phases. To the south of the harbour lies Darlington township, arranged as a quadrangle, with its whitewashed Probation era buildings and late nineteenth century additions. The layers of Darlington's past are evident in the textures and materials of these buildings: convict and industrial, symmetrical and asymmetrical, brick and weatherboard, adorned and plain. The quadrangle is a focal point for visitors today, many of whom are accommodated in the Penitentiary building and prepare their meals in the Mess Hall. Likewise, during the industrial eras, the quadrangle would have been a locus of social interaction.

This chapter considers how the landscape of Darlington evolved. The township of Darlington was shaped first by philosophies of convict management, then by the paternalistic entrepreneurism of Bernacchi, and subsequently by the corporate industrialism of the NPCL enterprise (Figure 19). Each development was influenced by what came before, not only by the physical structures but also the social and symbolic structures. This layered landscape was more than simply a backdrop against which everyday life happened, it actively shaped people's lives. This chapter examines the role of the settlement's spatial layout in transmitted ideologies of paternalism, social status and belonging. While historical sources, particularly newspaper articles, photographs, official records and maps provided the context for understanding the social landscape of Darlington, a limitation of these sources was that they presented an official version of events. Landscape archaeology, and spatial analysis of the layers of meaning, enabled me to interrogate a broader historical narrative that focused on the everyday lives of the inhabitants, their housing, routines and rituals, township and community.

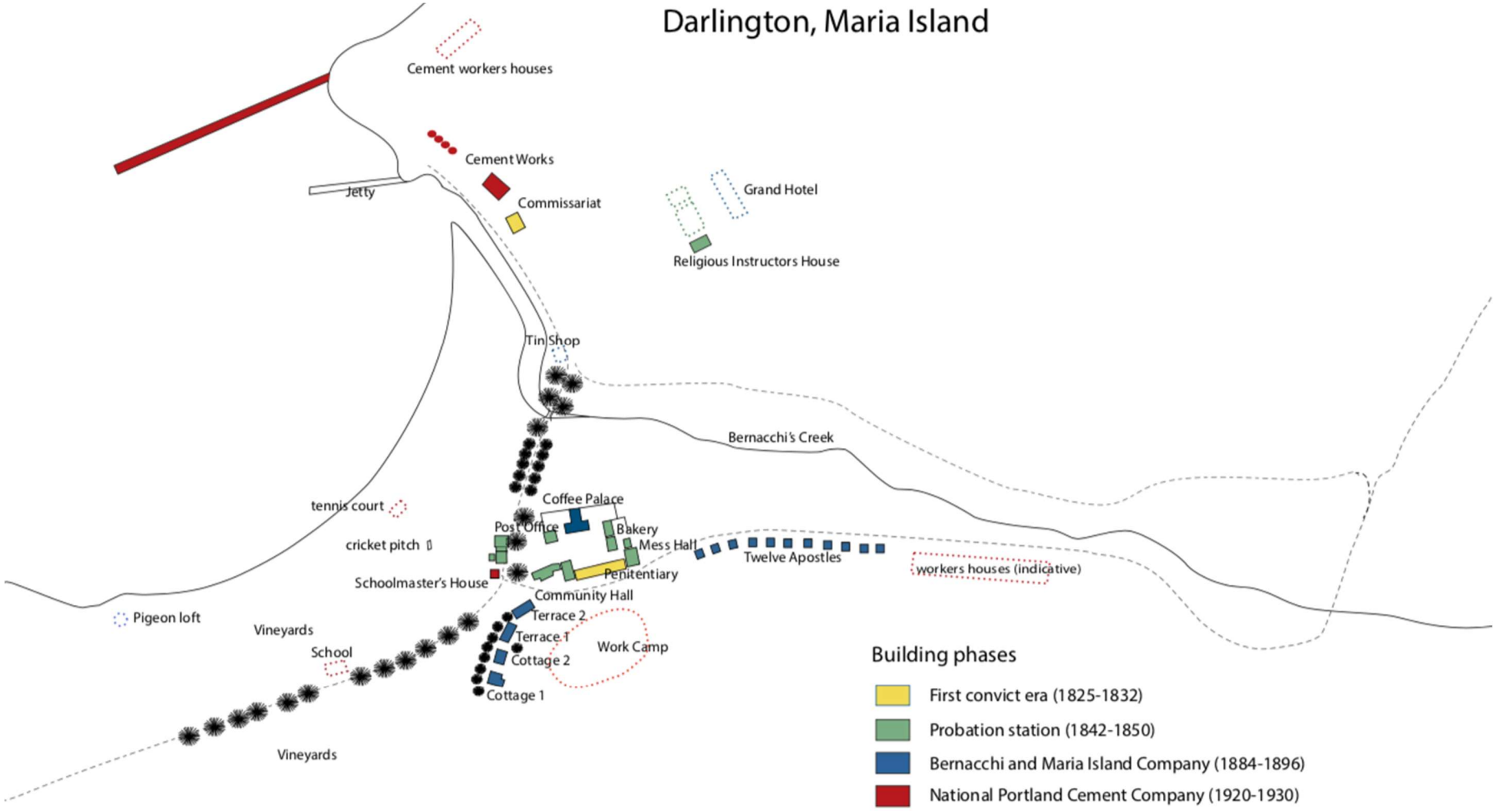


Figure 19 : Darlington, Maria Island: building phases.

Table 1: Darlington - summary of key structures in use during the industrial periods							
Structure	**Construction date**	**Location**	**Construction material**	**Use during convict eras**	**Bernacchi era**	**NPCL**	**Condition / current use**
Commissariat	1825	Darlington Bay	Brick, originally with slate roof, now tin. Verandah and portico added in 1920s.	Store house	Workshop?	Workshop	Visitor's Centre
Penitentiary	1830	Quadrangle	Brick with slate roof. Verandah and portico added in the 1920s.	Convict barracks	Workers' accommodation	Single Men's quarters	Tourist accommodation
Visiting Magistrates Office	c.1842-44	Quadrangle	Brick with weatherboard extension.	Administrative/ Magistrates Office	Shop and Post Office	Shop and Post Office	Extant
Smith O'Brian's Cottage	1842	Quadrangle	Brick	Convict quarters	Workers' accommodation	Workers' accommodation	Extant
Bridge	1842	Bernacchi Creek		Bridge	Bridge	Bridge	In use,abutments and piers are original
Bakehouse and Clothing Store	c.1842	Quadrangle	Brick	Bakehouse and Clothing Store	Bakery, blacksmiths shop and butchery	Bakery, blacksmiths shop and butchery	Extant
Religious Instructor's House	1843	Hill north of settlement	Brick	Religious Instructor's House	Bernacchi family house	Chief engineers house	Ruins
Mess Hall	1845	Quadrangle	Brick with weatherboard annex added in 1920s.	Mess Hall	Mess Hall	Mess Hall	Mess Hall for visitors
Reservoir	1845	East of settlement		Reservoir	Reservoir	Reservoir	Extant
Chapel / Day room	c.1847-49	Quadrangle	Brick	Chapel / Day room	Library / billiards room	School, cinema, church, community hall	Extant

Bernacchi Terrace (northern)	c.1888	South of quadrangle	Brick, reused from demolished Solitary Cells	–	Workers' accommodation	Workers' accommodation	Extant
Bernacchi Terrace (southern)	c.1888	South of quadrangle	Brick, reused from demolished Solitary Cells	–	Workers' accommodation	Workers' accommodation	Extant
Cottage (northern)	1888	South of quadrangle	Weatherboard	–	Manager's accommodation	Manager's accommodation	Extant
Cottage (southern)	1888	South of quadrangle	Weatherboard	–	Manager's accommodation	Manager's accommodation	Tourist accommodation
Twelve Apostles	1888	East of quadrangle	Weatherboard with tin roofs. Footings and fireplaces of recycled brick from demolished Solitary Cells.	–	Accommodation for vineyard workers and their families	Accommodation for cement factory workers	Dismantled in 1936 and relocated to Hobart. Archaeological remains
Grand Hotel	1888	Hill north of settlement	Weatherboard with tin roofs. Footings and fireplaces of recycled brick from demolished convict hospital.	–	Hotel/health spa	Administration office for Portland Cement Company	Dismantled after 1930 and moved to the mainland. Archaeological remains
Pigeon Loft	c.1890	Vineyards on hill south of settlement	Timber	–	Pigeon Loft	extant but not in use	Archaeological remains
Cement works	1922	Darlington Bay	Concrete, timber	–	–	Cement works	Cement silos and ruins of some buildings, archaeological remains
Schoolmasters House	1929	west of quadrangle	Weatherboard	–	–	Schoolmasters House	Ranger's office
Radio mast	1929			–	–	Radio mast	
Schoolhouse	1925	Vineyards on hill south of Quadrangle	Weatherboard	–	–	School	Dismantled after 1931 and relocated to

							Triabunna. Archaeological remains
Tin Shop	c. 1924	On road between jetty and quadrangle	Tin	–	–	Shop	Possible archaeological remains
Cemetery	1825	Headland north of settlement.		Cemetery - non-convict burials.	Cemetery	Cemetery	Extant
Coffee Palace	1888	Quadrangle	Weatherboard	–	Guesthouse and dining rooms	Boarding house	Extant
Prero's House	1920s	Beside Bernacchi's Creek between harbour and settlement	Weatherboard	–	–	Cuthbert Cobb's house.	Extant
Work camp	1920s	Behind Quadrangle to the south.	Canvas or timber huts on timber platforms with brick fireplaces	–	–	Temporary housing for Cement factory workers	Archaeological remains
Workers' cottages	1920s	East of Twelve Apostles.	weatherboard	–	–	Workers' accommodation	Archaeological remains
Workers' cottages	1920s	On headland north of cement works.	weatherboard	–	–	Cement workers cottages	Archaeological remains of three cottages
Cricket pitch	c.1920			_	_	Playing fields	_
Tennis courts	c.1920			_	_	Tennis court	_
Ruby Hunt's cottage	early 1900	Hill south of settlement.	Weatherboard	–	–	Mrs Hunt operated the pedal powered wireless	Extant
Jetty		Harbour	Timber	Original jetty replaced.	Jetty for passengers and mail boats.	Jetty for passengers and mail boats	Restored and in use
Long jetty	c.1924	Harbour	Timber	_	Deepwater jetty for loading cement onto ships.	Deepwater jetty for loading cement onto ships	Possible archaeological remains

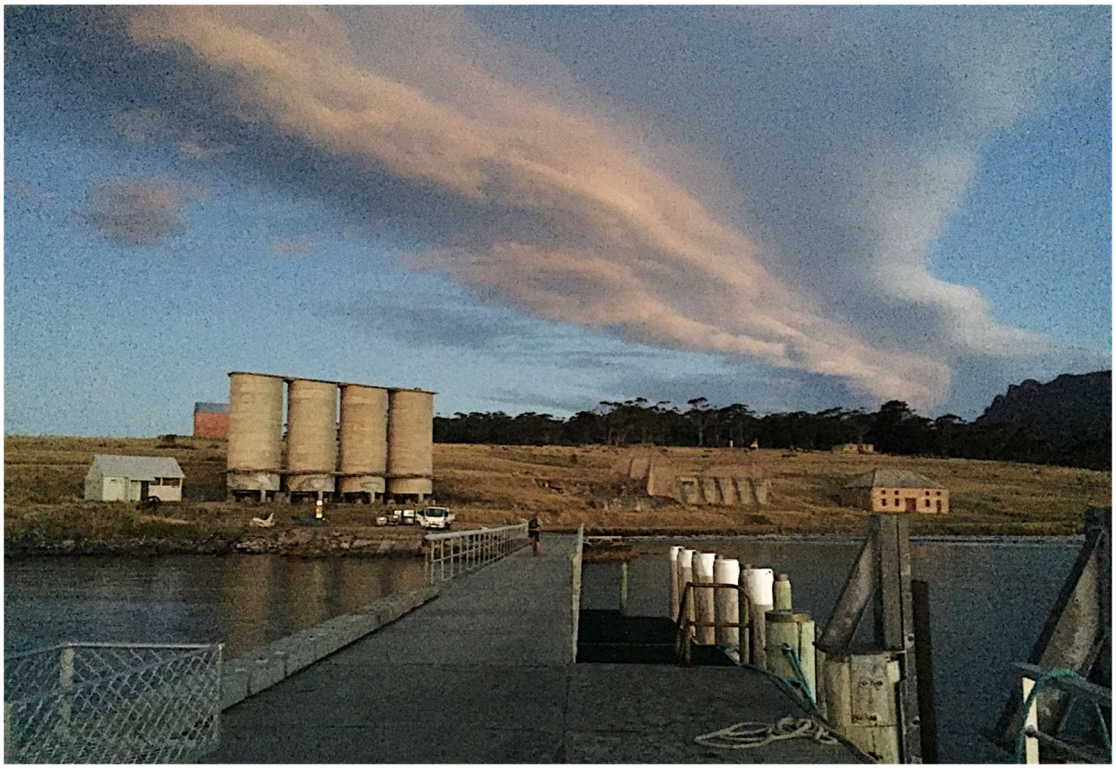


Figure 20: View on disembarking from the ferry. Cement silos and remains of NPCL buildings. The Commissariat building is to the right. Bernacchi's house is behind it on the hill. View east.

"Fresh enterprises among the ghosts of things that had been": the convict legacy

The legacy of the convict landscape influenced all subsequent development at Darlington. From the beginning of European settlement in the early nineteenth century, Darlington's cultural landscape was built on unequal power relationships. During Darlington's industrial eras, the inherited landscape of hierarchy and status was used to symbolic effect to reinforce roles and distinctions within the community. For example, Bernacchi chose the Religious Instructor's House for his family home. Located on a hill overlooking the settlement and the bay, the house's location and appearance provided a symbolic link to inherited status, possibly motivated by Bernacchi's desire for recognition and enhanced status among his peers (Palmer, 2005). Continuing the tradition, the house later became the home of Strudwicke, chief chemist for the NPCL. Meanwhile, workers were housed in and around the convict quadrangle, on the other side of the creek.

While the only surviving structures from the first convict phase are the Penitentiary (Figure 21), and Commissariat, the choice of location for the settlement and its initial layout influenced later developments. The character of Darlington, from where and how

it sits in the landscape to the way it is approached from the harbour, was shaped by decisions that were made during this earliest historical phase. During the second convict phase, the quadrangle layout was enclosed and formalised, in keeping with the Probation era philosophy of convict discipline, surveillance and reform, and in the 1880s, Bernacchi modified the quadrangle to create a village. To do this, he demolished the imposing, two storey Separate Apartments, leaving only the remains of the northern outer wall to serve as a rustic fence, delineating and enclosing the space. The remaining single storey plain, whitewashed buildings sit low in the landscape and give the settlement its character. By retaining the layout of the Probation Station quadrangle, Bernacchi preserved its inward-looking focus, conforming to his ideal of a village and provided a focus for community life.

Figure 21: The Penitentiary building today with its 1920s portico, surrounded by Probation era buildings. View east.

Other Probation era buildings in the quadrangle were modified during both industrial eras yet retain their original character. Alterations to the Penitentiary building included the addition of a verandah in the 1920s and a pitched portico that mirrored and provided cohesion with the Coffee Palace opposite. The Mess Hall also underwent alterations and additions but retained its high-pitched roof with exposed beams. During the NPCL era, the Mess Hall was run by a contractor who provided "excellent food for a guinea a week" (*Mercury,* 26 February 1923:5) and today continues to be used as a mess hall for campers. Some buildings within the quadrangle were brought back to their original use, such as the sandstone flagged bakery with its deep oven, while others were repurposed,

providing new facilities for the settlement such as a post office and general store, a billiards room and school.

Bernacchi's motives in retaining the convict buildings and settlement layout were pragmatic, aesthetic and symbolic. He chose to "establish fresh enterprises among the ghosts of things that had been" (*News*, 15 July 1924:4) and utilise this inherited architecture and setting, its symbolism and meanings. Ruins have material agency. Manning (2017) argues that the lack of ruins in the "New Worlds" contributed to broader colonial anxieties of unsettlement and a need to find new forms of haunting. At Maria Island in the 1870s and 1880s, visitors took pleasure in imagining the miserable horrors that took place in penal settlements such as Darlington. The low, whitewashed convict buildings are described as "chilling and ugly", with small windows and bare, plain fronts, the insides "decayed and desolate" (*Argus,* 10 April 1890:7). Therefore, by retaining part of the Separate Apartments as a garden wall for the Coffee Palace, or by keeping the "ancient pillars and railings" from the convict hospital (*Argus,* 10 April 1890:7) to frame the Grand Hotel, Bernacchi used the romantic, gothic appeal of the ruins to lend an air of legitimacy, of belonging, and a connection with history.

Figure 22: ***Old prison settlement buildings in the middle distance, [Darlington] Maria Island*****, c.1886, View south from Bernacchi's garden. The Separate Apartments enclose the quadrangle on the northern side, Penitentiary is opposite (Allport Library PHOTO AS280).**

This reflects an interesting paradox in late nineteenth century attitudes to convict buildings, revealing a simultaneous desire to leave the past behind while drawing validation from it. Bernacchi's willingness to reuse convict buildings could be considered unusual at a time when convict buildings elsewhere were being systematically destroyed in an effort to "erase a phase of Tasmania's history that many preferred to forget" (Forward, 1984:103). Even as late as 1923, a report described the standing convict buildings at Darlington as "reminders of a shameful page in the history of the State, and of the Empire, [… that] give food for the morbid imaginings" (M*ercury,* 26 February 1923:5). At the same time, much was made of Bernacchi's modern approach, his contribution to the economy of Tasmania, and the idea that the colony was moving away from its unfortunate past.

Figure 23: The Coffee Palace.

As well as repurposing the existing buildings, Bernacchi also made added some new ones. The Coffee Palace, along with other buildings constructed during the first industrial era such as the overseers' cottages (1888), the Grand Hotel (1888) and the Twelve Apostles (1888), have a cohesive style characterised by gabled roofs with decorative bargeboards and fretwork on timber verandah posts. The weatherboard T-shaped Coffee Palace (c.1888) that replaced the Separate Apartments (Figure 23) was

known as Arlington House when it was run by the Adkins in the 1890s, and as Aldermania when it was run by the Aldermans in the 1920s and served as a boarding house. The windows of the two dining rooms face onto the quadrangle and the rear bedrooms face east and west, overlooking what was once a vegetable garden and fruit trees.

Working within the constraints of landscape and making the most of the settlement's romantic charm, Bernacchi combined the old and the new. He made deliberate choices about the look and feel of the township, which in turn had ramifications for the relationships of power within the settlement and the residents' daily lives. Bernacchi set out to create an idealised European landscape that was ordered, productive, picturesque, and that legitimised social order and hierarchy (see Gibbs, 1997:57), ideals that were not dissimilar to the convict era that preceded him.

"Lombardy facing the Alps": idealised and legitimising landscapes

Vegetation clearance by the convicts around Darlington and the headland above the bay created a landscape of open vistas and parkland spaces on rolling hills. An early illustration of Darlington (Figure 24) presents an idealised version of an ordered and controlled landscape. In the romantic style of the time, the painting depicts a picturesque and familiar landscape that legitimises Europeans' connection to this place. Although no convicts are visible, the result of their labour is evident. The bush has been tamed through clearance, only a lone eucalyptus tree in the foreground indicates that this scene is in Australia. Neat fences mark out the boundaries, road and paths. People in the foreground seem to be at ease in their surroundings. As has been observed of Lycett's paintings (Figure 25), *"*Europeans are seen to be in harmony with a fertile land, a land which has been ordered by them and in which they are able to experience leisure" (Hoorn, 1986). This aesthetic was maintained and enhanced with other plantings by Bernacchi. Cleared parklands projected ideas of English aristocratic privilege onto the Australian landscape, while neat rows of grapevines and avenues of trees gave a sense of order and control, and the comfort of the familiar.

Figure 24: "Distant view of Darlington, Maria Island" by Robert Neill, c1830 (copy) (Tasmanian Archives AB713/1/8953)

Figure 25: Joseph Lycett, *View of Tasman's Peak, from Macquarie Plains, Van Diemen's Land,* 1825 (NGA 84.125.49)

Land legislation in Tasmania throughout the nineteenth century was driven by ideas associated with the Enlightenment concept that agriculture was a superior form of improvement (Meikle, 2014). The symbolism of wine and viticulture fitted within ideas of civilisation, going back to the ancient Greeks and Romans, and the nineteenth century interest in neo-classical design and culture, as well as modern ideas of refinement and gentility. Viticulture and the ordered rows of grapevines transformed the landscape into one that was, to nineteenth century European eyes, productive, beautiful and controlled (Hannickel, 2010:283). In 1879, John Bleasdale wrote that it is "an act of patriotism" when "wealthy men" planted vineyards. There is "a charm and freshness about the study of a European industry just being introduced on virgin soil" (Hannickel, 2010:292). The romantic myth of individual opportunity in a "new" country was part of a liberal ideology that viewed enterprise as a marker of success and development as a universal law of civilised society (Burke, 1999:76-77).

Tree planting was an important element in Bernacchi's landscape design, reflecting a European sensibility and a grand vision for the future of the town and its industries. Bernacchi described the avenue of poplar and cypress trees in an interview,

> "Nearly 40 years ago," he confided, "I planted them with my own hands: they remind me of Lombardy!" And then, in an abstracted voice that said a thousand things, he softly echoed to himself: "Lombardy facing the Alps!" (*News,* 15 July 1924:4).

The tall, conical Lombardy poplar (*Populus nigra*) was used throughout Europe as an avenue tree from the mid-eighteenth century (Wood, 1994). Whether or not Bernacchi had read *Arboretum et Fruticetum Britannicum* (Loudon, 1838) that stated, "It is a general rule in the composition of landscapes, that all horizontal lines should be balanced and supported by perpendicular ones," these principles would have been familiar to him from his experience of European and English towns. At Darlington, the replanted poplar avenue, marking the entrance to the township, is offset by the horizontal lines of the hedges, fences and the bridge (Figure 26). The avenue conveyed the message that this was a township of substance and style and created a pleasing vista from the Grand Hotel and Bernacchi's house on the hill.

Figure 26: Darlington c.1910-1915. View south showing the avenue of poplar trees. The hawthorn bushes were a common hedging plant and add to the European feel of the rural landscape. (Tasmanian Archives NS1013/1/1448)

The whimsical addition of a pigeon loft (Figure 27) built in a prominent position, on the vineyard hill to the south of the settlement added a folly to the vista. The loft was built from Huon pine without any nails (Ludeke, 2005:94). It had a central staircase and two platforms from which messenger pigeons could be sent and on festive occasions, white birds would be released. Bernacchi's motivation for building this structure when the island had a post office and regular mail service delivered by boat is unknown. Possibly it was linked to his flamboyant and exotic image of himself and the settlement. Charles Adkins (1987) remembers climbing it as a boy in the 1920s, an example of how structures from an earlier period acquire new meanings for people, part of the changing landscape in association with new buildings, in this case no longer associated with the vineyard but just up the hill from the school.

Figure 27: Pigeon loft, c.1892 (Tasmania Archives NS1013-1-1432)

The physical changes Bernacchi made to the landscape reflected his vision, his background and his time. He brought with him inherited ideas about the landed gentry, pastoral landscapes and paternalism, but he was also a businessman, director of the Maria Island Company, and motivated by the need to maximise profit. Often called "the father of Maria Island," the title conveys benevolence, while simultaneously bestowing social control, status and prestige (Scott, 1985). As Bernacchi set about transforming the convict landscape, making choices about what to destroy, what to restore and what to create, his approach was one of entrepreneurial innovation and pragmatism, combined with an astute sense of the symbolic.

Figure 28: View towards cement works taken from the hill behind Houses 11 and 12 (Beattie c.1924–1929, State Library of Victoria H92.350/126).

Isolation and uncertainty: life and work in the NPCL era

The relationship between home and work and the quadrangle continued to structure the landscape of Darlington during the 1920s. During this second period of industrial development, industry was front and centre. The new cement works dominated the harbour and views from everywhere within the settlement (Figure 28). Large ships docked at the deepwater jetty and railway lines cut across the hill between quarries (to north and east), harbour and jetty.

Unlike the familiar paternalism of the 1880s when Bernacchi and his family lived on the island, in the 1920s the NPCL era was characterised by a more pragmatic and profit-driven approach. The company was run by directors who managed the company from Melbourne. Wireless telephone-telegraph apparatus, installed on the island to facilitate communication between the directors in Melbourne and the cement works (*Mercury,* 21 September 1923:2) was a material reminder of the employees' isolation. Further reinforcing the division between the workers and those in charge, the Grand Hotel on the hill overlooking the cement works was converted into offices for the site managers.

As the priority of the company was to get the cement works up and running as quickly as possible, construction focused on the factory and related infrastructure rather than accommodation for the workers. Single men, employed to build the cement works, were housed in shared living quarters such as the Penitentiary or the temporary work camp. These living arrangements conveyed a sense of impermanence and were indicative of the lack of job security. If work was stopped, due to bad weather for example, workers did not get paid and most would just leave. In 1925, when part of the cement works closed, the island's football club was unable to field a side *(Mercury,* 10 June 1925:4). It is difficult to gauge the impact of this uncertainty on the residents, who were aware of the tenuousness of their situation, as they depended on the company for their livelihood and f the survival of the community as a whole (see White, 2017:3).

Housing: differentiation and standardization

Architectural style can be linked to ideology as part of the process by which people construct their social identity in relation to other groups (Burke, 1999). In a company town driven by ideals of capitalist production, two principles are simultaneously at work, hierarchical differentiation and standardisation (Zarankin and Senatore, 2005). In the landscape of Darlington, this is seen most clearly in the housing. Managers and those in higher status jobs with specific skills had more job security and better housing, than the standardised accommodation provided for labourers and casual workers.

Bernacchi's home

Bernacchi's family home, with its elevated position and commanding aspect, presented a view brought under control, representing ownership, and future opportunities (Ryan, 1996:74-89). Bernacchi demolished the adjoining convict hospital and doctor's house, but rather than build a new house out of the reused bricks, as he had done for his workers, Bernacchi chose to live in the old Georgian style building and enhanced the entry with new sandstone stairs (*Daily Telegraph,* 26 April 1888:3). Design choices for the "pre-entry" to a house (façade, fences, gate, landscape style) are a way of displaying status through material and design and send a symbolic message about who is included or excluded (Burke, 1999). Photographs of Bernacchi's house from the late 1880s (Figure 29) show a white picket fence around an ornamental garden with circular,

semicircular and rectangular beds bordered with flowers, and plantings of ferns and succulents. A structure topped with a flag near the fence (Figure 22) could be a weather vane, or a representation of the Eiffel Tower, a nod to Bernacchi's involvement in the 1889 Paris Exhibition (Gilfedder and Associates, 1997:25).

Figure 29: ***The Bernacchi family on the veranda at their residence at Darlington,*** **late 1880s, prior to demolition of the convict hospital, visible to the left of Bernacchi's house (Tasmanian Archives PH30/1/3085).**

The overseers' cottages

Housing within the settlement reflected the occupant's employment status. Two asymmetrical weatherboard cottages with fenced front yards face west were initially built for the vineyard overseers and later used for the cement works managers. The cottages are situated to the south of the town square, on the high side of the road leading south towards the vineyards (Figure 30, Figure 31). The cottages have hipped roofs, wide eaves, fretted timber bargeboards across gable ends, and a verandah with decorative timber corner brackets. These stylistic details are present on other 1880s buildings within the settlement and provide cohesion between them. The domestic gothic style provided a symbolic link to a romantic image of a rural, historic past

(Apperly, 1989) and reflects middle class taste at the time (Campbell 1987 in Burke, 1999:121). The front yards of the cottages were fenced and landscaped with plantings, some of which remain today. While the pre-entry space is not as elaborate as at Bernacchi's house, it is more substantial than at the Twelve Apostles or the terrace houses adjacent.

Figure 30: Southern cottage, built c.1888. View east.

Figure 31: Northern cottage, built c.1888. View east.

Terrace houses

Closer to the settlement, two rows of terrace houses lie to the north of the overseers' cottages. The brick buildings are much smaller than the overseers' cottages and very different in style to the post-convict weatherboard buildings. The northern row of terraces is a late Victorian Georgian brick structure (Figure 33). Historical photographs indicate that it was built after the demolition of the Separate Apartments, but prior to construction of the other accommodation (Figure 10). It has a shared verandah along the front accessed from the southern end with three doorways leading into the central hallway of each house. The two rooms on either side of the hallway each have a fireplace that share a common chimney and could operate as two separate apartments. The smaller living area, the lack of a fenced garden and the more basic amenities, such as no separate stove, indicate that this was more likely to have been accommodation for single male employees who would have taken their main meals in the Mess Hall.

Figure 32: Two men standing in front of the terrace houses, 1920s. Note the fencing in front of the southern terrace houses. View south (Tasmanian Archives NS2910/1/1).

The row of terrace houses to the south are slightly offset from each other, with separate balconies and entrances. Further privacy is provided by the fenced front yard, shown in a photograph from the 1920s (Figure 32). Staggering the heights of the houses could simply be a response to the hillslope or a conscious choice to provide more privacy and status. The arched windows and door frames at front and rear of all the terrace houses are reminiscent of Italianate style (see Apperly, 1989:70-3), while the concreted windowsills, imitating stone lintels, and the symmetrical facades are more in keeping with the convict era buildings (Figure 34). Unlike the terrace houses to the north these houses have no central corridor, which means that within a footprint that is the same size as the northern terrace, the missing central corridors allows for larger rooms. The disadvantage of this is that some rooms can only be accessed via other rooms, a less private arrangement that would possibly have been more suitable for family accommodation. Like the northern terraces, these houses have two double fireplaces, with no internal bathroom or separate stove in the kitchen.

Figure 33: Northern row of terrace houses, built c.1888. View south-east.

Figure 34: Southern row of terrace houses, built c.1888. View east.

Accommodation for single men

The majority of NPCL employees were single men or men who had families on the mainland and had the additional hardship of keeping two houses and commuting to work (*World*, 13 Oct 1923:4). Single men stayed in the Penitentiary or work camp. A photograph (Figure 35) of the Penitentiary from the 1920s shows towels, washing, and work clothes hung over the fence in front. The fence separates the single men's quarters from the square and the facilities used by everyone.

Figure 35: Penitentiary building during the NPCL era (Tasmanian Archives NS2910/1/1).

In the 1920s, a temporary work camp was set up for single men working on the construction of the cement works. Laid out on the hillslope behind the Penitentiary, photographs show huts set on timber platforms with brick chimneys, in rows that follow the contour of the hill (Figure 36). There seem to be about fifteen huts which could each house two to four men. Following an inspection in 1924, the union organiser reported that although conditions were okay, the hut accommodation had room for improvement and was not ideal for winter (*Mercury,* 22 July 1924:2). Joe Flanagan, a carpenter who worked on the construction of the cement works on Maria Island and Miele Dam photographed a work camp. While the photograph may have been taken at either location, it is indicative of the type of basic, transitory accommodation provided for labourers in remote locations (Figure 37).

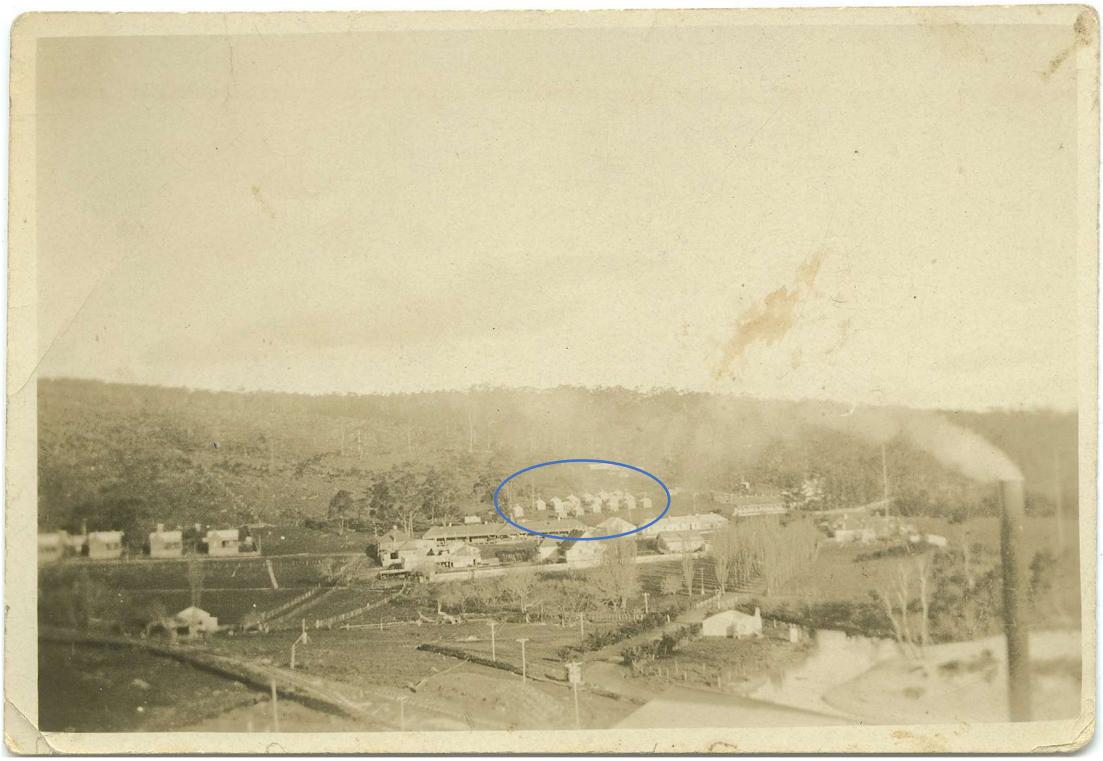


Figure 36: Darlington from the cement works c1924, showing the location of the work camp. The Tin Shop is in the foreground, north of the bridge (Tasmanian Archives NS479/1/107).

Figure 37: Work camp at either Darlington or Miele Dam from the photograph album of Joe Flanagan (Tasmanian Archives NS2910/1/1)

Workers' cottages

In company towns characterised by high ratios of male labourers, companies tended to regard married women and families as a desirable and stabilising influence (Borges and Torres, 2012). This was often reflected in a hierarchy of accommodation, that has been well documented in timber and mining towns (Davies, 2006; Gibbs, 1997; Pappas, 2004), and is evident at Darlington. Behind the town square, the row of workers' cottages known as the Twelve Apostles was built for the families of employees in 1888 and refurbished for similar use in the early 1920s. In appearance, they are smaller, simpler versions of the overseers' cottages. The following chapter will examine the archaeological remains of the Twelve Apostles as a case study of workers' housing within the settlement.

Archaeological remains show that during the NPCL era, new housing tended to be of poorer quality than earlier buildings. This is evident in the remains of four workers' houses on the headland north of the cement works, and four or more cottages to the east of the Twelve Apostles (Figure 38). Surface remains of these cottages are limited to the remnants of fireplaces and concrete features such as drains. Brick fireplaces and surfaces were constructed on a loose base of rocks and brick rubble, while corrugated iron formwork (Figure 39) is a distinctive feature of many of the structures, giving an overall impression of hastily built structures utilising readily available, inexpensive materials. Whether the cottages were constructed by individuals, or by the company to rent to employees, is uncertain. However, as the cottages aren't shown on the 1923 map (Figure 15) and the land belonged to the NPCL, it is more likely that these groups of cottages were built by the company. Either way, whoever owned them was unwilling to invest in well-constructed houses or buildings that were designed to last.

Figure 38: Remains of fireplaces on the headland to the north of the Cement Works (c.1920s).

Figure 39: Remains of a fireplace of one of the cottages to the east of the Twelve Apostles (c.1920s) showing construction methods and materials.

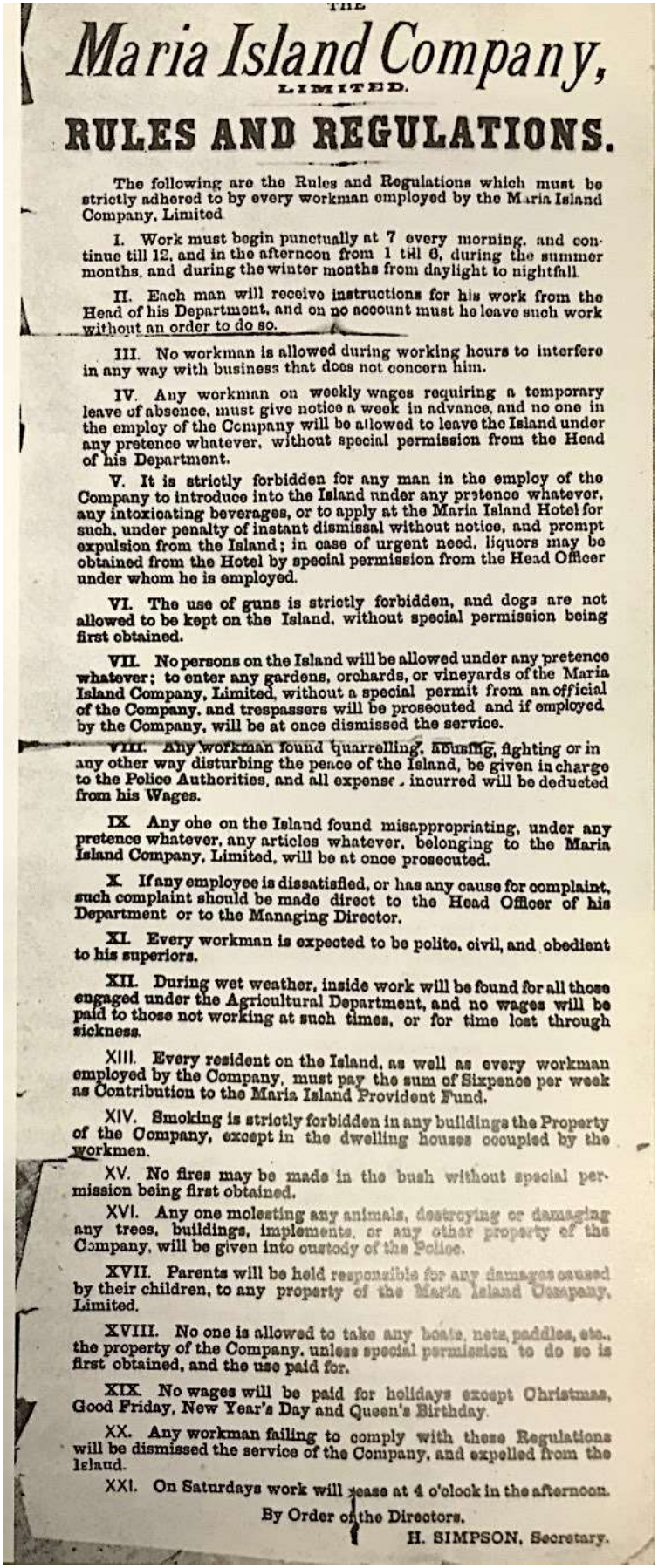
Rules and regulations

During both industrial eras, Darlington was an integrated landscape of town and industry (Mate, 2013). As a company town, it was shaped by the rules of the company and the presence of managers who could take note of general behaviour and who could allocate housing, approve repairs, assign work and enforce company rules (Figure 40). Work drew people to the island and work dominated all aspects of their everyday life.

The Maria Island Company rules and regulations (c.1887) make the relationship between worker and employer clear. Workers were restricted in where they could go and when they could leave the island, "No one in the employ of the Company will be allowed to leave the island under any pretence whatever, without special permission from the Head of his department." The company controlled access to alcohol and whether employees could keep a dog. Remaining on the island was at the discretion of the company, "any workman failing to comply with these Regulations will be dismissed and expelled from the island" (Weidenhofer, 1977).

As with many company towns, the remote location enabled company-controlled transport, therefore restricting who could enter and leave. In 1922 when the cement works were under construction, the president of the Australian Workers Union (AWU) reported that the only way a man could get across to Maria Island was having secured a job there first and the only transport was the company's motorboat (*Examiner,* 21 July 1922:4).

In addition to formal rules and requirements, the company promoted ideals of improvement and productivity outside of work hours. For example, the company made allotments beside the creek available to employees for them to plant vegetables (*Examiner,* 9 February 1924:15). A photograph taken from the cement works chimney c.1924 (Figure 41) shows cultivated beds to the north of the oval. The arrangement highlights the mutual benefits of living in a company town. In a time of economic depression, workers would have appreciated the opportunity for self-sufficiency and the other facilities provided by the company.



Maria Island Company,
LIMITED.

RULES AND REGULATIONS.

The following are the Rules and Regulations which must be strictly adhered to by every workman employed by the Maria Island Company, Limited.

I. Work must begin punctually at 7 every morning, and continue till 12, and in the afternoon from 1 till 6, during the summer months, and during the winter months from daylight to nightfall.

II. Each man will receive instructions for his work from the Head of his Department, and on no account must he leave such work without an order to do so.

III. No workman is allowed during working hours to interfere in any way with business that does not concern him.

IV. Any workman on weekly wages requiring a temporary leave of absence, must give notice a week in advance, and no one in the employ of the Company will be allowed to leave the Island under any pretence whatever, without special permission from the Head of his Department.

V. It is strictly forbidden for any man in the employ of the Company to introduce into the Island under any pretence whatever, any intoxicating beverages, or to apply at the Maria Island Hotel for such, under penalty of instant dismissal without notice, and prompt expulsion from the Island; in case of urgent need, liquors may be obtained from the Hotel by special permission from the Head Officer under whom he is employed.

VI. The use of guns is strictly forbidden, and dogs are not allowed to be kept on the Island, without special permission being first obtained.

VII. No persons on the Island will be allowed under any pretence whatever; to enter any gardens, orchards, or vineyards of the Maria Island Company, Limited, without a special permit from an official of the Company, and trespassers will be prosecuted and if employed by the Company, will be at once dismissed the service.

VIII. Any workman found quarrelling, abusing, fighting or in any other way disturbing the peace of the Island, be given in charge to the Police Authorities, and all expense incurred will be deducted from his Wages.

IX. Any one on the Island found misappropriating, under any pretence whatever, any articles whatever, belonging to the Maria Island Company, Limited, will be at once prosecuted.

X. If any employee is dissatisfied, or has any cause for complaint, such complaint should be made direct to the Head Officer of his Department or to the Managing Director.

XI. Every workman is expected to be polite, civil, and obedient to his superiors.

XII. During wet weather, inside work will be found for all those engaged under the Agricultural Department, and no wages will be paid to those not working at such times, or for time lost through sickness.

XIII. Every resident on the Island, as well as every workman employed by the Company, must pay the sum of Sixpence per week as Contribution to the Maria Island Provident Fund.

XIV. Smoking is strictly forbidden in any buildings the Property of the Company, except in the dwelling houses occupied by the workmen.

XV. No fires may be made in the bush without special permission being first obtained.

XVI. Any one molesting any animals, destroying or damaging any trees, buildings, implements, or any other property of the Company, will be given into custody of the Police.

XVII. Parents will be held responsible for any damages caused by their children, to any property of the Maria Island Company, Limited.

XVIII. No one is allowed to take any boats, nets, paddles, etc., the property of the Company, unless special permission to do so is first obtained, and the use paid for.

XIX. No wages will be paid for holidays except Christmas, Good Friday, New Year's Day and Queen's Birthday.

XX. Any workman failing to comply with these Regulations will be dismissed the service of the Company, and expelled from the Island.

XXI. On Saturdays work will cease at 4 o'clock in the afternoon.

By Order of the Directors.

H. SIMPSON, Secretary.

Figure 40: Maria Island Company rules (Weidenhofer, 1977).

Routines and rituals of daily life

Regular, personal interaction, and the ways this is facilitated by social institutions, the workplace, residential proximity, and family, are important elements that shape communities (Davies, 2006:89). At Darlington, the landscape was structured not only by the need for profit and efficiency, but also by community expectations regarding the provision of basic facilities such as a school, or access to medical and communication services. This commonality of purpose, of shared working and recreational space, played an important role in fostering a sense of participating in a joint enterprise, while the relative isolation of living on an island contributed to a sense of shared identity and belonging (Borges and Torres, 2012:19).

Homelife, routines and chores had to adapt to the demands and hours of work at the cement factory. The population of Maria Island was predominantly male during the NPCL era. Apart from clerical roles (Adkins, 1987) or the company nurse, the cement works were a masculine domain. Cultural norms set limits on female work and women's experiences (Borges and Torres, 2012:22). Women fulfilled roles in town such as school teaching, running the boarding house or taking in lodgers. However, there was also all the unpaid work they undertook to maintain the household (for a discussion on maintenance activities see Montón-Subías and Hernando, 2018), and tasks associated with the cement works, such as washing work clothes or providing a hot midday meal. Children's lives were also shaped by the cement works, influencing where they played and the chores they were expected to do. For example, the school inspector's report for 1922 records that two pupils were absent after 11 am taking dinners to the cement works (Tasmanian Archives ED31/1/26).

Darlington in the 1920s had two shops, one in the town square and the "Tin Shop", to the north of the bridge over Bernacchi Creek. The Tin Shop, named for its construction material, was run by Snowy Bevis. Two photographs show it had attached family living quarters at the rear (Figure 36, Figure 41). In the later photo, the house footprint has been extended, a chimney added and the yard fenced (Figure 41). Charles Adkins remembers that the shop sold boots and trousers, and more importantly, lollies. The other general store, attached to the post office in the main square, was run by Bevis' brother in law. Visiting the shops, bakehouse, butcher, and post office was part of peoples' daily routines and provided opportunities for social engagement, even if these

interactions were not always cordial. The *Mercury* (23 February 1923:8) reported a dispute before the local police court involving neighbours who were "not on friendly terms". Ruby Fox was accused of assaulting Kenneth Walter Kelly (age 10) because he and his younger brother had been teasing two of the younger Fox children. The incident occurred around 6 pm, a time of day when the Kelly children were collecting bread from the bakery and the eyewitness, Norman Phillips, was on his way to the Cement Company's mess room for tea.

Space is actively produced through social interaction, including movement through and between places. The weekly rhythm of the mail boat on Tuesday, Thursday, and Saturday (*Mercury,* 19 September 1925:7) supplied the means of communication and connection with the mainland, provided that the seas were not too rough for the boat to dock. In this way, the jetty had an important physical presence for the island community and also a symbolic role regarding people's interactions and access to the mainland. Pathways provide a form of material traces of everyday routines and practices. While there are official paths such as the one that leads to the settlement through the avenue of poplar trees (Figure 28), there are also unofficial paths. Paths that are created by frequent use as people found more convenient short cuts, such as a more direct way to get to work on foot across the paddock in front of the Twelve Apostles to the Cement Works rather than following the main road between the settlement and the harbour (Figure 41). As well as having a practical purpose, these "desire lines" can be also be seen as a form of resistance and a reclamation of space (Foster and Newell, 2019). They provide evidence of the routes and routines of daily life in a community, whereby people take what is built for them and build upon it (Luckert, 2012:326).

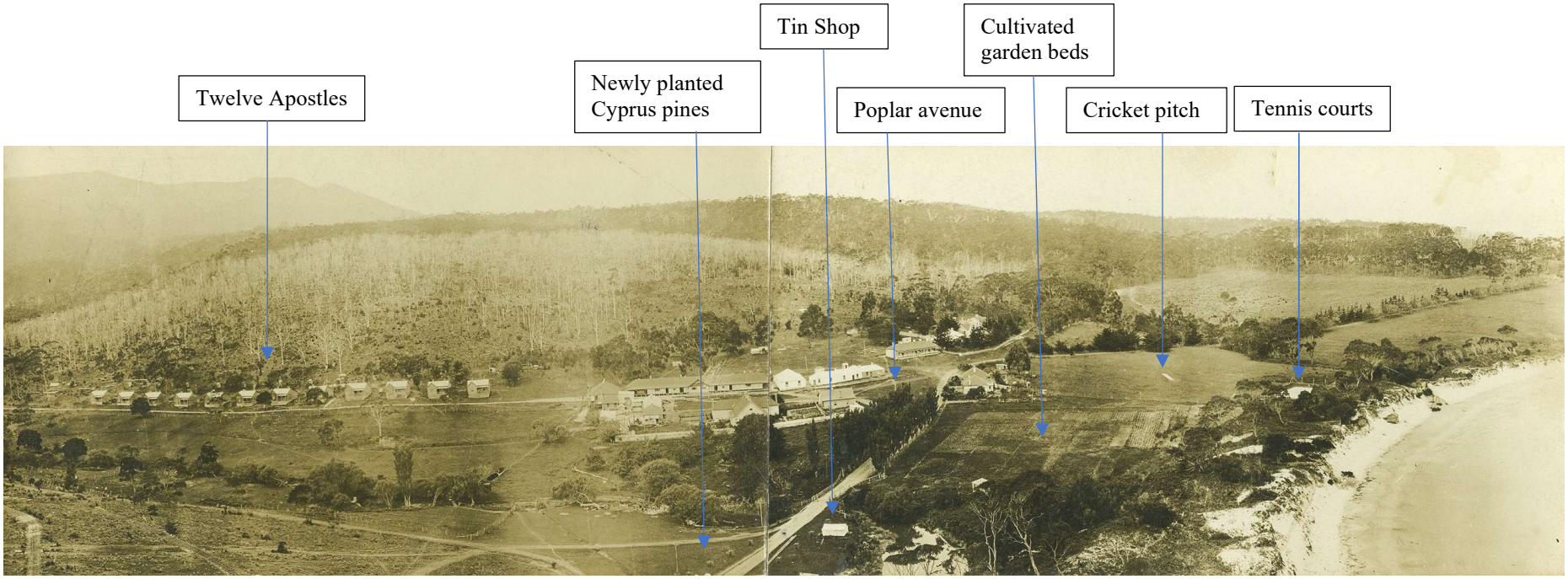


Figure 41: Panorama from the cement works chimney shows the settlement c.1924 (Tasmanian Archives NS479/1/31).

School

In his study of the nineteenth-century timber town, Henry's Mill, Davies views the school building as a "potent physical symbol of the stability of the community and the importance its members attached to educating their children" (Davies, 2006:93). On the one hand, this seems to be the case. Darlington school was established following a petition by company officials and local residents (Tasmanian Archives ED10/1/367). Yet, during the next few years, parental involvement in the school was sporadic and often lacked enthusiasm. In 1926, the education inspector wrote, "There is no outside interest displayed in this school. The Parents Assoc[iation]. has ceased to function." Staff turnover was high, with a new teacher assigned nearly every year. For many of the teachers, it was their first appointment or they lacked experience. The Inspector's report for 1925 records that Mr W.W. Lawson was the third teacher in charge of the school that year; and that although he was well liked and respected seemed to have little idea of what he was doing. At least he fared better than Mr W.L. Read in 1929. Darlington was his first school, and he was "not at all happy in his appointment and is full of complaints regarding the place, parents and pupils. A mild burglary, broken windows and anonymous letters are among the unpleasant attentions he says he has been subjected to." These reports suggest that while school was considered necessary by the company and by the community, there was little effort to retain staff or contribute through the Parents Association, possibly because of the disruptions caused by frequent closures of the cement works and employment uncertainty.

When the cement works opened, there was no purpose built schoolhouse. Classes were held in a hall rented by the Education Department from the company, and the teacher resided in the company's boarding house in the township (the Coffee Palace). By 1925, the population had grown sufficiently that a larger building was needed. A state school was "erected on land known as Bernacchi's vineyard, the property of the National Portland Cement Co, which kindly donated the site" (*Mercury,* 19 September 1925:7). The schoolroom had dark stained oak walls with one picture and a Union Jack, as it was not until the 1950s that the Australian flag took precedence over the Union Jack in schools (Kwan, 2007). The grounds were on a "good well-groomed slope, as yet unfenced" (Tasmanian Archives ED31/1/30). Attending school shaped the rhythm of children's daily lives. Children were expected to carry out chores such as tending to the

yard. The school day included physical training, squad drills and marching, as well as subjects such as reading, mathematics, geography, religion and "civics".

School attendance provides a barometer for the success of the cement works and the corresponding stability of the community. In 1921, sixteen students were enrolled but attendance was poor which the School Inspector attributed to the large, cold building which had no fireplace or ceiling. In response, the Education Department agreed to supply Darlington State School with an oil stove and a tin of kerosene. From 1924 to 1927 there were between 36 and 40 students, although absenteeism continued to be a problem. Writing to the Director of Education, one teacher attributed the lack of academic progress to "the irregular attendance of many of my pupils, many of whom leave the island for indefinite periods, also through sickness and wet weather." The following year, the inspector recorded that, "A shifting population and irregular attendance are handicaps to progress in this school. There are bad cases of retardation in the bottom classes." School enrolments fell as the NPCL experienced difficulties. In 1930, the school temporarily closed and by 1931 with only 12 pupils, the school was closed.

Sport, socialising and Sunday School picnics

On the fourth anniversary of his arrival on Maria Island, Signor Bernacchi, "The popular managing director of the Maria Island Co, with his usual liberality, gave a banquet in the large room of the Federal Club" (*Mercury*, 25 Apr 1888:3). Mr Castle, the local butcher did the catering and the inhabitants of San Diego presented Bernacchi with a silver epergne for

> full appreciation of his courteous and affable demeanour to all, his strict impartiality, and the kindly and active interest taken in all matters conducive to the welfare of residents on the island.

The provision of recreation and sporting activity is often viewed as a management strategy designed to encourage loyalty to the firm. Crewe (2014) argues that "it was more of a "bottom-up" process with workers initiating, organising and sustaining clubs and societies, albeit with a good deal of financial and logistical support from their employers". In other words, it is both a strategy to promote cohesion and workers' identity in relation to the company, while often being driven by the community. The Progress Association was a committee of residents set up to manage the facilities

provided by the company such as the island library and billiards room: “The men appoint their own committee of management, who, in conjunction with the company’s industrial officer, fix the charges” (*Mercury,* 26 February 1923:5). In 1923 it was half a crown a week. The committee is an example of the entwined nature of work and life in a company town.

At Darlington, the company invested in providing sports grounds and equipment and a recreation hall. These were run by the community with input and the omnipresence of the company, such as company managers taking the role of chairman or secretary or handing out prizes. On Easter Monday in 1888, the sports committee provided a programme of amusements at the recreation grounds near the lime kilns, and a concert and ball in the evening. A highlight of the day was the cricket match between the mechanics against the agricultural and engineering department (*Daily Telegraph,* 12 April 1888:1). Signor Bernacchi distributed the prizes for the various competitions held during the day (obstacle race, the Old Buffers race, wood chopping, smoking competition and so on).

During the NPCL era, the tradition of internal competitive sporting matches continued with weekend matches between the outside workers and the inside workers (*Examiner,* 6 December 1924:17). Although it’s not certain who the inside and outside workers were, it could have been the white versus blue collar workers, clerks versus labourers. The senior engineer or manager took presented the trophy to the winning football team (*Mercury,* 27 October 1927:10) and provided donations for the Cricket Club to purchase gear (*Examiner,* 6 December 1924:17). At the school Christmas party in 1924, one of the activities for children was a clinker counting contest. Clinker is produced during the cement manufacturing process (*Mercury,* 6 December 1924:17).

Within the quadrangle, the recreation hall was a focus of social activity for the community during the NPCL era. Used as a schoolroom during the day, it became a billiards room at night and was regularly converted to a dance hall or cinema. A letter of complaint to the editor, advocating for a separate school building, provides an insight into weekly social events:

> on average two dances a week are held in the hall Wednesday and Saturday night. On various other nights meetings are held e.g. football meetings, Progress Association meetings etc. Every

> Sunday morning Sunday school is held, while church is solemnised on Sunday evening. Last but by no means least there is a large billiard table in the hall, and every evening (except Sunday) the billiard table is used by some of the residents (*Mercury,* 6 September 1924:17).

Social activities, both formal and informal, shaped life on Maria Island. Tennis and (Australian Rules) football were the sports, most often mentioned in the newspaper's local news sections in the 1920s, along with the cricket club. Football matches were held against Spring Bay when there were enough men to field a team. The importance of sport in the development of working-class identity has been explored elsewhere (Burke 2008, McDowell 2014), and the role of loyalty to a local team in shaping the identity of a local community.

Medical facilities

There was no doctor on Maria Island. The closest doctor was at Swansea, 32 miles away, but high seas could cut residents off from communication with the mainland and prevent boats from making the crossing to the mainland. This situation continued to be of concern to the residents. At a meeting of employees presided over by Signor Bernacchi in 1887, a resolution was carried unanimously to obtain the services of a resident medical officer. The company would provide an annual subsidy, but all employees would pay 6d per week from their wages towards a fund for "defraying the expenses of medical attendance," and a committee was appointed (*Mercury,* 22 October 1887:1).

During the NPCL era, the company provided a first aid room in a wing of the former Grand Hotel. The dangers of working at the cement works and quarry were intensified by the isolation of living on an island. Between 1921 and 29, thirteen work related injuries, resulting in hospitalisation on the mainland, were reported in the newspapers. Most involved injury to limbs, usually by crushing. In addition, cement dust was an issue. C.H. Cully, trade unionist and local member for Denison, expressed his concern, stating that working hours were too long because of the cement dust workers consumed. He also raised the need for better lighting, and higher wages because of the isolation (*Daily Telegraph,* 26 August 1924:6).

Aside from leaving the island for medical emergencies or to give birth, residents needed to be self-sufficient in managing illnesses and minor injuries by using home remedies and relying on the patent medicines and medical advice supplied by Cuthbert Cobb. Cobb, initially employed there as a first-aid man, left after two months to set himself up in private practice. He was subsequently charged at Triabunna Police Court with having practised as a medical practitioner without being registered (*Mercury,* 22 June 1923:10). His lawyer argued that Cobb did not represent himself as a qualified doctor but rather as a first-aid man who had a great deal of surgical and medical knowledge, having served in the Boer War and WWI in the army ambulance corps. The community's attitude to the situation is evident in their court testimonies about how he had helped them and their children, and in their financial contribution to his lawyer's fees. The magistrate dismissed the case, "to much applause," as Cobb was providing a similar service to a bush nurse and charged much lower fees than a doctor. Cobb appears in the historical record again later that year in a petition lodged with the Minister for Lands to grant permission to Mr C. H. Cobb, licensed dispenser of medicine, to reside on the foreshore on Maria Island (Tasmanian Archives LSD180/1/2076). Cobb had previously rented one of Bernacchi's cottages, but these had now been sold to the company and Cobb considered them crowded and lacking in privacy and safety for his drugs, instead he built a two roomed cottage in the sand dunes between the creek and the sea. The petition cites the "splendid work" Cobb had done for the residents who "regard him as someone necessary to the welfare of the people here" The final signature, number 111, is Diego Bernacchi's. In the absence of access to adequate medical facilities, the community relied on their army veteran medical man and his dispensary.

Alcohol and other vices

Rules around alcohol have been documented at other company towns (Beaudry and Mrozowski, 1988) as a means of moral improvement and control. In these cases, the archaeology has revealed defiance by workers as the rules are flaunted. For a settlement established for the production of wine, there were contradictory rules at Darlington regarding alcohol, how and where it was consumed, and by whom.

In the 1880s, Maria Island Company employees were not allowed to bring liquor to the island (Figure 40) and parcels were searched (*Tasmanian* 29 August 1885:11). Alcohol could only be purchased with currency issued by the company whereby employees would purchase "beer tickets" printed with the words "Maria Island Establishment" for 1 shilling which could only be spent on the island. This dubious system ended after Bernacchi was charged in Spring Bay Police Court with having sold "fermented or spirituous liquors, to wit six glasses of beer" without a licence (*Mercury,* 22 September 1885:4).

Where people were allowed to drink was also restricted. In 1888, a petition from the Maria Island Company requested a license for the hotel to sell liquor "only to persons actually residing in such hotels or persons invited or entertained by them and travellers from places beyond the island" (Tasmanian Archives TRE1/1/1660). As a sanitorium for visitors to the island, the hotel was explicitly closed to company employees.

Yet residents found their own unofficially prescribed places, in areas hidden from view or where people are less likely to be monitored (McCoy and Codlin, 2016). In the 1920s, the work camp behind the Penitentiary became the focus of illicit recreational activities including "'two-up' schools all over the place on Saturday and Sundays, bottles of beer and old time wine, an occasional brawl and noise in the camp" (letter to the *Mercury* 30 October 1925:4). At this time, there was no licenced outlet for purchasing alcohol at Darlington and the locals found alternatives. Old time wine was a tonic of alcohol and beef extract, sold at Cuthbert Cobb's store for patent medicines, and seems to have caused the death of Archibald William McVilly who won two bottles in a billiards challenge and died after drinking it (*Mercury,* 8 December 1925:2). Charles Adkins (1987) recalls that cases of sly grog (ale) were brought over from the mainland and sold from the building next to the police station. There was a police station on the main road, Adkins remembers Constable "King" Cole, but Cole left in mid 1925 (*Mercury,* 10 June 1925:4), and after that, police presence seems to have been sporadic.

Conclusion

In 1925 the Tasmanian Governor, James O'Grady inspected the cement works and lunched at Arlington House (the Coffee Palace) with the cement works' chief chemist,

the chairman of East Coast Shipping, a reverend, and the ship captain. The general manager of the NPCL, Mr K. Maltby Robinson, "referred to the happy relationship between employer and employed and said the company was not troubled by any industrial disputes or labour troubles, for the men worked in co-operation with the management, having the success of the industry at heart" (*Mercury,* 30 March 1925:6). Those in charge presented their vision of a harmonious workplace in a way that linked their own entrepreneurial interests to those of the workers. However, while management could exert control over the official narrative and company controlled spaces, workers participated actively in the creation of meaningful spaces (Borges and Torres, 2012:19). There were officially prescribed spaces (such as roads, the school, Mess Hall, and oval) originally envisioned by Bernacchi and shaped by the values of productivity and progress, and informally created spaces (short cuts, two-up schools, sly grog and medical dispensary) created by the needs and rhythms of daily life. Social networks were created by the inhabitants around the routines and rituals of daily activities such as work, collecting groceries, the arrival of the mail boat, sport and recreational activities, and attending school; routines and rituals which built a sense of shared identity and belonging.

5. House and home – The Twelve Apostles

Paternalism is steeped in assumptions about the working class such as how they should live and what constitutes appropriate housing. It is informed by the belief that contented healthy workers are more productive. This chapter synthesises information from historical texts, images and maps, along with archaeological data, to investigate the ways in which residents of the Twelve Apostles chose to modify the company-provided accommodation to suit the daily patterns of their lives. While a lack of documentary evidence means that it is not possible to know the details of all the people who made up the households of the Twelve Apostles, the archaeology provides clues about peoples' preferences and reveals, at least in part, the routines and rhythms of their lives.

Figure 42: The Twelve Apostles after 1924 (note the presence of electricity poles). The front steps are gone, and the verandah of House 2 has been partially enclosed with an annex. (Tasmanian Archives NS479/1/129).

The Twelve Apostles

The Twelve Apostles were a row of cottages built as accommodation for the vineyard workers and later used to house the families of cement workers. Unlike the slums of Hobart where "the rents are high and the ceilings low, the families large and the rooms small, the floors are rat-eaten and the walls are bug runs" (*Mercury,* 19 September 1919:5), the housing that Bernacchi built his workers was comparatively spacious with good amenities: running water, rubbish collection and, after 1924, electricity. The

houses were situated mid-hillslope beside Bernacchi Creek, with an attractive outlook and a sunny, north-facing aspect facing the sea and fresh breezes. They were occupied during both industrial periods, in the intervening 24 years, and for a brief period after the cement works were shut down in 1929. In 1936, the houses were dismantled and transported to New Town, Hobart, to create temporary housing for destitute persons. They quickly fell into disrepair until the last of the cottages was demolished in the 1970s. On Maria Island, all that remains of the cottages are the remnants of brick footings, fireplaces, walls and paths. This chapter begins with a brief discussion of the historical sources. It then turns to the archaeology and what it reveals about the routines and rituals of daily life and how the occupants made these standardised company houses into homes.

The sources

Historical photographs

Historical photographs of the Twelve Apostles show them as a row of identical houses (Figure 42), and often as part of the settlement landscape (Figure 36). Apart from the blurry outline of a figure on the front verandah (Figure 36) the photographs do not show people posing or going about their daily life. While the intended audience for these photographs is unknown, they reveal a perspective of the cottages as part of a productive industrial settlement and an attractive place to visit or find work.

The photographs show that the weatherboard houses were set on brick foundations that were deeper at the front due to the hillslope. Asymmetrical in style, the houses had a gabled front room and balustraded front verandah, with decorative features such as scalloped bargeboards and timber lace corner brackets on the verandah posts. The front two rooms and the kitchen at the rear of the house had a small sashed window. Presumably, the other back room of each house had a south facing window although there are no photographs that confirm this. Facing north and with no overhang from the roof, the eastern front room would have received the most sunlight. Small timber structures approximately 10–15m behind each house and on the western boundary visible in Figure 41 could be outhouses.

Figure 43: Close up of one of the houses, prior to removal (Tasmanian Archives AD203/1/1977).

A closeup photograph of one of the cottages taken prior to demolition is included in a file with instructions for the reconstruction of the houses in Hobart (Figure 43) (Tasmanian Archives AD203/1/1977). Neither the photograph nor the file contains enough information to determine which of the twelve cottages it is. Of particular interest is a lean-to on the west wall of the house next door. Figure 44 shows lean-tos on the west side of three houses (cross referenced with other photographs, most likely Houses 4, 5 and 6) which indicates that the photograph is of House 7. Although the surface remains are inconclusive, the additions were possibly constructed in the late 1920s or even after cement works had closed. The additions may have been associated with the bathroom of each house as it is on the same side as the laundry feature and associated plumbing and drainage. Like the enclosed verandah at House 2 (Figure 42), it indicates that some residents chose to modify the internal structure of the house and create additional living space.

Figure 44: The Twelve Apostles, c.1920s (Glamorgan Spring Bay Historical Society: 2014-84X).

Documentary evidence

The best written descriptions regarding the layout of the Twelve Apostles are contained in newspaper reports about their relocation to the mainland:

> Each house consisted of four rooms, bath-room, passage, and a small verandah, together with necessary outhouses (*Examiner,* 26 June 1936:9).

> They number 12, each having four rooms and a bathroom. They are of weatherboard, with iron roofs (*Mercury,* 26 June 1936:5).

In addition, a memo from the Department of Public Works, Tasmania, providing instructions for installing the cottages at New Town in Hobart mentioned the enclosed back porches that were not lined, and that the houses had stone hearths (Tasmanian Archives AD203/1/1977).

The commissioned history of Maria Island was more concerned with the outward appearance of the Apostles and their contribution to the view:

> The roofs and fences of some neat little homesteads shining in the sunlight on the slope of a distant hill ("Dio", 1888:42).

Dio's description presents a pleasing bucolic and orderly vista, symbolic of Bernacchi's paternalistic and capitalist vision, and one that is clearly from his point of view. The houses are on a "distant hill", as if seen from Bernacchi's house. Yet, as others have

pointed out (Heath and Bennett, 2000; Upton, 1984) the landowner on the hill sees the landscape differently to the workers from their houses and work areas.

Not all contemporary commentators were complimentary about the architectural style of the cottages. One commentator described them as "a row of wooden cottages that remind one dismally of the speculative suburban builder" (*Argus*, 10 April 1890:7), suggesting that profit had been prioritized over aesthetics. Whether he was referring to the inexpensive building material, the standardized and unimaginative design or the lack of decorative features is uncertain. Nevertheless, the cottages were comparatively comfortable family homes, and during the economically depressed 1920s, newspaper reports were generally supportive of the industrial developments on Maria Island and the opportunities for employment and housing.

> the cottages are now the homes of happy workers for the Portland Cement Company (*Mercury,* 15 July 1924:4).

> Each has its own drainage, put in by the company; there is a regular sanitary service, and garbage bins are provided, which are cleared regularly… The rent is seven and sixpence a week, and the one condition of continued tenancy is that the sanitary rules must be observed (*Mercury,* 26 February 1923:5).

Overall, the reports convey a mood of excitement around what the cottages represented in terms of progress, modernisation, and security for workers.

The written record does not provide clear information on who lived in the houses or when. The annual post office directory, *Wises Tasmanian Directory* provides incomplete entries for Maria Island from 1890. It lists heads of the household and their occupation, and therefore very few women are listed. Exceptions include women with employment such as the boardinghouse manager Mrs Alderman (1922). Addresses are not provided as people collected mail from the post office. In addition, the entries were not updated each year: From 1925 until 1929, the entries do not change and, although NPCL closed at the end of 1929, employees of the cement works are listed in the directory well into the 1930s. Ludeke (2005) presents a list of families living in the Apostles during the 1920s (Table 1) although he does not provide the source of this information or a time frame. Cross referencing with Wise's Directory suggests that these may be the families living there when the cement works closed in 1929. Allowing

for the limitations of Wise's, it appears that occupation of the houses remained relatively stable throughout the NPCL period.

Table 1 Residents in the Twelve Apostles, 1920s

House	Ludeke (2005)	Wise's Directory
1	Quinn	? Quill 1922–1930
2	Christie	Christie 1922–1930
3	Cusick and Preston	Cusick 1922–1930
4	Taylor	Taylor 1921–1924
5	Hunt	
6	Thurstan	? Durston 1925–1929
7	Bowden	Boden 1923–1929
8	Marlow	
9	Kelly	Kelly 1922–30
10	Robertson	Robinson 1922–30
11	Prero	
12	Adkins	Adkins (continuous)

One additional source is a mud map (Figure 45) on an application form for a school submitted by the residents of Maria Island. The map shows three families living at the Apostles in October 1920, prior to construction of the NPCW, the Fergusons, Tapners and Atkins (*sic*) (Tasmanian Archives ED10/1/367).

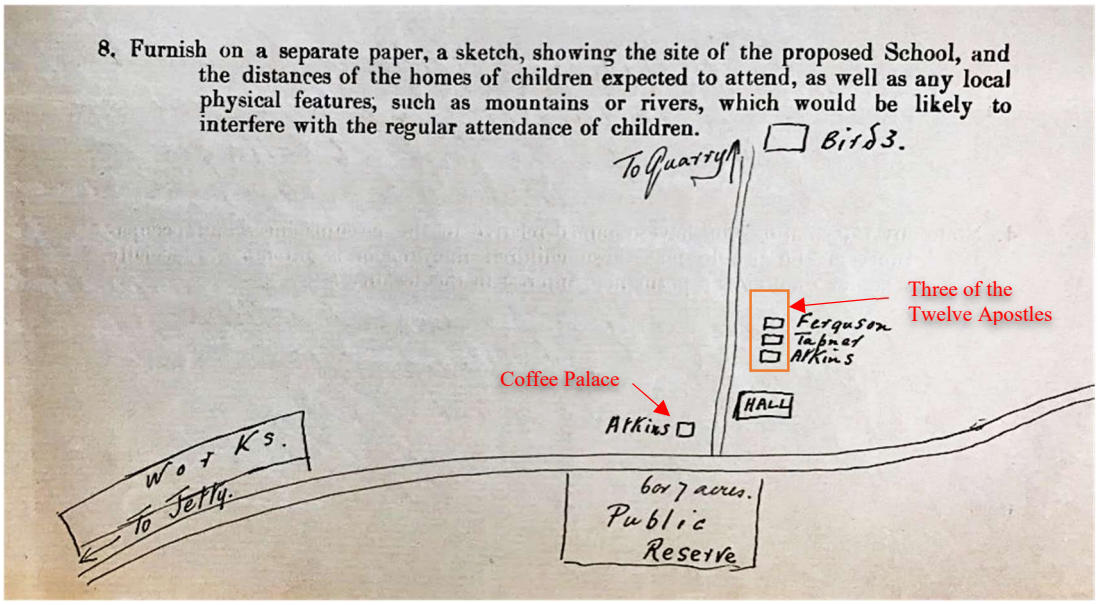


Figure 45: Extract from the school application (Tasmanian Archives ED10/1/367)

Archaeological approach

The gap between the written sources and the lives of the workers on Maria Island is a limitation of historical archaeology (see Chauvel and Flexner, 2020). While the written and photographic evidence tends to present a version of the past from the point of view of the industrialist and their supporters, archaeological evidence can provide a counterbalance, a way to interrogate a broader historical narrative by examining the material remains of workers' houses. Archaeological fieldwork focused on mapping these traces in the yards of the Twelve Apostles, documenting the building materials, recording construction techniques and noting the differences and continuities between them.

Within the local landscape, the smaller space (place) of the household unit, can be seen as a "small" landscape to which the same analytical methods of landscape archaeology can be applied (Brandon and Barile, 2004). To this end, during the first season of fieldwork, in January 2017, we mapped the surface remains of the houses and yards with sketch maps and a total station (EDM). The total station points were projected into ArcGIS and drawn up as plans in Adobe Illustrator. The houses were assigned a number, from 1 to 12, east to west (Figure 46). Mapping contributed to the interpretive framework by providing a productive space of enquiry (Warner-Smith, 2020:771) that generated further archaeological questions around the alterations, variabilities and connections between the houses. The following year, over nine days of fieldwork, a team of six conducted a more focused survey, documenting the features and artefacts within 12x12 m squares behind each of the houses. The size of the recording square was determined by several considerations. Each house is 9 m wide; therefore, in order to capture the side entrances to the yards, the baseline along the rear wall of each house was extended by 1.5 m on each side to create a 12x12 m square. The square was large enough to capture essential information about the structures and features immediately behind the houses but not so large as to become unwieldy. The complementary techniques of mapping by hand and with the total station enabled interpretive and three dimensional recording (see Chauvel and Flexner, 2020). Features within each square were plotted with the total station, assigned a context number (Appendix A), described, and photographed. The points were projected into ArcGIS and added to the drawings in Adobe Illustrator (Appendix B).

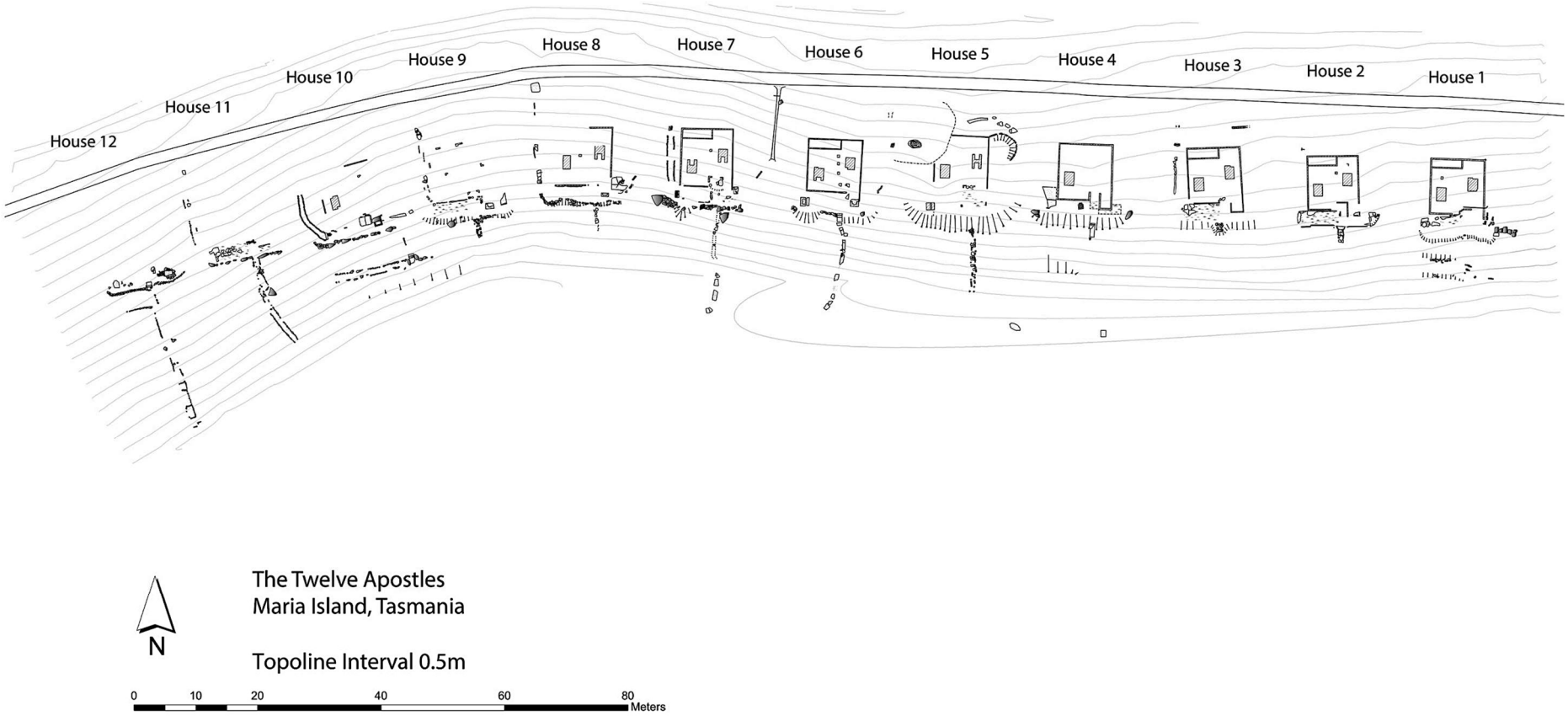


Figure 46: ***Plan of the Twelve Apostles.***

Photographs were taken from a 3.6 m pole with a Ricoh WG-30 camera to create accurate, aerial photographs of the twelve cottages and their rear yards. As the archaeological features of this site were more or less at ground level, pole photography provided an overview not possible with oblique photographs taken from ground level. The images were stitched together using Agisoft Metashape to create ortho-images that provide a photorealistic and spatially accurate record without excavation (Howland et al., 2014). The 3D photogrammetry images enabled an overview and understanding of the character of the site within the landscape (Vermeulen, 2013) and supplemented the measured plan drawings of the site (Appendix D).

Artefacts within the 12 m^2 grid were included in the data analysis. This maintained a consistent survey area size and a clear association with each house. The location of each surface artefact was recorded using a total station, and basic information including material, colour, size and any distinctive features related to manufacture or design was entered into a table (Appendix C). The aim was not only to identify artefact types but more importantly, to distinguish potential areas of activity and rubbish disposal, and identify patterns or differences between the yards.

As Landa et al (2014:72) have observed, taphonomic processes are not usually applied in the field of historical archaeology. However, the impact of human and animal trampling, the role of rainfall and slope on moving objects downslope and how sediment compaction affects artefact distribution and visibility across a site can all influence which artefacts are visible on the surface and therefore the conclusions that are drawn. Landa et al note that in softer sediment small objects tend to become buried, while larger objects are more likely to be kicked about and cluster towards the margins of the site.

In addition, the Twelve Apostles site presented specific challenges. First, the cottages were occupied for a relatively short period, less than 50 years (from 1888–1934). Occupation was characterised by intensive use at the beginning and end of the period with sporadic occupation during the thirty years in between. Secondly, the archaeological resource has been depleted by the effects of a sloping site and the activity of burrowing wombats and fossicking tourists removing artefacts or curating the larger pieces into piles (Figure 47). Finally, during the 1920s the company provided garbage

bins to residents and cleared them regularly (*Examiner,* 9 February 1924:15) thereby reducing the rubbish discarded in the yard.

Figure 47: (left) Tourist curated collection at House 1 on reused cut sandstone block overlaid with concrete. (right) Wombat passing through the archaeological remains.

The decision of the NPCL to collect the residents' rubbish reflects the company's moral ideals of improvement, efficiency and cleanliness, in keeping with a trend in the late nineteenth and early twentieth century towards improved hygiene and convenience, resulting in greater disposability (see Lucas, 2002). Prior to the late nineteenth century, waste was associated with inefficient (and wasteful) household management and items tended to be reused.

Results

Household spaces are shaped by everyday activities which in turn are reflected in the archaeological record, revealing how space was used. The houses were built to a standardized plan. Each house was 9 m wide with an internal floor space of approximately 82 m^2. The houses were set back from the road by about 7–9 m, with approximately 12 m between each house. Bricks, salvaged from the demolition of the Separate Apartments, were used to construct the foundations and arched fireplace bases (Figure 48). Double fireplaces provided for a fireplace in each of the four rooms. How the rooms were used would have differed from house to house and at different times. The kitchen (the south-eastern room at the rear of the house), appears to have been the largest room in the house and would have received morning light through the east window. It is likely that there was no separate living room and that, as in most working class houses of the time, the kitchen was multi-purpose, used not only for cooking and eating but also for other household tasks such as sewing (Casey, 2004). In addition to

the fireplace, a small annex in the south-east corner of the kitchen contained a stove. In the centre of the rear wall an area approximately 1 m^2 was levelled with rocks and brick rubble and overlaid with concrete. This feature survived to varying degrees in each house and was potentially the location of the back doorstep, as it lined up with the steps in the retaining wall that lead to the back yard.

The degree and nature of preservation varied across the row. The easternmost houses have better preserved house footings and Houses 2, 6, 7 and 8 also retain the remains of brick piers that once supported timber flooring. Houses to the west of the row, closest to the settlement, have fewer surface remains of the houses, such as fireplaces or footings, but generally have more substantial rear paths and yards areas. The hillslope is most pronounced in the centre of the row, at Houses 4 and 5, where the height difference between the rear yard and house foundation is greatest and removal of the retaining walls at these houses has contributed to more pronounced slope erosion.

Household places consist of all the spaces that people construct, use and conceptualise, both inside and outside the house (Robin, 2002:246). Archaeological investigations for this project focused on the yard area, defined as the bounded area immediately surrounding the domestic dwelling and which can be considered an extension of the dwelling space. The yards represent a "mediating space" between public and private (Heath and Bennett, 2000:38). Therefore, identifying elements in the yard and looking at how they were constructed provided a starting point for understanding the relationship of these choices to meaning and identity (Mate, 2014a:48). The following sections discuss the differences and continuities between the main features in the yards surrounding the houses. The key features are summarised in Table 2.

Table 2: Summary of yard features and building materials used[1]

	Side path (west)	Rear path	Retaining wall	Steps	Other
House 1	N/A	N/A	Nonextant. Cut into slope [108].	Cut sandstone (reuse) [105].	Concrete and sandstone pavers on east side of house, rear [102, 103].
House 2	N/A	Concrete [204].	Concrete (formwork) [204].	Concrete with formwork sides [205].	
House 3	Concrete over brick, stone edged [302].	N/A	Nonextant. Cut into slope.	Stones, not in situ, depression [303].	Remnant of brick wall at front of house [305].
House 4	N/A	Concrete over brick rubble [405].	Cut into slope with remnant large stones at each corner [406].	Stones used as a base, overlaid with brick and then concrete [403].	Concrete slabs beside west wall of house, indicates location of possible lean-to addition [401]. Sandstone drain (reuse) [407].
House 5	N/A	Concrete over brick and sandstone rubble. Edged with brick and stones. Section closest to the house repaired with another layer of concrete. Three steps along the path [506].	Eroded bank, remnants of dry-stone wall [507].	N/A	Raised and stone edged garden bed in front of house (north-east corner) [509]. Concrete path around bed leading to rear of house on east side [508]. Laundry structure [501]. Tap [504].
House 6	N/A	Concrete over stone and brick rubble [607].	Dry stone wall [608]	Thin concrete over well laid brick [605].	Laundry structure [601].
House 7	Parallel lines of irregular stones, quite wide [707].	Concrete over stone and brick rubble [706].	Dry stone wall [705].	N/A	Laundry structure [703].
House 8	Concrete, brick edged [804].	Coarse concrete over brick and stone rubble [807].	Dry stone wall [805].	Cut sandstone [806].	Concrete slab laid over rubble, drain, SE rear of house [802].

	Side path (west)	Rear path	Retaining wall	Steps	Other
House 9	Concrete with stone edging [908].	Brick overlaid with concrete, stone edging [906].	Dry stone wall [905].	N/A	Concrete slab and drain, SE rear of house [903].
House 10	Stone edging [1008].	East-west path, stone edged [1005].	Dry stone wall [1004]	N/A	Two concrete steps with an intermediate sandstone step, in between Houses 9 and 10, rear yard [1006].
House 11	Stone edging [1106].	Stone edging, sandstone flagging and four stone steps [1105].	Dry stone wall [1104].	N/A	Concrete slab, SE rear of house [1103]
House 12	N/A	Stone edging [1206].	Dry stone wall [1203].	Brick and concrete, stone edged [1204].	

[1.] Square brackets indicate context numbers. Also see Appendices A and B.

The front yard

Unlike the "pre-entry" space at Bernacchi's house, with its high picket fence and neat garden beds, photographs show post and wire fencing at the Twelve Apostles and archaeological evidence indicates that the residents of the Twelve Apostles made little effort to enhance their front yards. A notable exception is House 5 where remnants of a garden bed survive. To the north-east of the house, a mound edged with stone had been created, and a concrete path constructed across the front yard and around the raised bed (Figure 48). The front yard also contained a large tree to the north-west of the house, which had been cut down just prior to the 2017 survey. None of the other houses had surface evidence of landscaped garden beds or plantings.

Figure 48: Raised garden mound and front path, House 5. View south-west.

In the earliest photographs of the Twelve Apostles, steps lead up to the front verandah, but by the early 1920s, these steps had been removed (Compare Figure 5 and Figure 44). This may have been due to their state of disrepair, but it is interesting that they were not reinstated, suggesting a preference by the inhabitants to use the back door as the main entry. At the time, it was common in Australia for formal visitors to knock on the front door, while family and friends would use the back door. In more well to do houses, entry through the front door led into the formal rooms of the house, while the back door was used by servants. This point of difference affected the layout and

alterations people chose to make to the houses. Bernacchi added front steps and enhanced his front yard with plantings, while it was more practical for residents of the Twelve Apostles to use the back door as it lead into the kitchen and focus of household activity.

Side paths

Some of the best surviving evidence of alterations to the yards is the side paths leading from the road to the rear of the houses (Figure 49). The paths represent a ritual of everyday life for the inhabitants, as they returned home, entering through the back door into the kitchen. Remains of side paths beside the western boundary of each house, were present at six of the houses. At Houses 3, 7, 9, 10 and 11 the paths were edged with local rocks, but at House 8 the path was edged with brick pieces. House 4 was unusual in that it had a well-constructed concrete slab abutting the west side of the house at the entry to the rear yard, creating a neat edge to the drain and an extension of the paved area (Figure 50). This paved area may have been the surface for the lean-to structure shown in the pre-demolition photograph (Figure 43).

Given the muddy conditions described in newspapers — "some rain fell, and immediately the settlement was little better than a cowyard … mud and slush everywhere" (*Launceston* 26 August 1924:6) — it is likely that all the paths would have had some sort of surface. However, surface remains are only visible at Houses 3, 7 and 8. Houses 3 and 8 had remnants of a concrete surface overlaying the brick path, and House 7 had a gravel scatter that appeared to have been part of the path. The variation between the construction styles of the paths suggests that individual occupants, rather than the company, created the side access pathways to the rear of the houses using whatever materials were available.

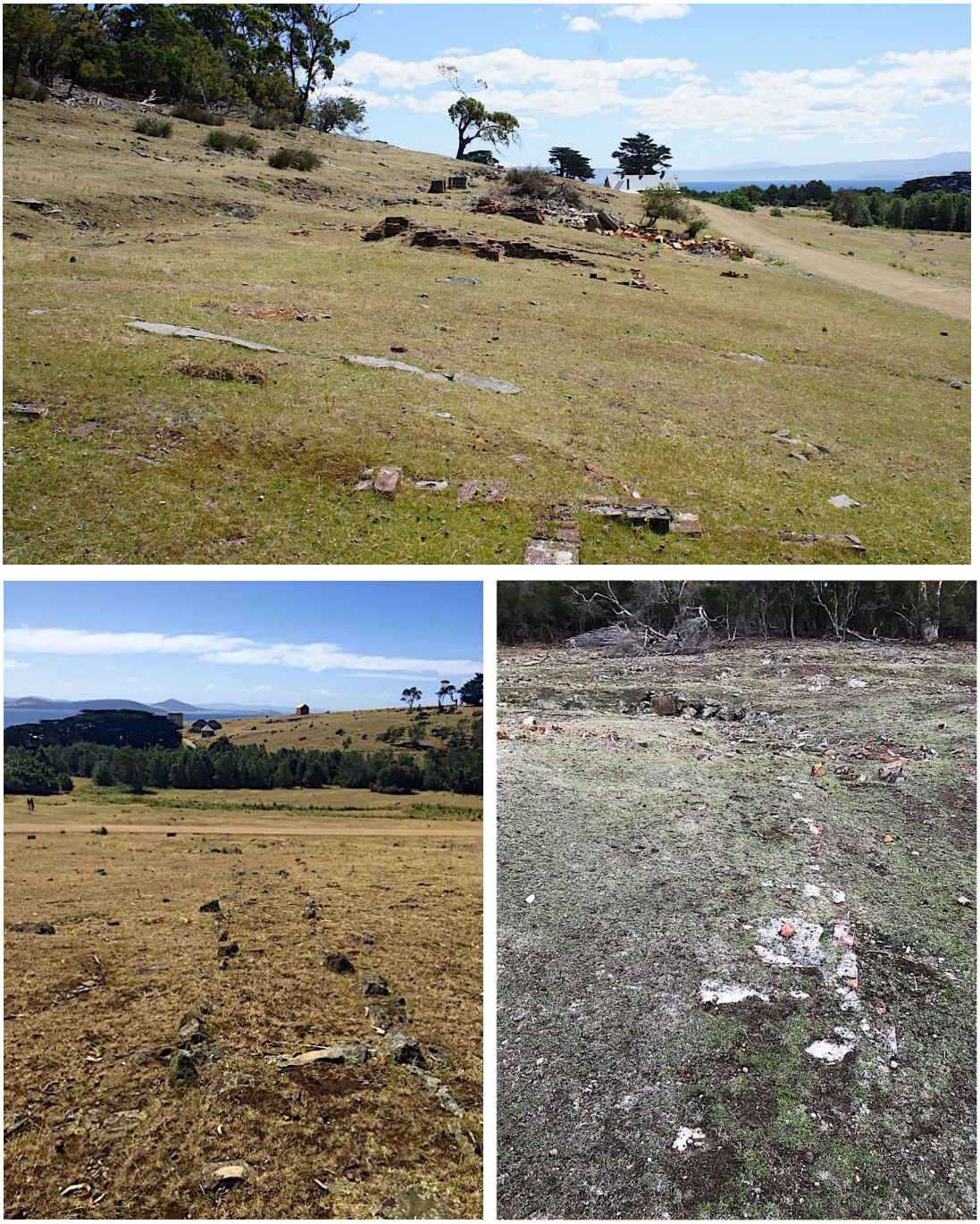


Figure 49: Side paths. Clockwise from top: House 3, view west; House 8 view south; House 11, view north.

Figure 50: Paved area to the west of House 4, view north.

The rear yards

The rear of the cottages would have been the focus of household chores and activities. Adjacent to the kitchen, the rear yard served as an extended work area for household chores (Casella, 2012). The area immediately behind each of the houses had been benched and levelled, and a retaining wall added. This effectively divided the rear yards into two areas which can be described as the *active yard*, and the *outer active yard* (see Moir 1987 cited in Heath and Bennett, 2000). The *active yard* comprised the levelled and paved area immediately behind each house, while the *outer active yard* encompassed the remainder of the yard, beyond the retaining wall (Figure 51).

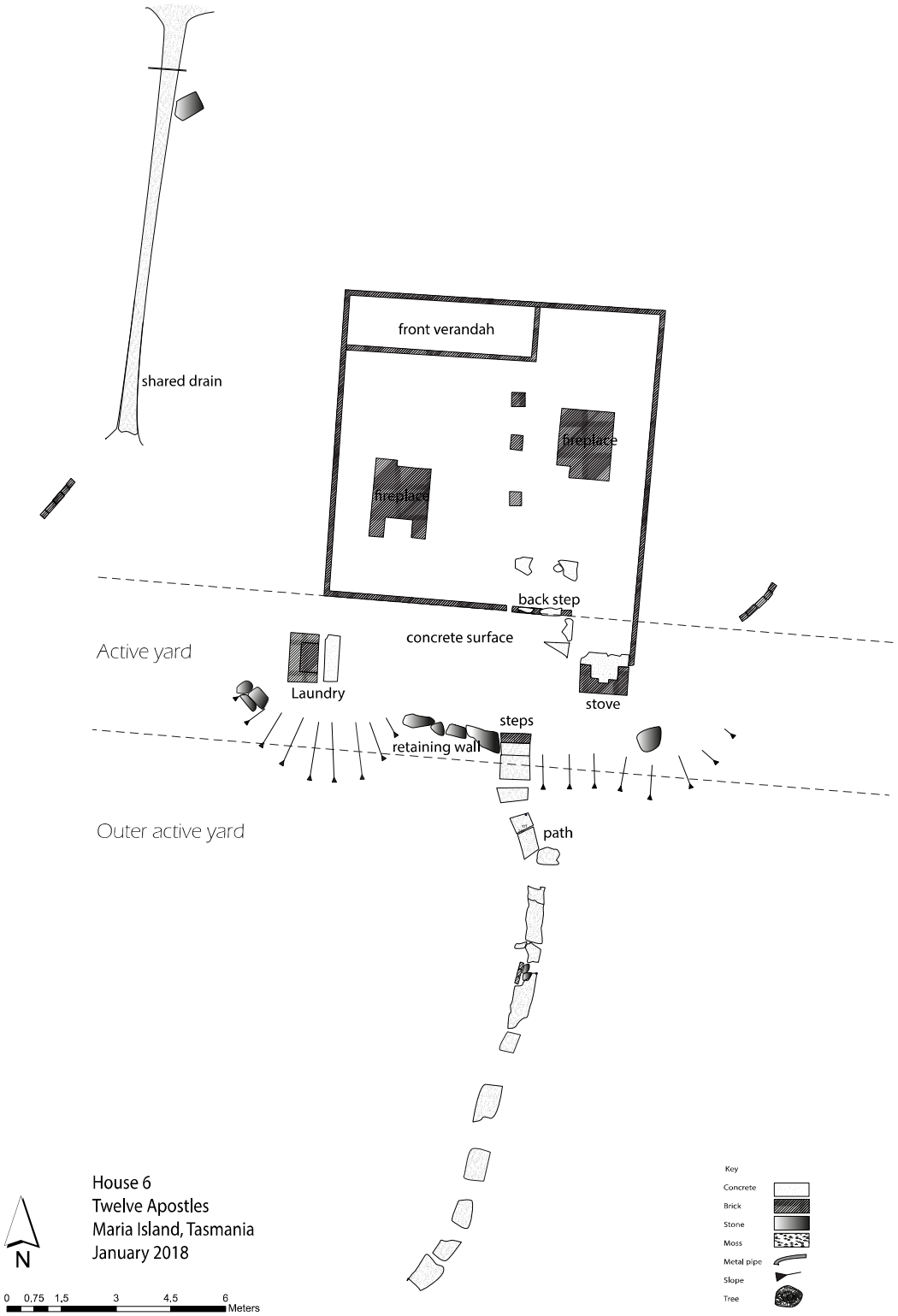


Figure 51: Active yard and outer active yard, House 6.

The active yard

At each of the Twelve Apostles, the active yard was approximately 3 m wide, abutting the retaining wall that divided it from the outer active yard. The paved active yard functioned as an extension of the house work area and was an important space in the rhythms and routines of home life, of household tasks, and comings and goings. The remains of a probable laundry area on the west side of the active yard were present at three houses near the centre of the row (Houses 5, 6 and 7) (Figure 52). However, the presence of drains and remains of paving at the other houses suggest that some sort of laundry feature, possibly less permanent, was present in the yards of all the houses.

Figure 52: Remains of the laundry area at House 6. View west.

The uniformity of the concrete paved area across all the yards suggests that it was part of the original house construction by the company. However, modifications and repairs to this surface over time, such as the presence of brick paving at House 4 or additional layers of concrete at House 12 may have been undertaken by the inhabitants of the houses. The top layer of concrete used at House 12 is of coarse quality and poorly constructed (Figure 53), a possible quick fix by the resident, although it could have been carried out by the company at the residents' request. However, this type of coarse aggregate concrete is not common at the Twelve Apostles, suggesting a one-off fix. It

is more similar in style to the rough concrete and poor workmanship used at the cottages to the east of the Apostles, and therefore probably dates to the 1920s.

Figure 53: Active yard of House 12, view east.

Retaining walls

Retaining walls in various states of preservation separate the flat concrete surface of the active yard and the hillslope of the outer active yard. Access to the outer yard was via a set of steps built into the retaining wall in line with the back door. Where remnants of the retaining wall survive, all but one were constructed of locally sourced rock, creating dry stone walls without mortar or cement (Figure 55). It is probable that the retaining walls were built during site preparation for the houses in order to stabilise the slope which had been cut to create a level surface behind the house. Repairs and alterations came later, such as at House 2, where formwork was used to create a low, neat concrete retaining wall as an improvement, upgrading the earlier dry stone wall (Figure 54). This was the only house where such an investment had been made, using good quality concrete and careful formwork. All the other yards either had remnants of stone walls or eroding embankments.

Figure 54: Retaining walls separating the active yard and outer active yard of House 2.

Figure 55: Dry stone retaining wall at House 10.

Steps

While there is some consistency in the dry stone construction of the retaining walls, the remains of the rear steps demonstrate greater variation between the houses, suggesting later additions, repairs or alterations. Brick was the most common building material but there were differences in construction technique (Figure 57). At Houses 4 and 6, bricks had been overlaid with concrete, either with a plank of wood used as formwork to square the concrete on the front face of the steps (House 4) or coated with a thin cement slurry (House 6) or laid over a concrete base and edged with vertical flat stones (House 12). The square hole in the centre of a cut sandstone step in the retaining wall of House 1 (Figure 56) indicates that it is stone retrieved from elsewhere, probably one of the convict buildings, demonstrating pragmatism and resourcefulness by the residents in using whatever materials were to hand. Greater care had been taken at House 2 where the trapezoid steps had been neatly constructed with concrete using formwork at the same time as the wall was instated. This added investment of time and materials does not appear to have been motivated by necessity as there is a very gentle hillslope behind the house, rather it is an aesthetic choice.

Figure 56: Reused cut sandstone block with a square hole, used as a step in the retaining wall of House 1.

Figure 57: Clockwise from top left, rear steps at Houses 2, 4, 12, 6.

Outer active yard

Greater variability between the houses was evident in the outer active yards. Terracing of the slope behind some of the houses suggests a number of possibilities such as access to washing lines or outhouses, or perhaps the creation of garden beds. In some of the yards, the addition of stone edging indicates more deliberate strategies to enhance and give structure to the rear yard. Without excavation, the location of fixed features, such as fences, sheds, chicken coops, water tanks, washing lines, and outhouses can only be deduced from photographs and depressions in the landscape. The location of semi-fixed features such as woodpiles, rubbish dumps, and incinerator barrels was even more elusive. Spatial mapping of artefact distribution of the area immediately behind the houses revealed no discernable pattern, although higher concentrations of artefacts near the tree line, 20 m behind the houses suggested that rubbish may have been discarded here.

Seddon (1997:155) identifies the functional self-sufficiency of the backyard and its complementary role to the house in providing storage, water, fuel (woodpile) washing facilities, food (vegetable garden) and waste (rubbish heap, toilet). However, I contest

his assessment of the backyard as a male domain, while inside the house was the female domain. He cites men's role in chopping wood, lighting the copper on washing day, gardening and washing up in the washhouse as reasons for men's dominance of the yard. The archaeology of the Twelve Apostles did not reveal evidence of gendered spaces, and it is not possible to assign gender roles to household chores or household spaces.

Figure 58: Remnant fence post, rear yard of House 5. View east and north.

Photographs show post and wire fences, demarcating the back yards, although the only surface evidence was a single fence post in the rear yard of House 5 (Figure 58). This style of fence afforded the residents clear views of each other's yards, which in turn may have provided an opportunity to build social relations based on familiarity and a sense of community, or alternatively, exacerbated existing conflicts. Intervisibility is one of the ways that communities participate in self-surveillance and normalising behaviour (Foucault, 1977). Being able to see what everyone else is doing causes people to compare themselves and others, and modify their behaviour accordingly, reinforcing notions of respectability.

Demarcating the houses with fencing seems to have been part of the standardised design determined by the company who created boundaries in keeping with social norms of order, respectability and privacy, along with the cultivation of personal discipline that this created and encouraged. Consequently, evidence of connections between the rear yards, such as the possible paths between the rear yards and the steps between Houses 9 and 10 can be seen as a form of everyday resistance (Scott, 1985:241). Remnants of

stone edging and terracing provide evidence of linked paths behind the houses and are most visible between Houses 9 to 12. Two concrete steps with an intermediary step of cut sandstone between houses 9 and 10 (Figure 59) lead up to one of a number of paths running along the hillside behind the houses. The paths, with remnants of stone edging, provide possible evidence of the decision by residents to create an alternate access route to their houses. Whether these paths were constructed and used during the first industrial phase, or the second, or both was unable to be determined. If these pathways were used during the first phase, they may have provided a path to the vineyards. During the second phase, when residents worked across the creek at the cement works, children may have used the rear pathways as a short cut to school.

Figure 59: Steps between Houses 9 and 10 and terracing for a path. View south.

Rear paths

In all but two of the outer yards, some form of rear path survived. The length of these paths varied and tended to be longest in the middle and on the western end of the row. It is probable that the paths originally led to an outhouse. The best evidence for this is at House 7 where the path leads almost to the tree line then curves to the west, terminating in a concrete step formed over stone and brick rubble that may have been the entry step to the outhouse (Figure 60).

Variations in materials and design suggest that the paths were created by residents in response to the topography of their yards and represent attempts to improve their yards' utility. For example, at House 5 three irregularly spaced low steps had been formed using flat stones and brick pieces, overlaid with concrete. In general, paths tended to be neater and more carefully constructed closer to the houses. At House 6, the concrete path had been formed with well laid bricks closer to the house, becoming less defined further back where the concrete had been laid over brick and stone rubble (Figure 57). Using brick and stone rubble as a base for laying concrete was a common construction technique for surface additions and alterations at the Twelve Apostles, although the degree of skill and care varied. At House 5 the path had been neatened with an edge of brick and stone (Figure 61) while at House 7 the path was constructed of free-form concrete over a base of rubble (Figure 60).

Figure 60: Rear path of House 7. View north.

Figure 61: Brick edged rear path of House 5. View south.

Water and drains

The Twelve Apostles had running water from the beginning. The Maria Island Company connected water to the houses from the old convict-built dam east of the settlement. Remnants of a glazed stoneware pipe stamped "LAUNCESTON" are visible just north of the tree line, approximately 20m behind Houses 2 and 3, running east to west. The location of at least one water outlet to the houses is indicated by a metal pipe, with the tap still attached, extending out of the eroding bank behind House 5 (Figure 62). This location is consistent with supplying water to the laundry structure that is extant in Houses 5, 6 and 7.

Figure 62: Tap near the laundry feature at House 5. View west.

In preparation for occupation during the 1920s, the company installed drainage (*Examiner,* 9 February 1924:15). The Y-shaped drains between each of the houses run downslope into the gutter beside the road. Remnants and depressions show that the branches of the "Y" originate from the rear of the houses, near the laundry on the west side of the houses and near the kitchen on the east side of the houses. The original construction of the drains is evident at House 1 where parallel lines of angled bricks, overlaid with cement, channel water into the shared drain with House 2. While these services of water and drainage were provided by the company, there is evidence that the residents made their own modifications to water management, such as more effective channels for the water where needed. At House 9 a concrete slab had been laid with an angled, sloped edge to direct the water away from the house (Figure 63) The rear yard of this house also contained a basin lined with a sheet of iron, and with part of a pipe attached. The basin was not in situ and was probably originally installed beneath a downpipe or outdoor tap. At House 8 a concrete platform laid over brick rubble on a bed of stone covered the drain (Figure 64). At House 4, a piece of cut sandstone possibly reused from one of the convict buildings had been placed near the retaining wall as part of the drainage system (Figure 65). Differences between the houses suggest that residents often took matters into their own hands when it came to ensuring water was channelled effectively to suit the needs of their block and household water use.

Figure 63: Concrete slab, with angled southern edge, outside the south-east corner of House 9. View north.

Figure 64: Concrete slab with sloped edge to channel water. Outside south-east corner of House 8. View north.

Figure 65: Curved sandstone repurposed as a drain at House 4.

Artefacts

During the survey, a total of 811 artefacts were identified. The majority of the artefacts are representative of daily activities around food and beverage consumption, with very few personal items related to clothing, grooming or recreation. Some of the glass fragments may be from medicine bottles or jars but, as health tonics such as "Old Time Wine" were also drunk recreationally, these categories are not necessarily clear cut.

Very little building material was present across the site, indicating that the area was effectively cleared when the houses were removed. This is consistent with historical evidence regarding how the houses were dismantled and the building materials retained and reused as public housing in Hobart during the Depression. Detailed correspondence (Tasmanian Archives AD203/1/1977) lists the expenses associated with the move including the use of local contractors. One handwritten note details a "squabble" between H.J. Fox who carted the dismantled buildings across John Howell's land. Another letter notes that "considerable damage was caused to the old material whilst being transported from the site on Maria Island to the jetty there by means of bullock drays; further considerable material was lost during gales whilst stacked on the Maria Island Wharf awaiting shipment." The amount of building material identified was negligible and does not add information to the research questions; therefore the following discussion excludes building material (such as window glass and nails) and focuses on the remaining 734 artefacts.

In general, artefacts were distributed across the site, with houses towards the centre of the row containing higher artefact densities (Figure 66). This is likely due to the higher degree of erosion on the steeper slopes towards the middle of the row, resulting in greater exposure. It is also consistent with the downslope movement of artefacts in the outer active yard, resulting in the artefacts becoming captured in the retaining wall and subsequently exposed by erosion and stone displacement from the wall. As the artefacts were highly fragmented (85% were 4 cm or smaller) and sparsely distributed, only a couple of refits could be made. Consequently, it was not possible to assess how far the artefacts may have shifted horizontally.

Issues associated with analysing surface sites have been well documented (Wandsnider and Camilli, 1992; Holdaway et al., 1998; Bolton, 2009; Trachet et al., 2016). Holdaway et al (1998:1) identified four key issues: the lack of stratigraphic information; ambiguity about the extent of an artefact scatter; variable ground surface exposure and visibility; and that the artefacts themselves are often difficult to interpret. At the Twelve Apostles, artefact recording provided some useful information but was unsuccessful in identifying areas of activity or rubbish disposal in the rear yards. Subsurface testing could contribute more spatial information about yard use and change over time.

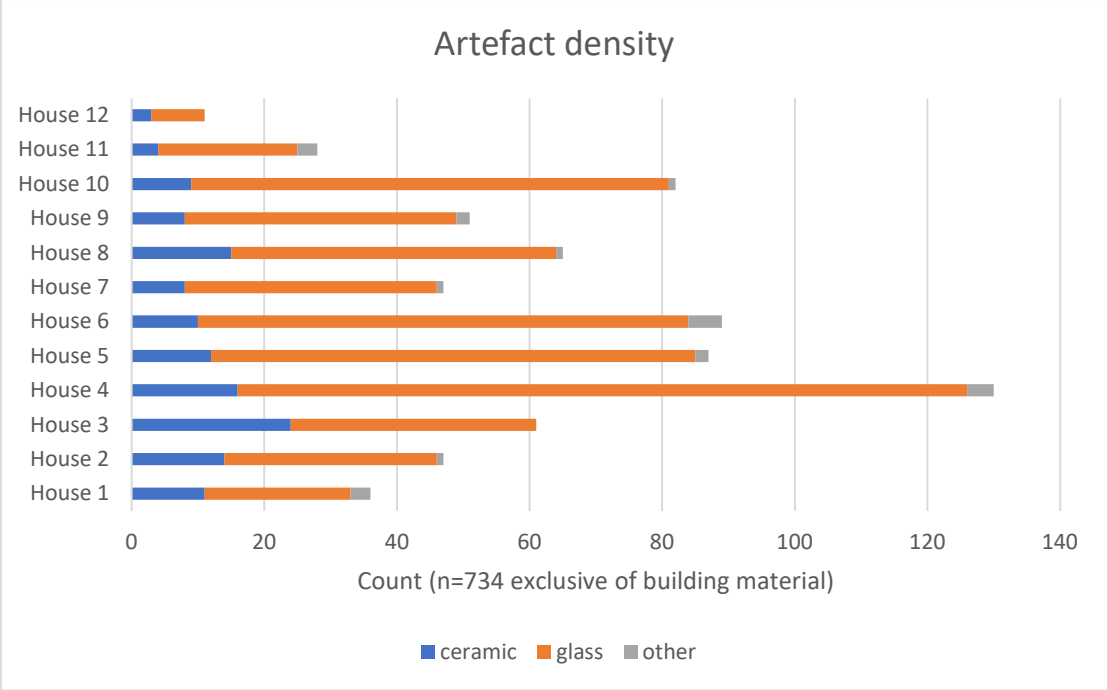


Figure 66 Graph showing artefact densities within the recording square in the yards of the Twelve Apostles.

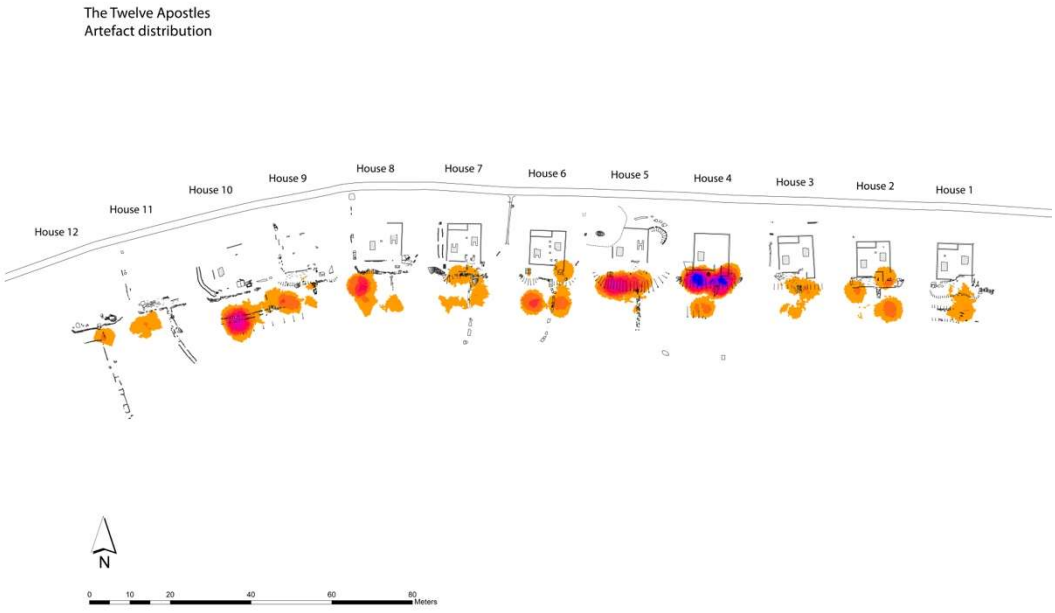


Figure 67: Distribution of glass and ceramic fragments in the rear yards of the Twelve Apostles (darker colours indicate higher densities).

Glass

The assemblage contains a predominance of glass fragments (n=577) concentrated behind House 4 (20% of the total) and in the two neighbouring houses to the west. Colourless glass was spread relatively evenly across the yards and comprised the

highest proportion of the household assemblage of House 10 (51 out of 70 glass fragments). Lack of diagnostic information means that it is difficult to tell if these were food jars, condiment bottles or soda bottles, but the higher density and concentration suggests a longer period of occupation (perhaps continuing after the cement works closed). While colour by itself is not a reliable characteristic for classification or function, olive glass and amethyst glass found at the houses is more likely to date from the earlier phase of occupation. Over a third of all olive glass (34%) came from House 5. This could be a result of high erosion in the bank once the retaining wall was removed thereby exposing deeper (older) layers of buried artefacts. Similarly, House 4, which also had a high proportion of olive glass, had a relatively high level of erosion.

Amber glass, mostly beer bottles, was found across the site, and in highest density at House 6, often with fragments of a map of Tasmania or the phrase: "This bottle is the property of the Tasmanian Bottle Company Limited". The Tasmanian Bottle Company Ltd was registered from 1920 to 1959. Given that these bottles were usually returned to the manufacturer and that the NPCL provided regular rubbish collection, these amber bottle fragments may relate to occupation of the houses after the cement works had closed. Other fragments contained the Australian Glass Manufacturers Ltd (AGM) symbol (Figure 69) produced from c.1930 (Boow, 1991, Appendix:176), indicating a predominance of artefacts from the latest phase of occupation.

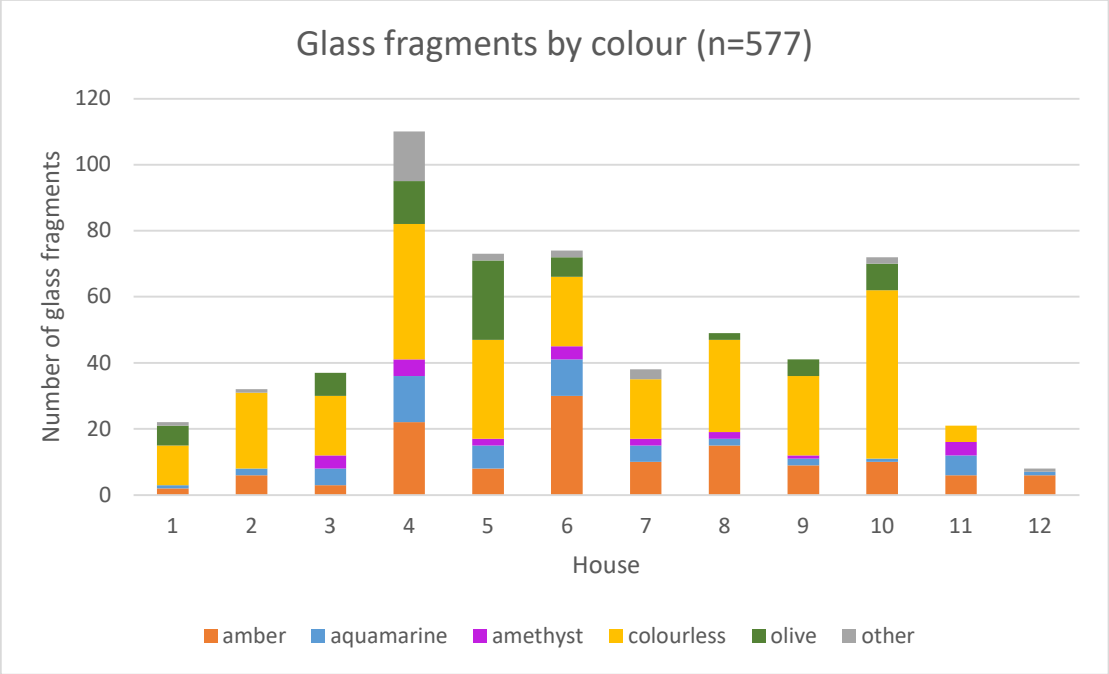


Figure 68: Glass artefacts identified at each house, by colour.

Figure 69: Glass fragments

Ceramic

Comprising approximately a quarter of the assemblage (n=134), ceramic fragments were distributed across the site, with slightly higher concentrations in the houses further away from Darlington settlement. As such, approximately two thirds of the ceramic assemblage were concentrated in the yards of the six easternmost houses (Houses 1-6). However, fragmentation was high across the site. Most of the ceramic artefacts were 4cm or less in size (n=125), of which the majority were between 2-3cm (n=87). Consequently, less than half of these had diagnostic features, and of these, only 19 could be identified as either a plate or saucer (flatwear=7), a cup or bowl (openware=11) or a lid (n=1).

While the ceramic assemblage comprised predominantly plain whiteware, there were a small number of transfer prints (n=15) in black, blue, grey, red and green. Even though the fragments were small, some were identifiable as Rhine and Asiatic Pheasant, popular nineteenth century designs (Figure 70). Other decorations included banded and floral patterns. Notably, near the tree line approximately 20m behind the houses, the scattered presence of larger fragments of decorated ceramics may reflect the tendency for tourists to opportunistically remove the more colourful or interesting fragments from the area closest to the house ruins and road.

In historical archaeology, the problem of how to interpret assemblages dominated by whitewares has been approached in a number of ways. At Casselden Place in

Melbourne, the nineteenth century assemblage and spatial distribution of artefacts was homogenous between the houses despite historical records showing that the houses had been occupied by different tenants during the 50 year period. Murray and Mayne (2001) attributed the patterns of similarity to the scale and power of mass production and consumption in the second half of the nineteenth century, while acknowledging that their analysis did not tackle the more difficult questions of value and meaning. At Lowell Massachusetts, Mrozowski (2005:248-9) believed that the predominance of whiteware was due to the homogenising effect of the ceramics industry on consumer choices so he chose instead to focus on individual items that he considered "more evocative of identity than the assemblage as a whole".

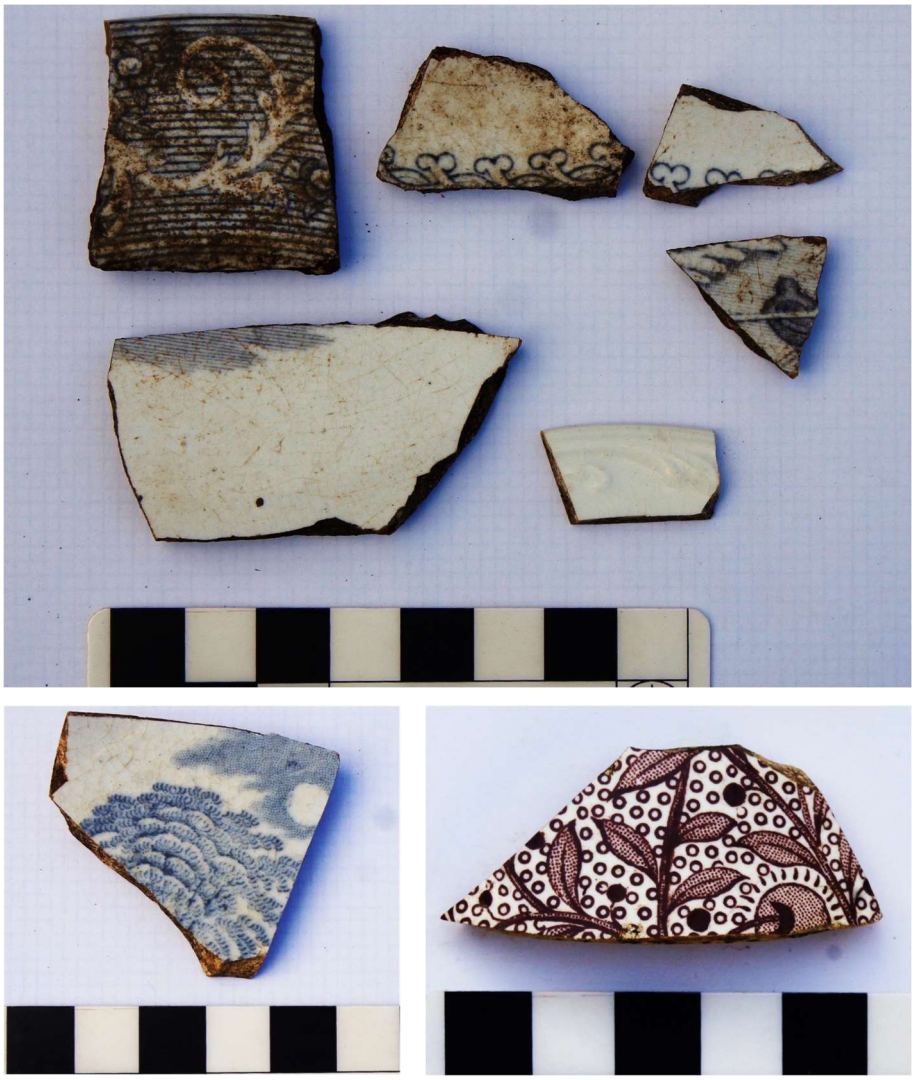


Figure 70: Decorative ceramic fragments from the rear yards.

Other artefacts

In the yards of the Twelve Apostles, items of a more personal nature were rare. There were four buttons including a copper alloy, four-hole trouser button with the generic inscription "OUR OWN MAKE". Unlike buttons bearing a tailor's name, the inscription indicates cheaper working-class dress (Casey and Lowe, 2010:171). Without excavation and sieving, small items (buttons, pins, etc.) would inevitably be missed (see Bolton, 2009:47). Items identifiable as children's toys included a bisque doll's leg (Figure 71), a toy teacup and a hand rolled marble.

Figure 71: Miscellaneous items, clockwise from top left: bisque dolls leg; button; and lighter.

Overall the surface artefacts in the yards of the Twelve Apostles represent a small, fragmented sample of household items, typical of the working class of the time in their ordinariness. The brief occupation of the site, the way that the houses were removed, and the small sample size has provided scant evidence about particular individuals but does present a broad indication of their lifeways at the turn of the century.

Conclusion

The archaeological evidence demonstrates that the Twelve Apostles residents made additions and improvements, but their investment was in time and labour rather than material. Residents reused material from the convict buildings in a way that was economical and resourceful. Brick rubble was often used as a base for laying concrete for paths and surfaces, locally collected stone was often used as edgings, while cut sandstone was reused to create drains and steps. Along with the difficulty of determining who lived in each house and for how long, a limitation of this study was in attributing the alterations and additions to the earlier or later industrial period. Given the short time frame, the use of recycled material and continual use Portland Cement it was not possible to date the features from their surface remains alone, although overlays of concrete occasionally provide clues regarding the sequence of repairs. More importantly, what can be ascertained is the ongoing process of repair and adaptation. The common elements in the yards of the houses include the traces of paths, surfaces, terracing and steps. However, differences in their construction and the materials used, suggest that these features were not constructed by the company but by the different residents and at different times. (Table 2). The workers' aesthetic differed from that imposed by the company, tending towards pragmatic solutions rather than beautification.

Gonzalez-Ruibal (2008:249) in talking about the recent past describes "the unconscious in culture" meaning the things we take for granted or care little about. Remnants of everyday life in the yards of the Twelve Apostles are largely these taken-for-granted aspects. By considering the ways people altered their living spaces and made these small adaptions, their creative strategies within the constraints of living in a company town come a little more clearly into focus.

6. Conclusion

Darlington on Maria Island is an example of a boom and bust town, a product of one man's grandiose vision during a period of optimism in Australia when investors, seeking opportunity in the country's vast natural resources, sought ways to exploit these assets. Australia has many such towns that sprung up quickly to take advantage of a particular resource and were soon abandoned. The fate of these small towns is largely overlooked by the collective consciousness of Australia. These towns are dwindling due to causes that range from the sudden closure of a mine and evacuation of the town to more long term gradual causes such as an aging population, the development of regional centres that draw away young people seeking education and employment, globalisation, shifting markets, and climate change. Archaeology can help tell the stories of these towns and the people who lived in them. It can investigate the layers of meaning, both social and symbolic, in the town's layout and architecture.

The questions posed by this thesis concern the role of Darlington's spatial layout in transmitting ideologies about paternalism, social status and belonging; and the ways in which workers' responses are reflected in the material remains of their houses. In order to answer the research questions, this thesis took a landscape archaeology approach using multiple lines of evidence from field survey, mapping, spatial analysis, historical documents and photographs. Evidence presented and discussed in the preceding chapters suggests that the township that Bernacchi created in the 1880s was underpinned by a philosophy of industrial paternalism, but was also shaped by the landscape design, spatial structures and social hierarchies established during Darlington's convict periods. The past shaped and continues to shape the context within which people inhabit this landscape. Visitors to Darlington continue to sleep in the Penitentiary bunk beds, cook in the Mess Hall and walk the convict roads.

This thesis contributes to historical archaeologies of industry and work, by focusing on the intersection of life and work in a company town. Darlington, like other company towns, reflected the goals and ideals of the industrialist behind it. The created landscape encouraged community and interactions outside of work on the one hand, while maintaining hierarchies and distinctions between different groups on the other. Home and work life were linked. In a company town, social order is derived from labour,

routine, isolation, and company-imposed rules or policies (Garner, 1992:4) which was further complicated on Maria Island by employment uncertainty.

Landscapes are palimpsests, constantly being made and remade. At Darlington, the convict landscape and its hierarchical structure of surveillance and control were overlaid with an industrial landscape. The company provided accommodation and facilities for its workers, motivated by a desire for financial success but underpinned by cultural goals of paternalism, social control and status. During the second period of economic development, in the 1920s, the style of paternalism changed to reflect a corporate style of management that was more detached from its workforce. The focus of development was the cement works infrastructure which dominated the township. New housing for the workers was rudimentary and/or temporary and employment more uncertain. Yet within the boundaries of the island and the regulations set by their employer, people's routines and social activities, both sanctioned and illicit created community identity.

Everyday routines and rituals leave a pattern on the landscape. I have been influenced by Scott (1985:241)) in finding "cautious resistance and calculated conformity" in the residents' responses to life and work in a company town and in the pragmatic modifications they made to their rental accommodation within the boundaries of the company's rules. My research into households, looking at the Twelve Apostles workers' cottages, demonstrates that no matter what the original intentions of the company, inhabitants of company towns find ways to resist, reinterpret and reshape their environment. Homes are created to reflect what we think home should be and who we should be or are, perceptions which are in turn influenced by society's ideas of what a home should be (Chesson, 2012). In a company town, this is imposed by the company, but shaped by the rituals, routines and needs of daily life.

Shackel (2004) argues that the versions of the past we create through our archaeology reflect our concerns in the present. Employment controls workers' time while planned environments control the spaces of daily life. Company towns continue to be built, with the same tensions between the company's desire to create an idealised community setting where workers will be productive and its desire to manage people's lives. Describing Willow Village, Facebook's planned community in California's Silicon

Valley, Bollimer (2018) points out its similarities to earlier company towns that were built by corporations to house, and keep tabs on, their workers. Referring to the legacy of utopian communities in the United States, he writes, "American history is filled with towns, conceived and built to realise specific theological world views, at times linked with faith in capitalism and the power of technology". In 2019, New Zealand company, Bedmaker The Comfort Group, announced plans to build a "unique manufacturing hub and community" at Ohinewai, 85 km south of Auckland. Their press statement declared:

> Our vision is to create a genuine community for people, in a beautiful setting, who want an affordable, quality home, a stable job and a thriving community they can be part of (Black, 2019).

Not everyone shared this enthusiasm. Brendan Gleeson, Melbourne University urban planning professor, expressed concern regarding the sustainability of an enterprise built on a single economic activity, a lesson learned from the fate of some mining towns or places like Darlington on Maria Island. Bollimer (2018) sees the issue as one of control and therefore, more insidious. He draws attention to the danger of transferring planning, policy and even some government functions (such as dictating housing policy or funding police) from democratically elected and accountable officials to private corporations. He questions whether there are checks and balances on the company's behaviour and expresses concern that the practices of company towns throughout history, could be continued and updated to include digital surveillance and technological means of control.

Further research could be conducted on comparative assessment with other company town sites in Tasmania and elsewhere in Australia, focusing on the intersection between work and home life. This thesis has attempted to examine the responses of residents to life and work in a company town, in the small ways they resisted, reinterpreted and reworked their household environments. The archaeological investigations of the Twelve Apostles yards could be extended by mapping the 1920s NPCL workers' accommodation at Darlington, including the workers' camp behind the Penitentiary, the ruins of workers' cottages to the east of the Twelve Apostles and the remains on the cliff north of the cement works. I was unable to find documentary evidence for these cottages but archaeological investigation in conjunction with the work done here would add to our understanding of people's lives on Maria Island during its industrial eras.

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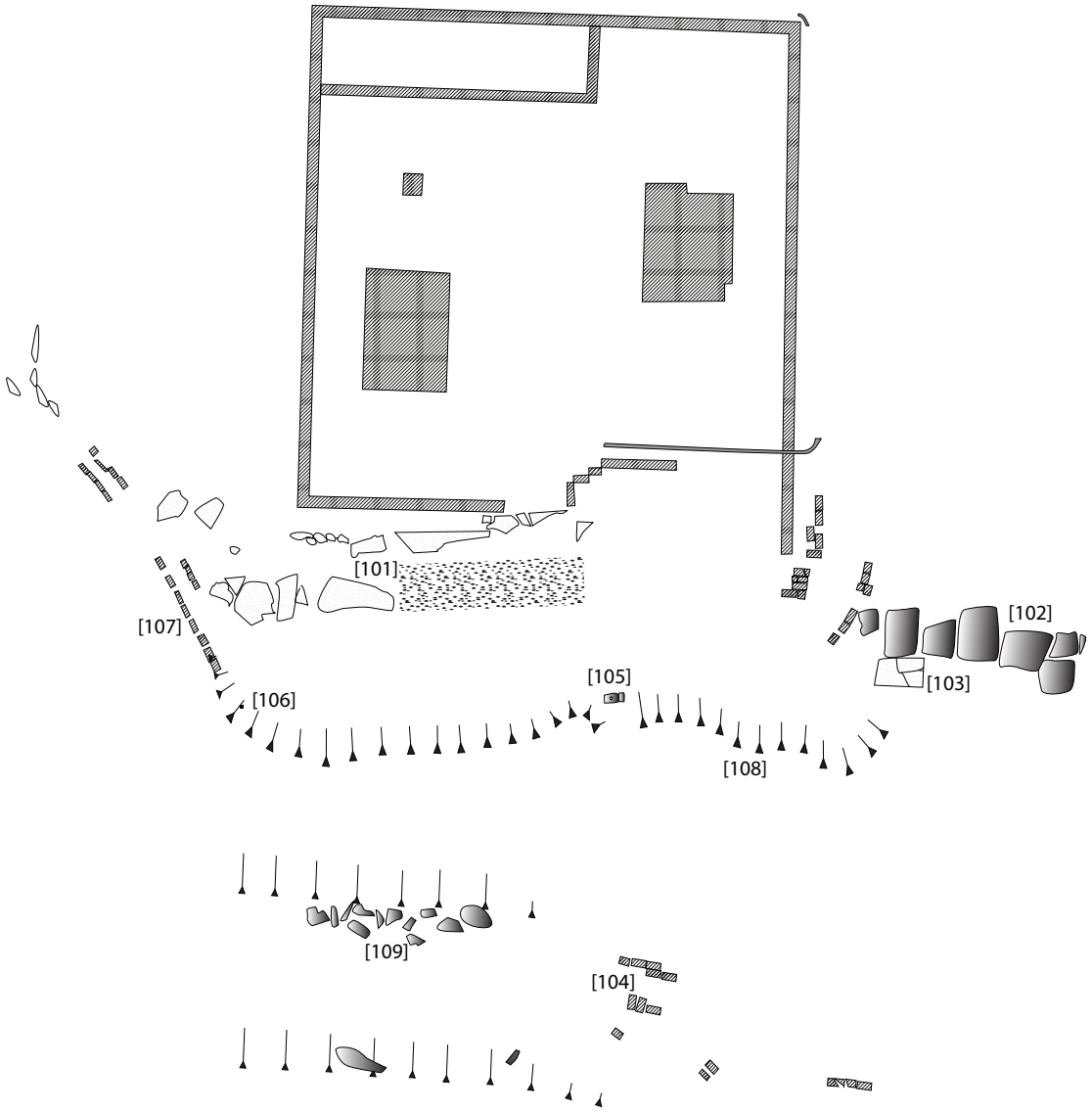
Appendix A: Context numbers

Context number	House	Feature	Description
101	1	surface	Remains of concrete slab directly behind House 1. Moss indicates original location
102	1	path or paving	Sandstone slabs. Associated with [103].
103	1	paving	Cut stone with chisel marks (possible reuse), overlaid with concrete, associated with [102].
104	1	path edging	Possible brick path edging, terraced area.
105	1	step	Two sandstone blocks, one with central hole (reuse?)
106	1	post	Square timber post (5 x 5 cm) near top of sloped earth behind house.
107	1	drain	Parallel lines of angled bricks, creating drain from SW corner of house to shared drain with House 2. Overlaid with concrete near intersection.
108	1	earth mound	Heavily eroding slope, possible associated with original retaining wall
109	1	retaining wall	Series of rocks 7-8 m behind House 1, part of garden terracing?
201	2	surface	Concrete slab directly behind House 2.
202	2	paving	Seven half bricks in line with doorway and stairs, no bonding material.
203	2	structure (alcove for stove)	Concrete slab with remnant brick wall along south edge, concrete mortar. SE corner of house.
204	2	retaining wall	Concrete retaining wall, formwork construction.
205	2	steps	Four steps leading up to garden from paved area behind house. Concrete over sandstone, formwork sides.
206	2	paving	Concrete paving, SE corner covered in moss
301	3	surface	Concrete slab directly behind House 3
302	3	path	Path along west side of house. Concrete covered brick. Remnant sandstone edging.
303	3	steps	Debris of sandstone and brick, not in situ but depression in retaining wall mound suggests original location of stairs
304	3	retaining wall	Possible remnant of dry-stone wall on western side of retaining wall mound behind house
305	3	wall	Two courses of brick with concrete mortar on top and between. In front of house.
401	4	surface	Concrete slab in SW corner of house. Different concrete to [403 and 405], more inclusions.
402	4	brick feature	Rectangular arrangement of bricks, no mortar or indication that the feature extended to create paving.
403	4	steps	Brick overlaid with concrete; formwork used for front face. Rise of each step is 20cm.
404	4	surface	Concrete surface in eastern half of yard directly behind house.
405	4	path	Path extends approximately 2 m, three steps. Rocks overlaid with brick rubble and concrete laid on top.
406	4	earth mound	Heavily eroding slope, possible associated with original retaining wall.
407	4	drain	Cut sandstone, curved, associated with the drain. Possible reuse.
408	4	drain	Brick lined drain, overlaid with concrete after it joins with the drain from House 5.

501	5	brick structure	Foundation bricks, three courses high in two rectangular sections with a channel between (smaller section is possibly a fallen wall from the larger structure). Behind house in SW corner. Possible laundry structure.
502	5	surface	Moss covered surface to rear of House 5.
503	5	drain	Two sandstone blocks possibly placed to create a crossing over the drain.
504	5	tap	Pipe with tap extending from eroding bank behind house
505	5	post	Rectangular timber post fragment embedded in ground at top of eroding bank behind house
506	5	path	Concrete path laid over sandstone and brick, 3 steps, extends N-S approximately 20 m behind house
507	5	retaining wall	Steep slope behind house, heavily eroding with frequent stone rubble, could be original retaining wall
508	5	path	Curved concrete path, laid over brick, at front of house around [509]
509	5	mound	Two courses of rocks built up around a mound outside the NE corner of the house.
601	6	brick structure	Brick structure on west side of yard directly behind house. Possible laundry.
602	6	brick structure	Two courses of bricks overlayed with concrete, part of [601]. Concrete is cross hatched by hand.
603	6	brick structure	Brick structure in SE corner of the house. Possible alcove for a stove.
604	6	surface	Remnants of concrete surface directly behind House 6.
605	6	step	Concrete mortar over brick. Possible back doorstep.
606	6	steps	Three steps from back yard up to garden. Brick overlaid with concrete.
607	6	path	Remnants of concrete path extending approximately 20 m south of steps [606].
608	6	wall	Dry stone retaining wall between rear slab 604 and garden, extensive tumble and erosion.
701	7	brick structure	Brick structure outside SE corner of house with corrugated iron concrete formwork.
702	7	surface	L-shaped concrete surface, partially visible (moss) Includes associated mound, east side at rear of house.
703	7	brick structure	Brick structure on west side of yard directly behind house. Possible laundry structure.
704	7	surface	Exposed concrete boundary edge, west of mound/back door.
705	7	wall	Stone retaining wall between rear yard surface and garden.
706	7	path	Concrete path with sandstone edging.
707	7	path	Path edged with stones along west side of house between rear of house and road. Remnants of gravel surface.
801	8	surface	Concrete slab directly behind House 8, constructed over bricks.
802	8	surface and drain	Concrete slab laid over brick rubble on a bed of stone. Behind SE corner of house, part of a drainage feature.
803	8	brick structure	Brick structure in SE corner of the house. Possible alcove for a stove
804	8	path	Concrete side path, west of house, brick edged.
805	8	wall	Dry stone retaining wall at rear of House 8, best preserved in west corner where it curves to the north.
806	8	steps	Two steps, sandstone, no concrete.

807	8	path	Path is brick rubble overlaid with concrete.
901	9	surface	Remnants of concrete slab directly behind House 9.
902	9	brick structure	Brick structure, partially demolished, in SE corner of house, possible stove alcove.
903	9	surface and drain	Concrete slab outside SE corner of house, slopes to the north to create a drain.
904	9	basin/drain	Basin / drain feature, not in situ.
905	9	wall	Remnants of dry-stone retaining wall.
906	9	path	Brick path, edged with stone, overlaid with concrete.
907	9	surface	Coarse concrete overlying brick rubble and rocks. Possibly associated with the drain. In NE corner of the house yard, near the road.
908	9	path	Stone edged path on west side of house.
1001	10	surface	Brick rear yard surface, with step (concrete over brick) at western end connecting with path.
1002	10	surface	Concrete slab directly behind back door, 1.8 m wide
1003	10	brick structure	Brick structure, partially demolished, in SE corner of house, possible oven alcove.
1004	10	wall	Remnants of dry-stone wall, seems to have been built around tree SW of house.
1005	10	path	E-W stone edged path approximately 5 m south of retaining wall [1004]. In line with concrete steps to the east.
1006	10	steps	Two concrete steps with an intermediary sandstone step, in rear yard between Houses 9 and 10.
1007	10	surface	Concrete with incised cross hatching, outside the SE of corner of the house.
1008	10	path	Stone edged path on west side of house.
1101	11	surface	Broken concrete slab, overgrown with moss, extending west from [1102] to west corner of the house.
1102	11	surface	Remnants of concrete surface outside what would have been the back door.
1103	11	surface/footing	Remnants of concrete slab behind SE corner of house.
1104	11	wall	Dry stone retaining wall.
1105	11	path	Long, stone edged path, curves around larger rock, not always clear.
1106	11	path	Stone edged side path from rear yard to road.
1201	12	surface	Concrete slab, moss covered with exposed sections on western side.
1202	12	brick structure	Brick structure in SE corner of house.
1203	12	wall	Stone retaining wall.
1204	12	steps	Concrete and brick steps, edged with stones.
1205	12	wall	E-W retaining wall, west of the path.
1206	12	path	Long path, stone edged, best preserved towards the south where there are also steps.
1207	12	structure/surface	Larger stones, infilled with smaller stones, built up to create a base and overlaid with coarse concrete. Abuts [1202].

Appendix B: Plan drawings of the Twelve Apostles

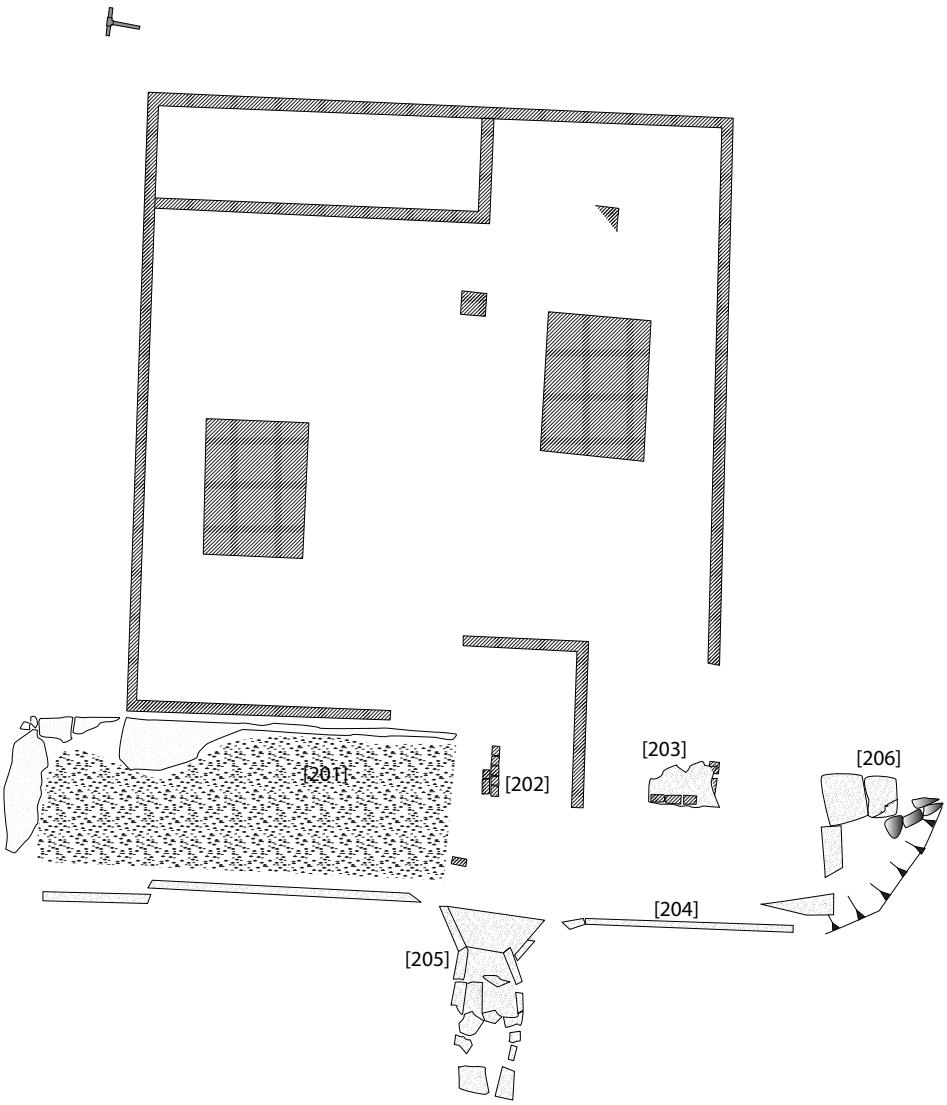


House 1
Twelve Apostles
Maria Island, Tasmania
January 2018

N

0 0.75 1.5 3 4.5 6 Meters

Key
Concrete
Brick
Stone
Moss
Metal pipe
Slope
Tree

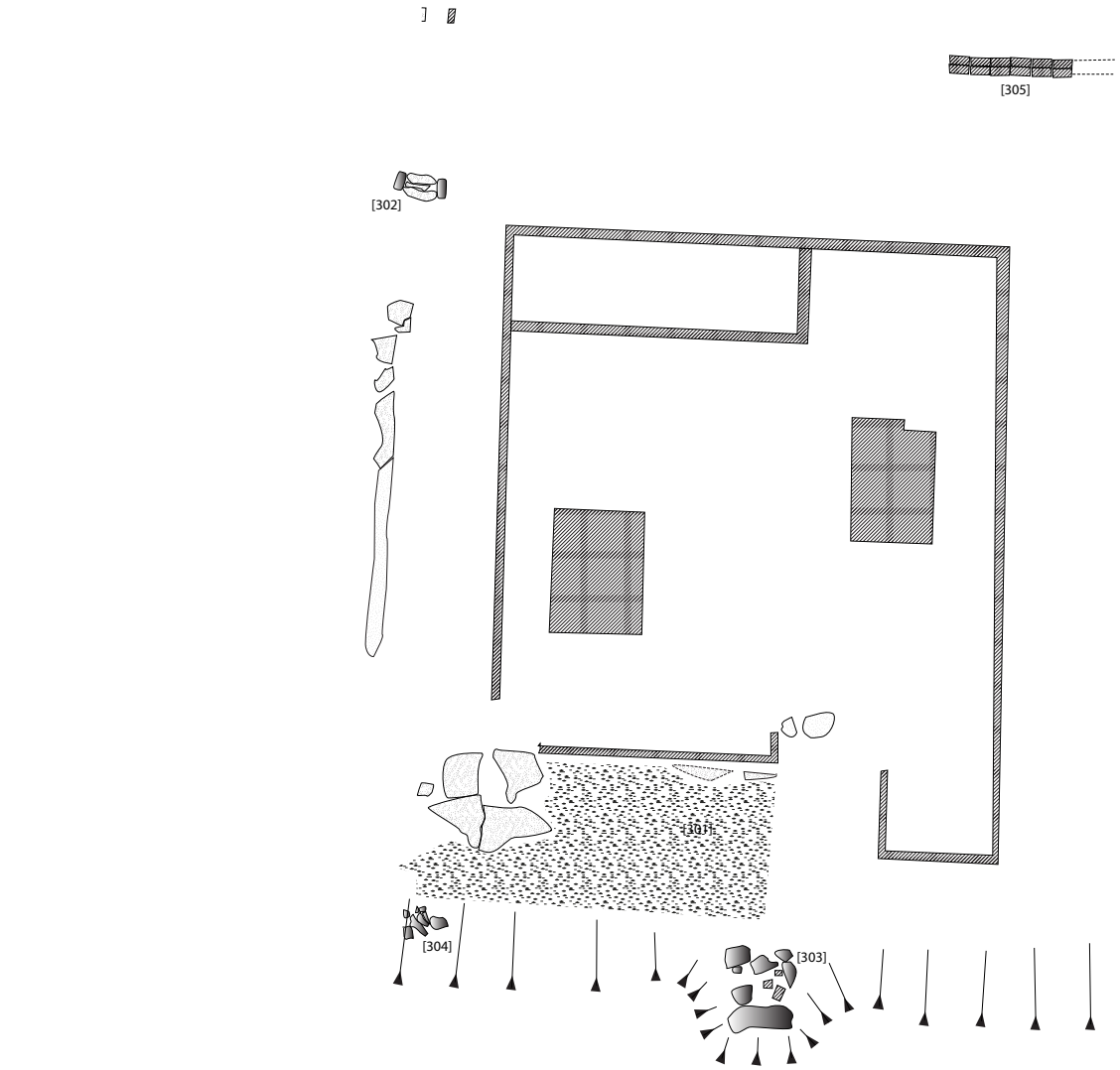


House 2
Twelve Apostles
Maria Island, Tasmania
January 2018

N

0 0.5 1 2 3 4 Meters

Key
Concrete
Brick
Stone
Moss
Metal pipe
Slope
Tree



House 3
Twelve Apostles
Maria Island, Tasmania
January 2018

N

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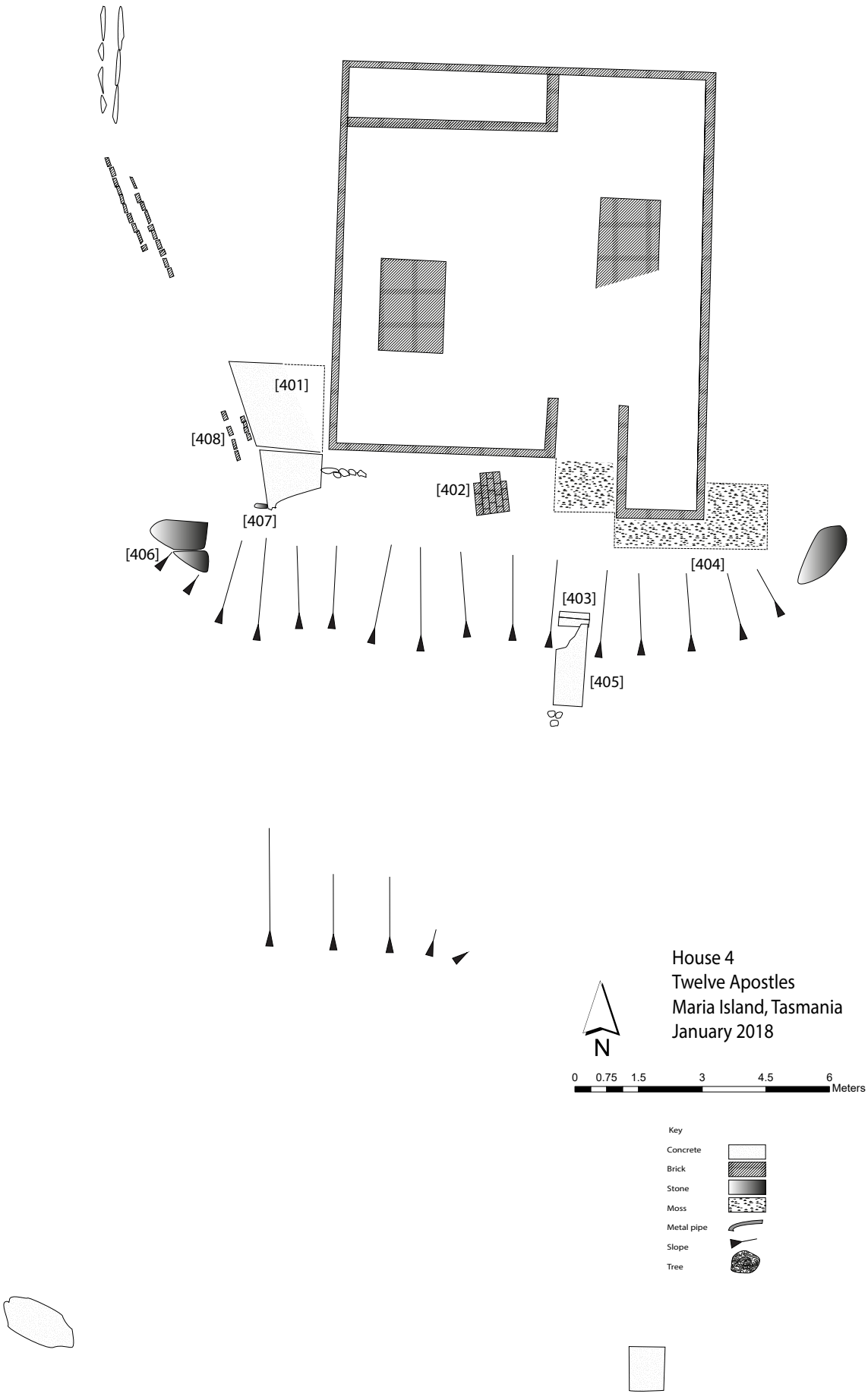
Meters

Key
Concrete
Brick
Stone
Moss
Metal pipe
Slope
Tree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[408]
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[402]
[406]
[404]
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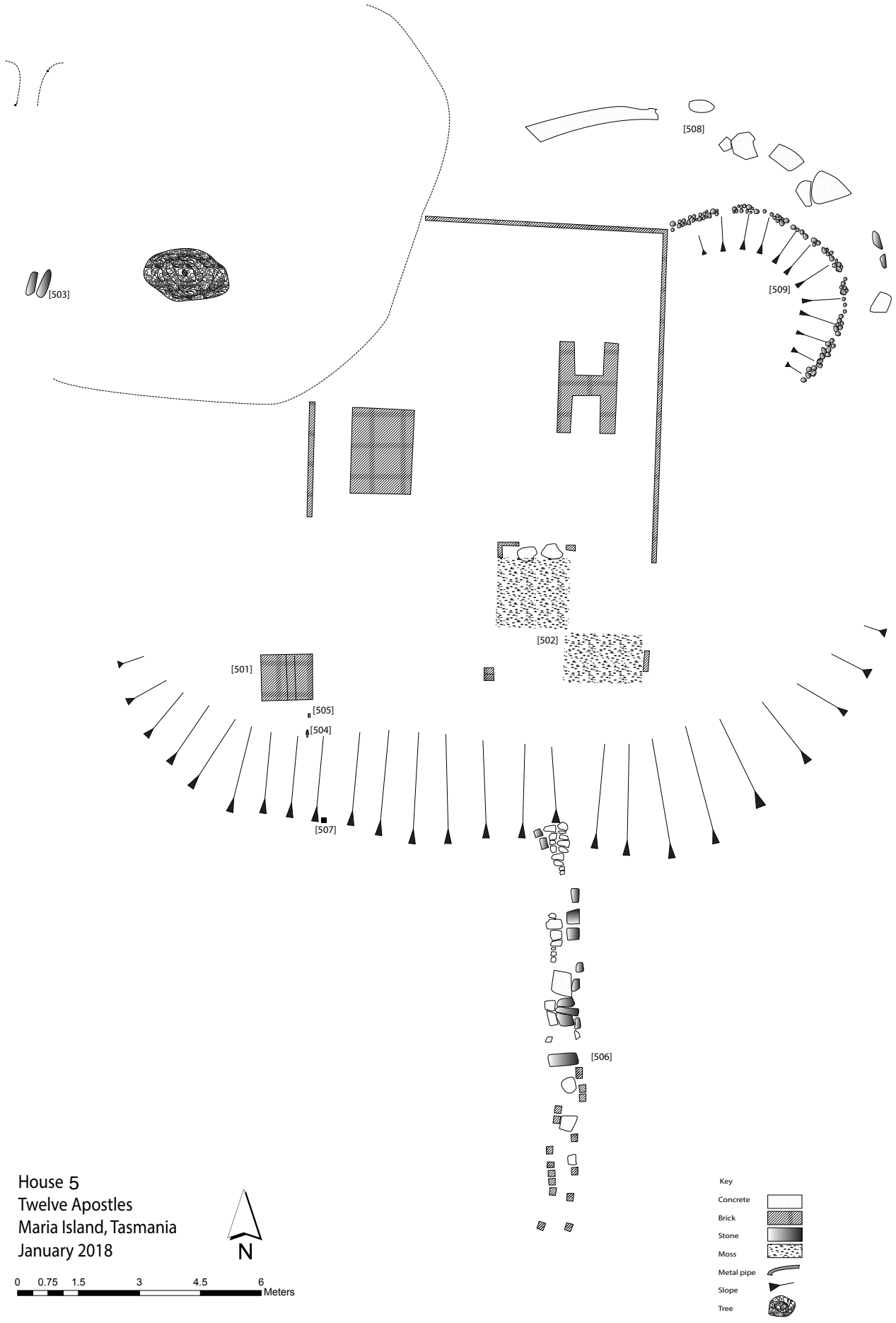
House 4
Twelve Apostles
Maria Island, Tasmania
January 2018
N
0 0.75 1.5 3 4.5 6
Meters
Key
Concrete
Brick
Stone
Moss
Metal pipe
Slope
Tree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[509]
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[501]
[505]
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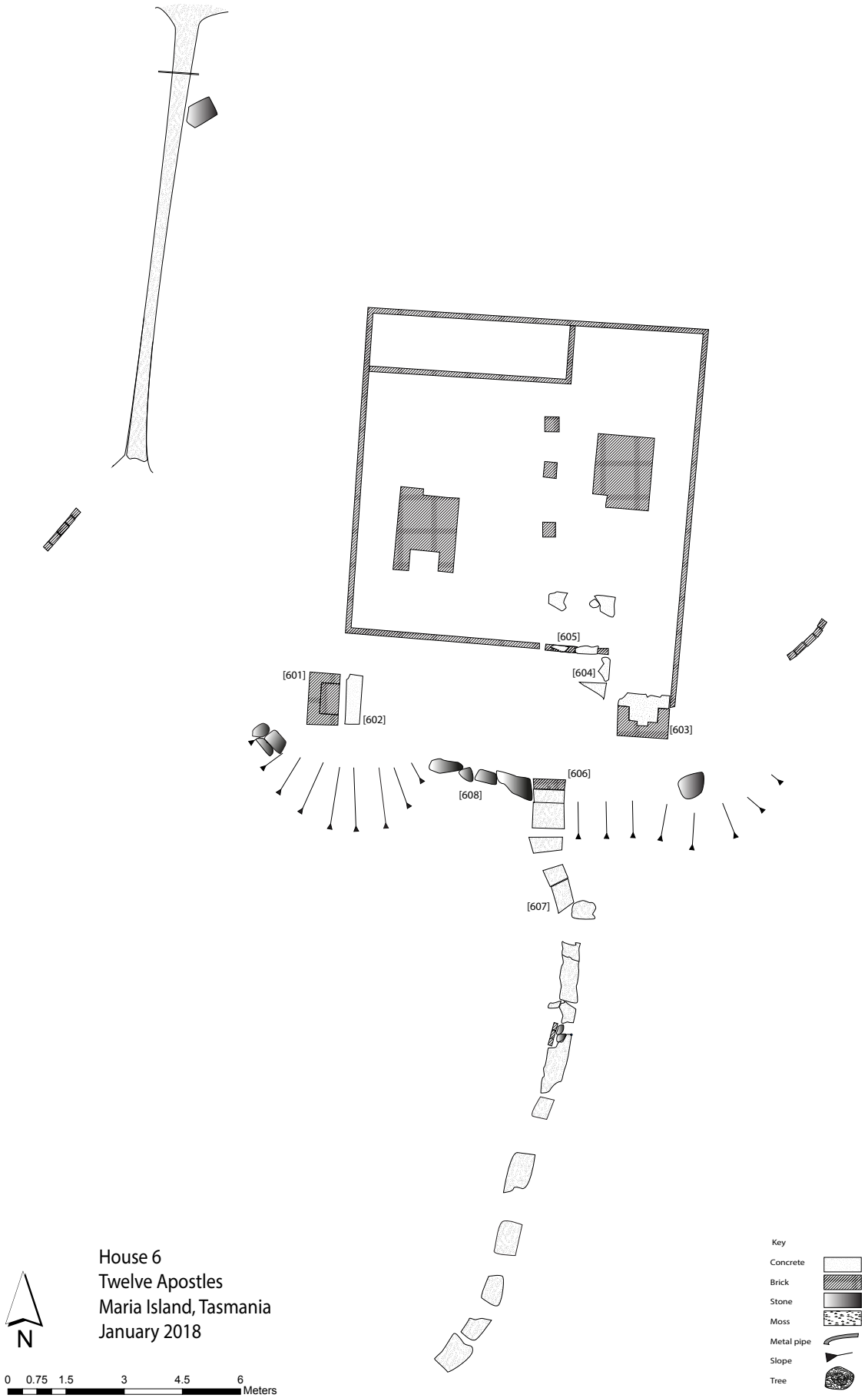
House 5
Twelve Apostles
Maria Island, Tasmania
January 2018
N
0 0.75 1.5 3 4.5 6
Meters
Key
Concrete
Brick
Stone
Moss
Metal pipe
Slope
Tree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House 6
Twelve Apostles
Maria Island, Tasmania
January 2018
N
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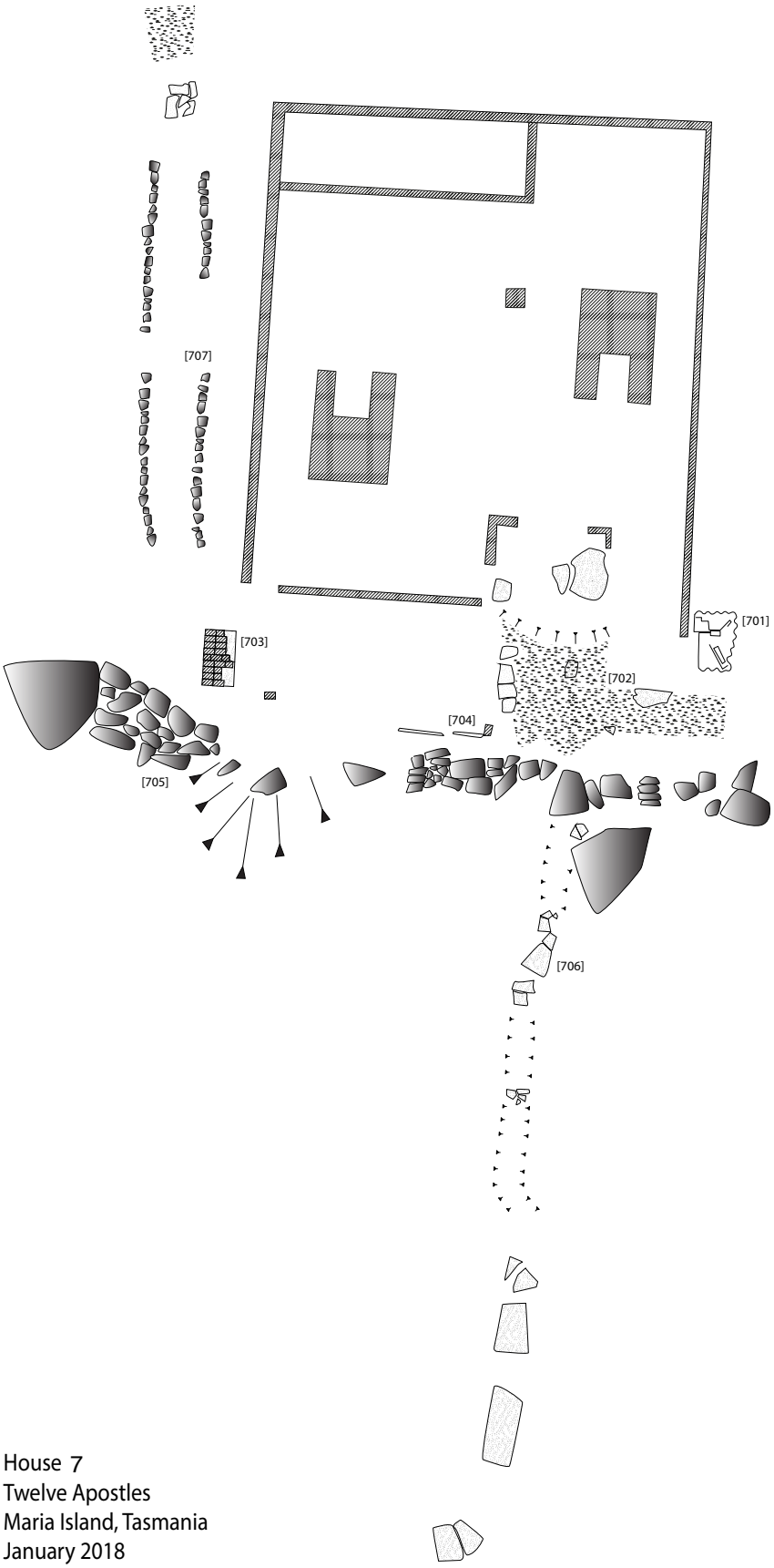
Meters
Key
Concrete
Brick
Stone
Moss
Metal pipe
Slope
Tree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House 7
Twelve Apostles
Maria Island, Tasmania
January 2018
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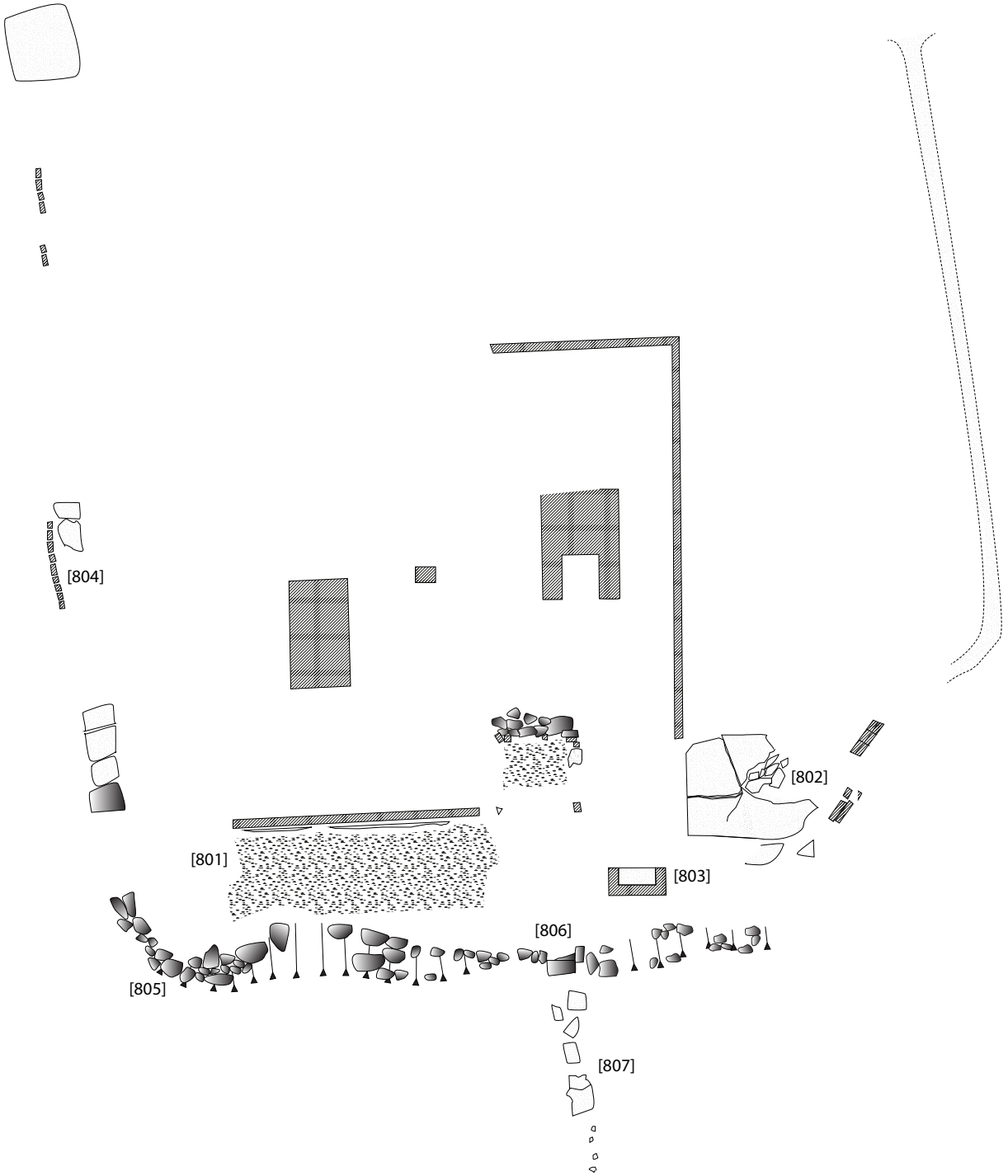
Meters
Key
Concrete
Brick
Stone
Moss
Metal pipe
Slope
Tree



Key

Concrete

Brick

Stone

Moss

Metal pipe

Slope

Tree

House 8
Twelve Apostles
Maria Island, Tasmania
January 2018

N

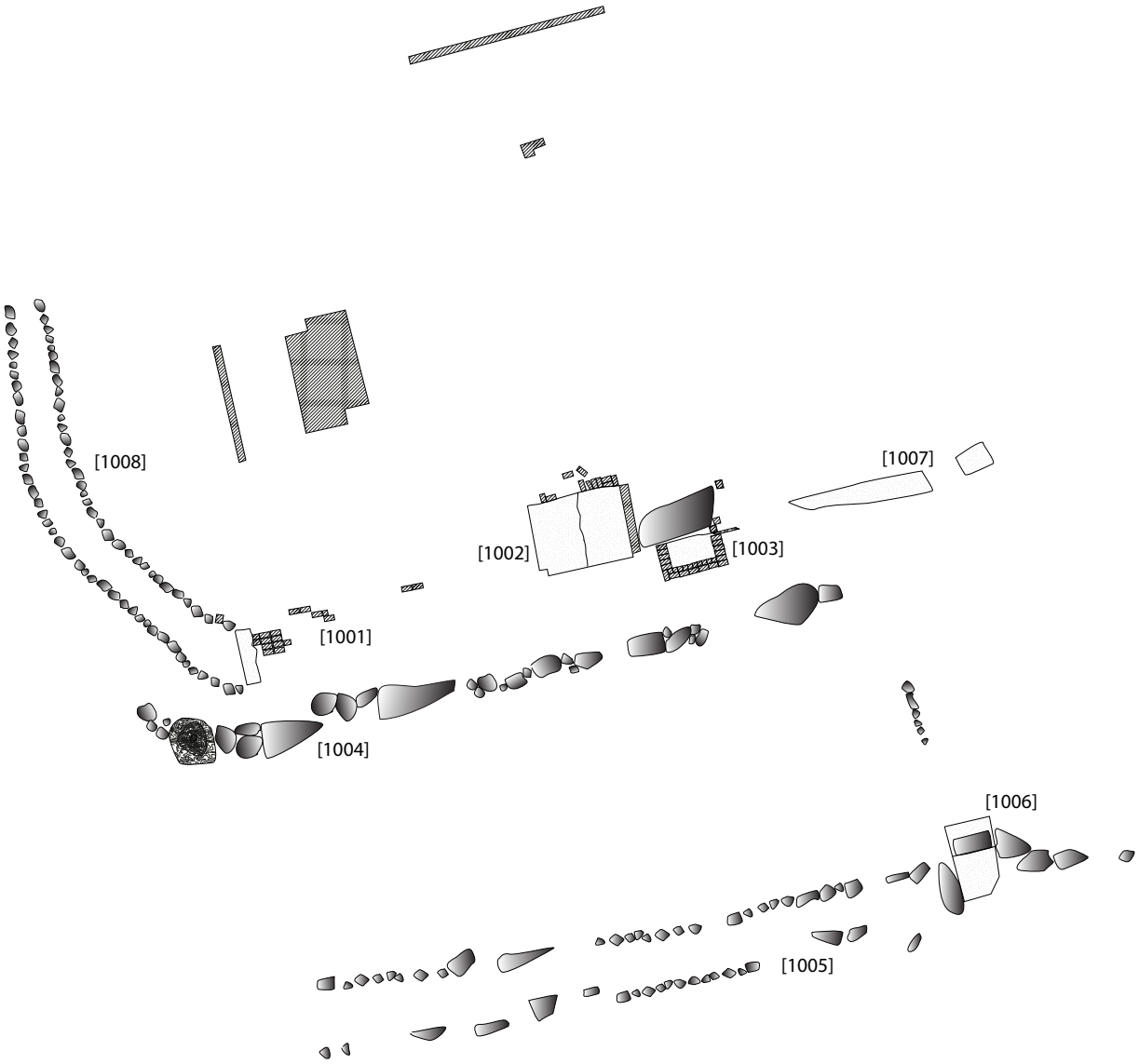
0 0.75 1.5 3 4.5 6 Meters

House 9
Twelve Apostles
Maria Island, Tasmania
January 2018

N

0.5 1 2 3 4 Meters

Key
Concrete
Brick
Stone
Moss
Metal pipe
Slope
Tree



Key

Concrete

Brick

Stone

Moss

Metal pipe

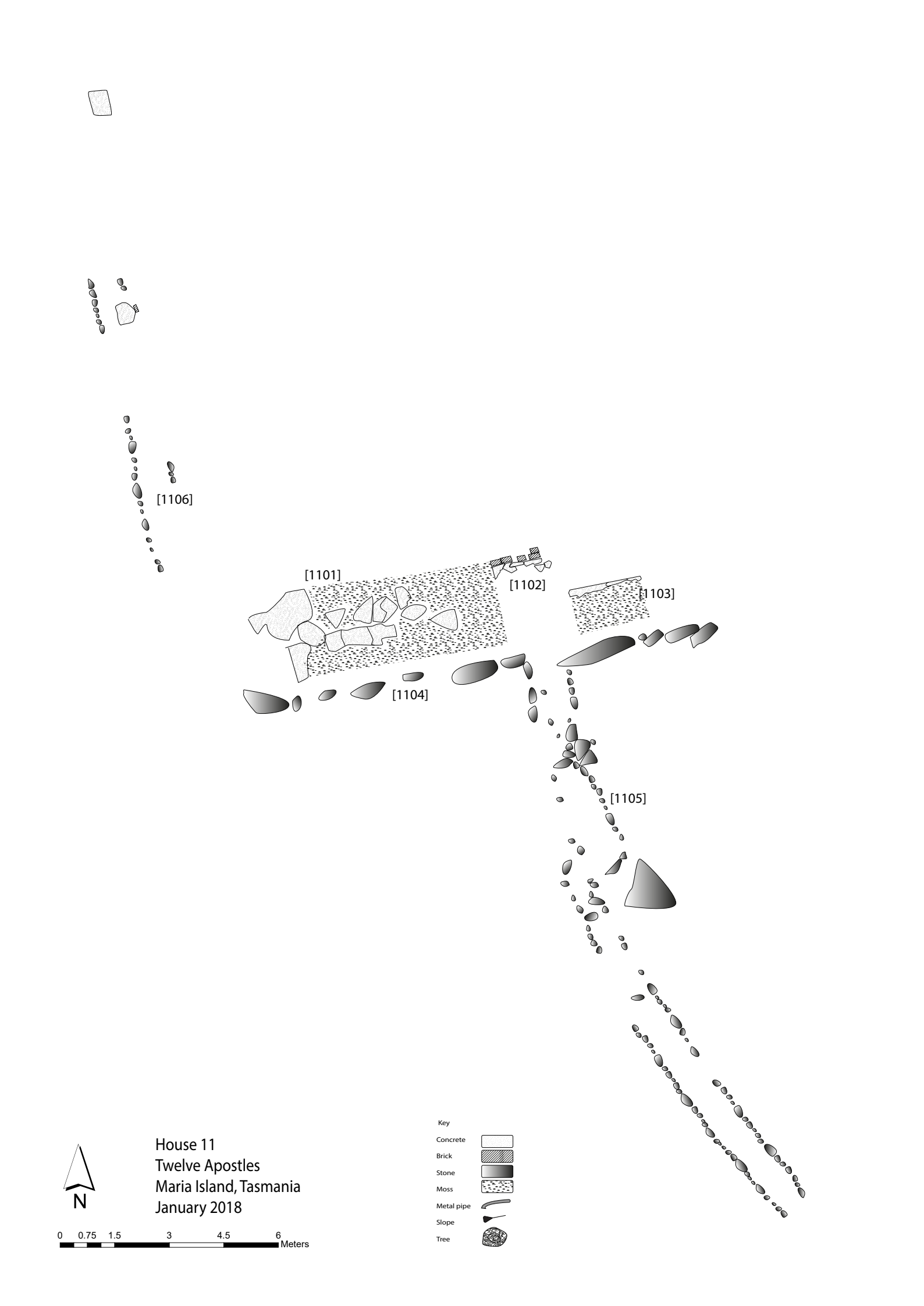
Slope

Tree

House 10
Twelve Apostles
Maria Island, Tasmania
January 2018

N

0 0.5 1 2 3 4 Meters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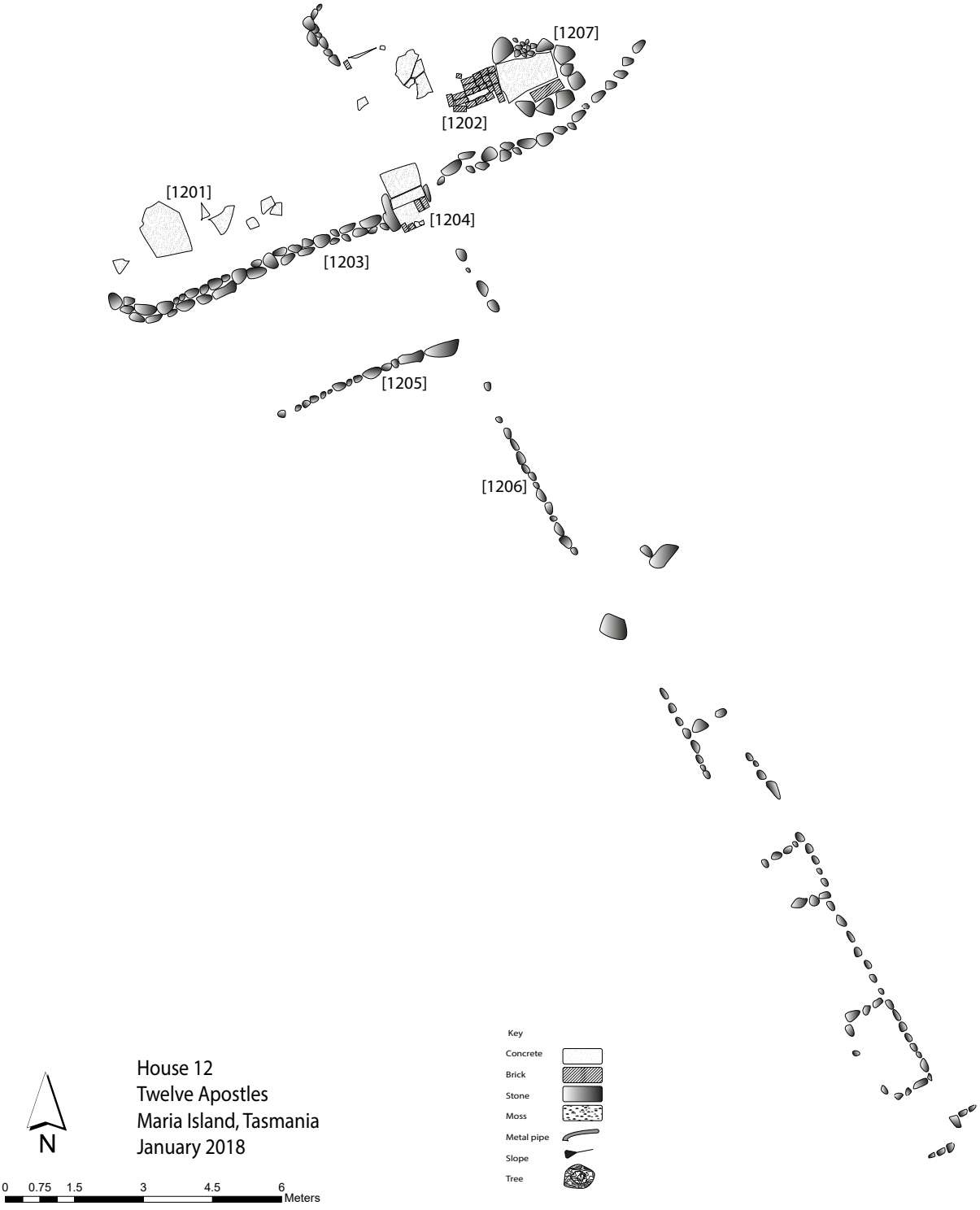
[1101]
[1102]
[1103]
[1104]
[1105]
Key
Concrete
Brick
Stone
Moss
Metal pipe
Slope
Tree
N
House 11
Twelve Apostles
Maria Island, Tasmania
January 2018
0 0.75 1.5 3 4.5 6
Meters


[1207]
[1202]
[1201]
[1204]
[1203]
[1205]
[1206]
Key
Concrete
Brick
Stone
Moss
Metal pipe
Slope
Tree
N
House 12
Twelve Apostles
Maria Island, Tasmania
January 2018
0 0.75 1.5 3 4.5 6
Meters

Appendix C: Artefact catalogue

PtID	E	N	H	House	Material	Portion	Size (mm)	Colour	Description
249	587701.742	5285098.97	50.524	7	glass		7	amber	bottle body fragment
250	587700.635	5285098.056	50.683	7	ceramic		2	white	earthenware, pearlware, decorative moulding
251	587699.702	5285098.815	50.559	7	ceramic		2	white	earthenware
252	587697.864	5285099.512	50.302	7	glass	neck	6	amber	bottle, "TAS.." inside a map
253	587697.74	5285099.452	50.3	7	glass		3	amber	bottle
254	587697.661	5285097.115	50.693	7	glass		5	amber	machine made
255	587696.629	5285096.666	50.809	7	glass	finish, neck	3	colourless	two-part rim
256	587696.375	5285096.889	50.755	7	ceramic		1	white	
257	587696.36	5285096.794	50.768	7	glass		1	amber	bottle
258	587696.107	5285099.642	50.153	7	glass		1	amber	machine made
259	587695.338	5285096.131	50.962	7	glass		5	light green	bottle body, three sides, "R"
260	587693.897	5285096.361	50.891	7	glass	rim	2	light green	very weathered, possibly melted
261	587693.683	5285096.332	50.881	7	glass		2	amethyst	
262	587692.649	5285096.677	50.81	7	glass		4	colourless	machine made, "...REM"
263	587692.606	5285095.978	51.008	7	glass		1	colourless	
264	587692.367	5285095.285	51.097	7	glass		2	pink	
265	587692.066	5285095.341	51.115	7	glass	finish, neck	3	green	machine made
267	587693.438	5285098.675	50.434	7	ceramic		3	white	earthenware
268	587692.834	5285099.673	50.215	7	ceramic		2	light brown	1.5cm thick, with vitrification on either side, tile?
269	587694.33	5285101.925	49.707	7	glass		5	colourless	machine made, two seams to the top, single lip
270	587692.943	5285102.598	49.396	7	glass		2	light green	bottle fragment, curved
271	587692.909	5285102.528	49.418	7	glass		2	light green	window glass
273	587693.025	5285104.587	48.623	7	glass	finish	3	light pink	machine made

275	587694.645	5285104.055	49.229	7	glass		1	colourless	
276	587694.539	5285104.009	49.198	7	glass		2	colourless	
277	587694.512	5285104.153	49.133	7	metal	nail	2		iron nail
278	587696.637	5285104.508	49.053	7	glass		1	amber	curved
279	587696.872	5285104.646	48.988	7	glass	finish, neck	4	light green	no seams
280	587697.316	5285104.876	49.018	7	glass		3	amber	bottle, machine made
281	587697.83	5285105.4	48.907	7	glass		2	amethyst	
282	587698.382	5285104.74	49.08	7	metal		4		fragment of circular piece of flat copper with two nails
283	587698.263	5285105.932	48.552	7	glass		2	colourless	
284	587698.579	5285105.575	48.733	7	ceramic		2	white	earthenware
285	587698.964	5285105.732	48.751	7	metal	nail	3		iron nail
286	587699.759	5285105.348	49.188	7	glass	base	7	colourless	rim on base, concentric lines on base
288	587700.568	5285103.54	49.495	7	ceramic	base	4	brown	Rockingham - yellow paste with glossy brown glaze
289	587700.929	5285103.401	49.528	7	glass	finish, neck, shoulder	7	colourless	machine made, two seams to the top
290	587700.347	5285102.965	49.599	7	ceramic		2	white	earthenware
291	587700.084	5285102.367	49.676	7	glass		3	colourless	
292	587700.937	5285103.417	49.519	7	glass		4	colourless	hand blown, small bubbles, bottle
293	587701.573	5285101.627	49.945	7	glass		3	colourless	
294	587701.438	5285101.396	49.979	7	glass		2	colourless	
295	587700.279	5285101.126	50.011	7	glass		4	amber	
296	587701.291	5285100.314	50.276	7	glass		4	light green	aquamarine, curved
297	587701.534	5285100.021	50.321	7	glass		4	amber	bottle
298	587701.797	5285100.267	50.293	7	glass	finish, neck	4	colourless	jar lip with three ridges
299	587692.456	5285103.081	49.169	7	glass		5	colourless	
300	587691.654	5285103.189	48.874	7	glass		4	colourless	fragment of square bottle, "SCO / …UL"

301	587692.866	5285104.301	48.714	7	glass		2	colourless	
302	587694.963	5285105.119	48.551	7	glass	neck	6	colourless	
303	587713.947	5285101.415	50.413	6	glass		5	colourless	hand made
305	587715.601	5285102.425	50.168	6	ceramic		2	black	earthenware, black transfer print, abstract pattern
306	587715.531	5285102.564	50.112	6	ceramic		2	white	earthenware
307	587715.204	5285102.816	50.08	6	glass		2	colourless	
309	587716.048	5285104.102	49.828	6	glass		1	colourless	
310	587715.907	5285104.019	49.858	6	glass		3	light green	body fragment
311	587719.698	5285103.711	49.985	6	glass		3	amber	
312	587720.638	5285104.424	49.903	6	glass	top	1	black/ white	glass button with checker pattern, shank missing
313	587721.603	5285104.189	50.001	6	glass	base	4	light green	aquamarine, machine made, shallow, flat kick up, flat foot
314	587721.481	5285104.549	49.861	6	glass		4	colourless	curved, weathered
315	587721.555	5285105.001	49.739	6	metal	nail	2		iron nail, rusted, flat, square, 3mm thick (cut)
316	587721.536	5285105.141	49.719	6	glass		4	amber	curved, bottle
317	587721.253	5285105.309	49.705	6	ceramic		4	brown	brown glazed terracotta, glaze on inside curve, broken so external side is missing, possible pipe
318	587721.199	5285105.062	49.727	6	glass		1	colourless	
319	587720.792	5285104.863	49.797	6	glass	neck	1	amber	curved
320	587720.504	5285105.125	49.754	6	glass	base	2	colourless	bottle base fragment, slight footing
321	587720.043	5285105.122	49.788	6	glass		2	green	curved body fragment
322	587720.483	5285105.885	49.587	6	glass		3	colourless	
323	587720.103	5285105.997	49.507	6	glass	base	3	amber	thick base fragment
324	587719.342	5285105.675	49.542	6	glass		4	light green	aquamarine, curved
325	587715.469	5285104.889	49.616	6	glass		2	amber	
326	587715.227	5285105.553	49.375	6	glass	base	5	colourless	hand blown, "… G M" on base
327	587713.662	5285103.189	49.872	6	glass	neck, shoulder	7	amber	

330	587713.772	5285103.319	49.87	6	glass		2	colourless	chamfered edge
331	587713.518	5285103.326	49.84	6	glass		4	light green	body fragment
332	587713.606	5285103.387	49.823	6	glass		1	amber	
333	587713.608	5285103.511	49.823	6	glass		1	amber	
334	587713.496	5285103.483	49.807	6	glass		2	amber	
335	587713.99	5285103.421	49.871	6	glass		1	light green	aquamarine, thin glass
336	587714.164	5285103.802	49.795	6	glass		1	light green	
337	587713.861	5285104.251	49.667	6	glass		1	amber	
338	587713.855	5285104.493	49.617	6	glass		1	light green	aquamarine, hand blown
339	587713.553	5285104.336	49.615	6	glass		2	amber	M, N or W
340	587713.618	5285104.624	49.552	6	glass		2	amber	
341	587713.377	5285104.736	49.512	6	glass		7	amber	
342	587712.736	5285104.815	49.431	6	glass		1	light green	
343	587711.208	5285104.136	49.608	6	glass		2	amber	bottle shard, machine made
344	587710.079	5285105.742	49.136	6	glass	neck	4	amber	bottle shard, machine made
345	587712.758	5285105.872	49.173	6	glass		2	amber	bottle shard, machine made
346	587718.205	5285107.103	49.14	6	plastic	lid	5	white	bottle top, probably screw top
347	587719.094	5285107.798	49.034	6	glass	base	3	amber	machine made
348	587720.308	5285106.736	49.362	6	glass		4	light green	aquamarine, curved
349	587720.149	5285107.042	49.271	6	glass		2	colourless	window glass
350	587720.089	5285107.501	49.186	6	glass		2	amber	bottle shard, curved
351	587721.112	5285107.792	49.186	6	glass		5	light green	bottle shard, curved
352	587720.801	5285108.32	49.014	6	glass		5	colourless	hand blown, small bubbles, bottle
353	587720.937	5285108.503	48.965	6	glass		2	olive	

369	587794.655	5285138.396	48.237	6	glass		3	colourless	bottle shard
370	587794.493	5285138.18	48.236	6	glass		3	colourless	bottle shard
371	587794.362	5285138.225	48.236	6	glass		2	amethyst	ribbed
372	587794.028	5285137.94	48.238	6	glass		3	olive	bottle shard
373	587794.145	5285137.641	48.328	6	ceramic		3	white	whiteware, plain, open vessel
374	587794.356	5285137.681	48.315	6	glass		3	olive	bottle shard
375	587794.325	5285137.774	48.328	6	glass		3	colourless	window glass
376	587794.568	5285137.866	48.356	6	glass	stopper	3	colourless	Club sauce stopper, flat top, square sides, no mark
377	587794.591	5285137.722	48.333	6	glass		3	light green	bottle shard
378	587794.782	5285137.833	48.295	6	glass		4	olive	bottle shard
379	587794.767	5285137.903	48.268	6	glass		3	colourless	window glass
380	587794.897	5285138.919	48.029	6	glass		2	amber	bottle shard
381	587794.827	5285138.895	48.068	6	glass	base	4	colourless	bottle shard
565	587720.526	5285110.88	48.159	6	glass		3	colourless	bottle shard
566	587720.4	5285110.891	48.173	6	glass	finish	1	colourless	crown top
567	587720.405	5285110.881	48.157	6	glass		2	colourless	bottle shard
568	587719.455	5285111.566	47.918	6	metal	nail	4		Copper nail, square, hand cut
582	587708.727	5285109.432	47.934	6	glass		3	amber	mould seam
583	587708.482	5285109.634	47.909	6	glass	base	5	amber	"…S BOTT[LE] / [PRO]PERTY OF…/…LE CO" (probably Tasmanian Bottle Co
584	587708.324	5285109.89	47.842	6	glass	base	5	olive	bottle, thick glass, champagne?
586	587709.9	5285112.262	47.559	6	glass		4	colourless	bottle shard
587	587710.242	5285112.742	47.554	6	ceramic	rim	2	white	porcelain, rim of a plate or saucer
588	587710.438	5285109.941	47.722	6	glass		2	amethyst	
589	587710.951	5285110.384	47.662	6	glass		5	amber	machine made
590	587713.034	5285111.241	47.595	6	ceramic	rim	2	white	earthenware, rim of a plate or saucer
591	587713.132	5285111.132	47.594	6	ceramic		2	black	earthenware, cream paste, black glaze

592	587715.104	5285113.89	47.626	6	mortar		2	white	cement render or mortar near shattered material on back door pavement
593	587715.242	5285113.714	47.602	6	mortar		2	white	cement render or mortar near shattered material on back door pavement
594	587715.469	5285113.03	47.557	6	mortar		2	white	cement render or mortar near shattered material on back door pavement
595	587716.955	5285111.26	47.853	6	glass		4	olive	bottle shard
596	587716.846	5285111.335	47.806	6	glass		3	amethyst	single groove
597	587720.113	5285112.195	47.795	6	glass		3	amber	bottle shard
598	587717.346	5285112.489	47.492	6	glass		7	amber	bottle shard
599	587718.92	5285113.727	47.45	6	glass		5	amber	bottle shard
600	587718.663	5285113.77	47.455	6	glass		6	colourless	bottle shard, machine made
601	587718.484	5285114.201	47.476	6	glass		7	amber	hand blown, bottle shard
602	587718.509	5285113.96	47.437	6	glass		4	amber	hand blown, bottle shard
603	587718.511	5285113.6	47.481	6	ceramic		2	white	earthenware
605	587718.842	5285115.109	47.324	6	glass		4	amethyst	bottle shard
606	587718.855	5285115.171	47.328	6	glass		4	amber	bottle shard
607	587718.659	5285115.259	47.332	6	glass		3	amber	bottle shard
608	587697.708	5285108.477	48.444	6	ceramic	rim	3	white	earthenware,
609	587697.627	5285108.372	48.421	6	glass		5	amber	bottle shard
610	587695.053	5285105.205	48.523	6	glass	neck, shoulder	5	colourless	bottle
611	587694.882	5285105.248	48.553	6	ceramic		3	white	earthenware, thin pink line
612	587694.895	5285105.32	48.52	6	glass		3	colourless	window glass
613	587693.158	5285105.236	48.458	6	plastic		2	cream	thin plastic with small circle on it, discoloured with age
614	587691.523	5285104.714	48.56	6	glass		5	colourless	bottle shard
859	587618.282	5285061.662	48.768	12	glass	finish	3	light green	aquamarine, separate finish, rolled top
861	587616.435	5285060.164	48.801	12	glass		1	light green	window glass
862	587616.021	5285060.35	48.639	12	ceramic		2		earthenware, transfer print

863	587616.063	5285060.471	48.593	12	glass		2	light green	window glass
864	587616.005	5285060.431	48.594	12	glass		1	colourless	window glass
865	587616.01	5285060.617	48.543	12	glass		1	light green	window glass
866	587617.648	5285062.282	48.529	12	glass	finish, neck	5	amber	separate, two-part finish, rolled top
867	587617.124	5285063.122	48.474	12	glass	base	5	amber	"E", "C" and "O" written on edge
868	587616.286	5285062.296	48.326	12	glass	base	5	amber	"TAS[MANIAN]/[COMPA]NY LIMITE[D]"
869	587616.169	5285062.269	48.326	12	glass	base	5	white	milk glass, opaque, purplish tinge
870	587616.112	5285062.235	48.326	12	glass		4	amber	
871	587615.962	5285062.137	48.327	12	glass		4	amber	"[BOT]TLE .../THE TAS[MANIAN].../[COMPA]NY"
872	587614.773	5285060.581	48.309	12	ceramic	base	2	white	earthenware,
873	587614.201	5285060.349	48.279	12	ceramic	rim	3	white	porcelain
874	587616.696	5285061.014	48.671	12	glass	shoulder	4	amber	separate finish, striations from manufacture, mould seam
1004	587622.381	5285067.216	48.572	11	glass	base	4	colourless	bottle
1005	587622.649	5285067.487	48.552	11	ceramic	rim, base	4	white	earthenware
1006	587623.098	5285068.056	48.616	11	ceramic	base	3	white	porcelain, floral decal - green, blue
1007	587624.66	5285068.956	48.689	11	glass		2	amethyst	
1008	587624.785	5285069.127	48.708	11	glass		2	colourless	window glass
1009	587626.642	5285069.556	48.784	11	glass	finish, neck	5	light green	pale aquamarine, machine made, seam to top of lip
1010	587624.058	5285068.23	48.681	11	metal		6		Copper alloy, flat with square cut outs, 8 holes for nails (2 extant)
1011	587626.921	5285069.498	48.838	11	glass	neck	7	amber	bottle
1012	587627.232	5285069.441	48.833	11	glass		4	colourless	bottle shard
1013	587627.606	5285069.595	48.853	11	plastic	button	1	cream	2-hole, sew through button with rim
1014	587626.873	5285070.985	48.824	11	glass		4	colourless	bottle shard
1015	587627.376	5285070.631	48.806	11	glass	base	7	amethyst	bottle, early machine made. Moulded "S"
1016	587627.751	5285070.645	48.806	11	glass	finish, neck	5	light green	aquamarine, Codd soda bottle

1017	587628.257	5285070.094	48.871	11	ceramic	rim	3	white	porcelain, rim of a plate, two moulded lines
1019	587636.21	5285068.352	50.57	11	glass		4	light green	pale aquamarine, bottle shard
1020	587637.956	5285066.46	51.216	11	glass		5	amber	machine made, bottle shard
1021	587634.066	5285066.535	50.476	11	metal	complete	3		back of a 12-gauge shot gun shell. Possibly says "REMINGTON", copper alloy
1022	587631.127	5285065.939	50.086	11	glass	base	8	amber	"AGM" Side/base seams, machine made “LIMITED" (probable Tasmanian Bottle Co.)
1023	587629.146	5285066.005	49.804	11	glass		2	colourless	window glass
1024	587628.401	5285065.726	49.749	11	glass		2	amber	bottle shard
1025	587628.426	5285065.652	49.771	11	ceramic		2	white	earthenware
1026	587626.77	5285063.293	49.8	11	glass		3	light green	bottle shard
1027	587624.356	5285065.454	49.189	11	glass		3	colourless	window glass
1028	587624.053	5285065.592	49.11	11	glass	base	5	amethyst	early machine made, seams
1029	587623.949	5285065.623	49.141	11	glass	base	7	amethyst	early machine made, seams
1030	587624.317	5285065.98	49.083	11	glass		4	light green	aquamarine, thick glass, bottle
1031	587624.001	5285066.306	49.026	11	glass		3	colourless	bottle shard
1032	587624.081	5285066.897	48.948	11	glass		7	light green	aquamarine, cordial bottle (Nespa)
1033	587624.936	5285066.976	49.086	11	glass		1	colourless	bottle shard
1034	587626.137	5285067.748	49.167	11	glass		4	amber	bottle shard
1035	587622.665	5285067.377	48.583	11	glass	finish, neck	8	amber	machine made, seam,
1053	587806.131	5285138.728	49.057	1	glass		1	colourless	bottle shard
1054	587808.606	5285139.596	49.131	1	ceramic	rim	2	white	whiteware with moulded decoration
1055	587808.574	5285140.571	48.988	1	glass	base	4	olive	
1057	587812.839	5285141.394	49.183	1	glass	shoulder	3	colourless	bottle shard
1058	587812.957	5285140.99	49.278	1	glass		3	colourless	window glass
1059	587813.943	5285141.667	49.207	1	glass		4	colourless	bottle shard

1060	587815.668	5285143.336	49.186	1	metal	rim	20	white	enamelled metal pot rim
1061	587815.76	5285143.457	49.187	1	glass	base	8	colourless	Ovoid fluted bottle, Side has an "A", "70" Base has "G" and "M" inside a square "A" with "M152 above it and "M/M" beneath. Mould seam runs around the base
1062	587815.743	5285143.024	49.206	1	ceramic	half	6	white	ceramic, flat/circular electrical insulator with some copper wire attached, "215/ A..."
1063	587815.343	5285141.191	49.505	1	ceramic		4	white	whiteware, possibly originally patterned on exterior
1064	587812.98	5285140.296	49.513	1	ceramic		3	white	whiteware, possibly a closed vessel, glaze missing, faint horizontal grey band
1065	587813.019	5285140.244	49.51	1	glass		4	colourless	window glass, thick
1066	587814.819	5285144.841	48.955	1	metal		15		corroded iron pot/tin, missing base
1067	587812.483	5285139.419	49.547	1	glass		2	colourless	
1068	587816.875	5285139.43	49.979	1	glass		2	olive	bottle shard
1069	587816.504	5285139.208	50	1	glass		3	colourless	bottle shard
1070	587816.771	5285138.671	50.133	1	ceramic		2	white	porcelain
1071	587815.372	5285139.316	49.868	1	glass		3	light green	aquamarine bottle shard
1072	587810.429	5285139.768	49.312	1	ceramic	base	5	white	foot ring, probable teaware, cup or milk jug
1073	587816.639	5285137.593	50.339	1	glass		3	colourless	
1074	587816.857	5285137.556	50.362	1	glass		2	olive	bottle shard
1075	587816.935	5285137.232	50.422	1	glass		4	colourless	bottle shard
1076	587818.321	5285135.203	50.821	1	ceramic		2	white	whiteware
1077	587817.106	5285135.162	50.654	1	glass	base	2	colourless	Moulded glass with botanical design, base of a bowl or drinking glass? Foot ring, solarisation
1078	587816.816	5285134.23	50.821	1	glass		2	colourless	bottle shard
1079	587815.983	5285133.982	50.778	1	glass		1	amber	"...BO[TTLE]..."
1080	587815.841	5285134.64	50.589	1	ceramic		2	white	whiteware, green floral design
1081	587816.385	5285138.75	50.077	1	metal	complete	2		copper alloy washer
1082	587815.268	5285136.406	50.262	1	glass		4	olive	bottle shard
1083	587814.317	5285137.04	50.07	1	glass	base	4	colourless	bottle shard

1084	587814.633	5285135.053	50.39	1	glass		1	colourless	bottle shard
1085	587814.545	5285135.094	50.39	1	glass		2	colourless	window glass
1086	587813.789	5285135.146	50.347	1	glass		3	olive	bottle shard
1087	587812.93	5285134.523	50.313	1	glass		3	amber	bottle shard, "A"
1088	587812.054	5285136.713	49.947	1	glass		3	blue	Corner of a poison bottle, ribs on one side
1089	587811.58	5285136.726	49.888	1	glass		1	colourless	window glass
1090	587811.624	5285135.526	50.132	1	glass		3	olive	bottle shard
1091	587810.52	5285134.261	50.254	1	ceramic		1	white	porcelain
1092	587811.273	5285132.746	50.582	1	ceramic		2	white	porcelain
1093	587808.415	5285133.744	50.103	1	ceramic		1	white	earthenware
1094	587796.185	5285136.358	48.06	2	ceramic		2	white	porcelain
1095	587797.126	5285135.595	48.564	2	ceramic		3	white	earthenware, possible lead glaze, crackle
1096	587797.482	5285134.118	48.951	2	ceramic	complete	3	white	Bisque porcelain lower leg, with black painted boot -from a soft body doll
1097	587799.215	5285131.746	49.431	2	ceramic	base	4	grey	earthenware, transfer print, tree. Flat shard, plate?
1098	587799.684	5285130.923	49.663	2	ceramic	rim	2	blue	whiteware, blue transfer print, both sides
1099	587799.388	5285131.601	49.5	2	ceramic		3	brown	Rockingham - yellow paste with glossy brown glaze
1100	587798.593	5285130.353	49.626	2	glass		2	colourless	bottle shard
1101	587798.82	5285130.244	49.663	2	glass		3	colourless	bottle shard
1102	587799.03	5285130.148	49.692	2	ceramic		3	white	porcelain
1103	587799.237	5285129.644	49.882	2	glass	neck	4	green	bottle shard
1104	587799.242	5285127.9	50.105	2	glass		2	colourless	bottle shard
1105	587799.058	5285127.651	50.191	2	metal	button	1		4-hole sunk eye, copper alloy, wide flat rim inscribed "OUR OWN MAKE"
1106	587797.93	5285129.588	49.714	2	glass		3	light green	
1107	587797.106	5285130.384	49.512	2	glass	rim	2	colourless	jar
1108	587797.151	5285130.116	49.546	2	glass		3	colourless	side seam "P"
1109	587797.145	5285129.826	49.598	2	glass		2	colourless	window glass

1110	587797.137	5285128.831	49.761	2	glass		3	colourless	window glass
1111	587795.91	5285132.724	49.05	2	glass		4	colourless	possible jar, same as 1107
1112	587795.592	5285130.907	49.271	2	glass		3	colourless	flat sided bottle
1113	587794.775	5285131.323	49.116	2	glass		2	colourless	"[PR]OP[ERTY]..."
1114	587794.336	5285127.944	49.653	2	ceramic	rim	4	white	Porcelain, grooves inside rim for possible screw
1115	587793.693	5285126.231	49.911	2	ceramic		2	brown / blue	Redware, brown glaze inside, blue glaze outside. Industrial slip? Same as 1117
1116	587793.34	5285128.006	49.56	2	glass		3	colourless	
1117	587791.549	5285126.806	49.572	2	ceramic		2	brown / blue	Redware, brown glaze inside, blue glaze outside. Industrial slip? Same as 1115
1118	587789.828	5285125.566	49.578	2	glass	base	4	light green	aquamarine with flat sides to base
1119	587789.396	5285125.193	49.621	2	glass		3	colourless	bottle shard
1120	587790.744	5285128.701	49.294	2	ceramic	base	2	white	earthenware
1121	587790.243	5285130.858	48.886	2	glass		3	colourless	window glass
1122	587788.405	5285131.204	48.603	2	glass	rim	1	colourless	two parallel ribs for a screw top jar
1123	587789.231	5285132.246	48.533	2	glass		3	colourless	
1124	587788.998	5285132.231	48.502	2	glass		3	colourless	
1125	587788.785	5285132.075	48.504	2	glass	rim	2	colourless	Jar, single lip
1126	587788.578	5285132.378	48.44	2	glass		1	colourless	curved body frag
1127	587788.399	5285132.41	48.427	2	glass		1	colourless	curved body frag
1128	587788.481	5285132.732	48.36	2	glass		1	colourless	curved body frag
1129	587787.046	5285133.331	48.145	2	ceramic	rim	5	white	porcelain, thin gold band, possible cup
1130	587787.047	5285132.258	48.322	2	glass		5	colourless	window glass
1131	587787.895	5285133.512	48.171	2	glass		6	colourless	window glass, thick
1132	587788.422	5285133.743	48.121	2	glass	rim	3	colourless	Jar, single lip
1242	587799.019	5285132.687	49.429	2	ceramic	rim	1	white	earthenware, possible bowl
1243	587799.159	5285132.562	49.5	2	glass		2	amber	bottle shard
1244	587799.473	5285131.872	49.662	2	ceramic	rim	2	white	porcelain, small curved shard, possibly from a miniature tea set

1245	587798.905	5285131.025	49.692	2	glass		3	amber	bottle shard
1246	587796.889	5285131.201	49.495	2	glass	base	4	colourless	square bottle
1247	587793.144	5285128.799	49.576	2	glass		1	colourless	two parallel ribs
1248	587789.81	5285126.397	49.583	2	glass	base	2	colourless	shallow push-up, "O"
1249	587788.184	5285132.094	48.6	2	glass		2	amber	
1250	587798.402	5285131.227	49.636	2	glass		2	colourless	bottle shard
1251	587795.143	5285133.505	48.97	2	glass		2	colourless	bottle shard
1252	587792.174	5285130.931	49.224	2	glass		2	amber	bottle shard
1253	587790.781	5285131.565	48.976	2	glass		2	amber	bottle shard
1254	587789.555	5285134.549	48.328	2	glass		2	amber	bottle shard
1320	587760.557	5285117.235	49.235	4	metal	complete	6		Copper alloy. Handle, possibly from furniture, remnants of iron nails where it was attached
1321	587759.803	5285117.548	49.074	4	metal	rim	15		Moulded iron container. "A?KEN…/WEST BRO…" inside an oval around the number 3, enclosed in a raised border
1322	587758.482	5285116.19	49.364	4	glass		3	green	jar or bottle, curved
1323	587758.107	5285116.736	49.229	4	glass		3	colourless	
1324	587757.459	5285116.386	49.298	4	glass		2	colourless	
1325	587757.261	5285116.24	49.292	4	glass		2	colourless	
1326	587754.532	5285114.727	49.483	4	glass		4	green	
1327	587754.253	5285114.917	49.453	4	glass		2	green	
1328	587754.49	5285115.898	49.209	4	glass		5	colourless	
1329	587754.681	5285116.832	48.947	4	ceramic		16	red	Stoneware pipe, incised parallel lines
1330	587754.211	5285116.784	48.931	4	ceramic		2	white	porcelain
1331	587754.216	5285116.698	48.931	4	glass		5	green	bottle shard
1332	587754.433	5285116.722	48.964	4	ceramic		3	white	porcelain
1333	587753.52	5285116.412	48.962	4	glass		1	colourless	window glass
1334	587753.259	5285116.917	48.827	4	glass		2	colourless	
1335	587753.809	5285115.632	49.199	4	glass		4	green	

1336	587753.275	5285115.709	49.232	4	glass		1	amethyst	
1337	587753.077	5285115.54	49.234	4	glass	finish	1	colourless	bottle shard
1338	587753.143	5285114.756	49.488	4	glass		2	colourless	
1339	587750.978	5285114.559	49.334	4	glass		2	colourless	
1340	587750.663	5285115.052	49.218	4	glass		1	amethyst	
1341	587750.685	5285115.594	49.02	4	metal	nail	5		corroded nail
1343	587754.45	5285117.713	48.839	4	glass		6	amber	bottle shard, moulded map of Tasmania (partial) with "T.."
1344	587755.885	5285118.255	48.858	4	glass		3	green	
1345	587758.869	5285122.942	48.09	4	glass		4	colourless	bottle shard
1346	587757.017	5285122.448	48.001	4	glass		2	light green	bottle shard
1347	587756.146	5285122.111	47.955	4	glass		3	light blue	bottle shard
1348	587756.092	5285122.006	47.944	4	glass		2	light blue	bottle shard
1349	587755.99	5285121.836	47.989	4	glass		5	amber	bottle shard
1350	587755.901	5285121.649	48.049	4	glass		6	amber	bottle shard
1351	587755.81	5285121.545	48.072	4	glass		2	amethyst	flat sided bottle
1352	587755.392	5285121.809	47.952	4	glass		1	amber	
1353	587755.631	5285121.848	47.959	4	glass		5	amber	
1354	587755.774	5285122.054	47.916	4	glass		3	amethyst	
1355	587756.018	5285122.376	47.859	4	glass		4	amber	
1356	587755.98	5285122.257	47.9	4	glass		2	amber	
1357	587755.892	5285122.204	47.923	4	glass		3	amber	bottle shard
1358	587755.816	5285122.238	47.878	4	glass		3	light green	Pale aquamarine, bottle shard
1359	587755.705	5285122.309	47.882	4	glass		4	amber	bottle shard
1360	587755.605	5285122.385	47.832	4	glass		2	amber	bottle shard
1361	587755.674	5285122.556	47.831	4	glass		1	light green	Pale aquamarine
1362	587755.244	5285123.025	47.615	4	glass		4	amber	bottle shard

1363	587755.465	5285122.955	47.642	4	metal	nail	2		cut nail?
1364	587756.301	5285122.838	47.816	4	ceramic		3	white	porcelain, thick, remnants of worn green glaze
1365	587756.683	5285122.732	47.882	4	glass		2	colourless	window glass
1366	587757.084	5285122.857	47.905	4	ceramic		4	white	porcelain insulation, 1cm thick, grooves on side, and room for a screw,
1367	587757.379	5285123.324	47.763	4	glass		2	light green	flat sided bottle, slight aquamarine
1368	587757.462	5285123.362	47.759	4	glass		2	light green	bottle shard
1369	587756.758	5285123.352	47.69	4	glass		2	light green	window glass
1370	587756.75	5285123.344	47.691	4	glass	neck	2	colourless	bottle shard
1371	587756.648	5285123.423	47.654	4	ceramic	rim	3	white	porcelain
1372	587756.765	5285123.472	47.662	4	glass		3	light green	window glass
1373	587756.52	5285123.346	47.672	4	glass		3	light green	window glass
1374	587756.463	5285123.305	47.653	4	glass		3	colourless	heat damaged, folded back on itself
1375	587756.454	5285123.393	47.652	4	ceramic		5	orange	terracotta pipe, 5mm thick
1376	587756.481	5285123.517	47.598	4	glass		3	colourless	heat damaged
1377	587756.495	5285123.599	47.576	4	glass		2	colourless	window glass
1378	587753.597	5285122.476	47.642	4	glass		2	colourless	flat sided bottle
1379	587753.545	5285122.352	47.676	4	glass		4	dark green	bottle shard
1380	587752.922	5285122.369	47.692	4	glass		4	colourless	bottle shard
1381	587752.495	5285122.217	47.676	4	glass		2	colourless	window glass
1382	587751.981	5285122.064	47.671	4	glass		4	colourless	bottle shard
1383	587752.001	5285122.318	47.554	4	glass		4	colourless	bottle shard
1384	587751.418	5285121.753	47.746	4	glass		2	green	bottle shard
1385	587751.422	5285121.933	47.681	4	glass		2	green	bottle shard
1386	587751.026	5285121.837	47.611	4	glass	shoulder	3	amber	

1387	587751.123	5285121.639	47.742	4	glass		2	green	
1388	587751.149	5285121.601	47.766	4	glass		2	colourless	bottle shard
1389	587751.218	5285121.544	47.809	4	ceramic		1	white	whiteware
1390	587751.279	5285121.401	47.866	4	ceramic		1	white	
1391	587750.866	5285121.504	47.781	4	glass		2	colourless	window glass
1392	587750.887	5285121.415	47.811	4	glass		2	colourless	window glass
1393	587750.75	5285121.38	47.78	4	glass		2	colourless	window glass
1394	587750.644	5285121.317	47.867	4	glass		2	colourless	window glass
1395	587750.719	5285121.252	47.883	4	glass		2	colourless	window glass
1396	587750.346	5285121.217	47.842	4	glass		2	green	
1397	587750.198	5285121.863	47.528	4	glass		2	colourless	window glass
1398	587750.298	5285121.757	47.564	4	glass		2	colourless	bottle shard
1399	587750.362	5285121.76	47.604	4	glass		2	colourless	window glass
1400	587750.37	5285121.75	47.583	4	glass		2	colourless	window glass
1401	587750.277	5285121.621	47.591	4	glass		2	colourless	window glass
1585	587759.53	5285118.692	48.909	4	metal		6		flat copper alloy strip raised in middle and flat at either end with holes for screws (for furniture or to secure an electric cord
1586	587757.839	5285123.752	47.731	4	glass		3	amber	bottle shard
1587	587757.841	5285123.836	47.722	4	ceramic	rim	4	white	earthenware
1588	587758.139	5285124.19	47.724	4	glass	base	3	colourless	bottle shard
1589	587757.631	5285124.629	47.424	4	glass		3	colourless	window glass
1590	587757.657	5285124.532	47.421	4	metal	cap	1		bottle cap, crushed
1591	587757.891	5285124.928	47.343	4	glass		8	amber	bottle shard
1592	587757.966	5285125.355	47.223	4	glass		4	amethyst	
1593	587757.745	5285125.783	47.162	4	glass		6	colourless	window glass
1594	587757.947	5285125.986	47.175	4	glass		6	colourless	window glass
1595	587758.191	5285126.389	47.166	4	glass		6	colourless	window glass

1596	587757.82	5285126.667	47.12	4	glass		5	amber	bottle shard
1597	587757.9	5285127.092	47.085	4	glass		3	colourless	window glass
1598	587757.626	5285127.613	47.048	4	glass		2	light green	window glass
1599	587757.574	5285126.876	47.103	4	glass		3	colourless	window glass
1600	587757.736	5285126.658	47.124	4	glass		4	amber	bottle shard
1601	587757.705	5285126.594	47.108	4	glass		3	colourless	window glass
1602	587757.771	5285126.445	47.118	4	glass		4	colourless	bottle "POIS[ON]"
1603	587757.63	5285126.23	47.124	4	glass		4	colourless	
1604	587757.793	5285126.164	47.112	4	glass	base	5	light green	aquamarine, bottle shard
1605	587757.579	5285125.834	47.141	4	glass		4	colourless	window glass
1606	587757.138	5285125.984	47.134	4	glass		4	colourless	window glass
1607	587757.451	5285125.524	47.155	4	glass		5	colourless	bottle shard, "O"
1608	587757.404	5285125.415	47.183	4	glass		4	olive	bottle shard
1609	587757.005	5285125.198	47.196	4	glass		1	colourless	
1610	587756.974	5285124.894	47.238	4	glass		4	colourless	bottle shard
1611	587756.296	5285125.106	47.176	4	glass		1	light green	bottle shard
1612	587756.604	5285123.899	47.458	4	ceramic	base	3	white	earthenware
1613	587755.988	5285123.797	47.435	4	glass		7	amber	bottle shard
1614	587755.997	5285123.585	47.473	4	glass	neck	3	amber	bottle shard
1615	587755.95	5285124.677	47.188	4	glass		1	colourless	window glass
1616	587755.798	5285124.565	47.196	4	glass	base	3	colourless	bottle shard
1617	587755.809	5285124.73	47.169	4	glass		3	colourless	bottle shard
1618	587755.357	5285124.657	47.166	4	glass		4	colourless	heat damaged
1619	587755.337	5285125.116	47.149	4	glass		4	amber	bottle shard "N"
1620	587754.985	5285123.657	47.268	4	glass		4	colourless	bottle, small bubbles, early machine made?
1621	587754.589	5285124.053	47.139	4	glass		4	colourless	bottle, small bubbles, early machine made?

1622	587753.816	5285123.45	47.202	4	glass		4	amber	bottle shard
1623	587752.642	5285123.271	47.219	4	glass		8	olive	bottle shard
1624	587752.318	5285123.411	47.195	4	glass		8	colourless	bottle shard
1625	587752.069	5285123.078	47.231	4	glass		3	light green	bottle shard
1626	587751.985	5285123.118	47.234	4	glass		4	colourless	bottle shard
1627	587752.542	5285124.155	47.053	4	ceramic		7	brown	terracotta roof tile
1628	587752.086	5285124.207	47.07	4	glass		5	light green	bottle shard
1629	587752.004	5285123.858	47.106	4	glass		5	light green	bottle shard
1630	587751.659	5285123.968	47.1	4	glass		6	colourless	bottle shard
1631	587751.84	5285123.709	47.132	4	glass	base	2	colourless	bottle shard
1632	587751.698	5285123.673	47.127	4	ceramic		4	white	earthenware
1633	587751.65	5285123.592	47.136	4	glass	base	5	colourless	bottle shard
1634	587751.64	5285123.497	47.137	4	glass		3	brown	bottle shard
1635	587750.915	5285123.524	47.125	4	glass		4	colourless	bottle shard
1636	587751.295	5285122.968	47.238	4	glass	base	5	olive	bottle shard
1637	587751.702	5285122.42	47.484	4	glass		6	colourless	bottle shard
1638	587751.379	5285122.534	47.387	4	glass		4	olive	bottle shard
1639	587751.422	5285122.232	47.53	4	glass	base	4	olive	bottle shard
1640	587750.798	5285122.231	47.431	4	glass		5	colourless	bottle shard
1641	587750.584	5285123.499	47.114	4	glass		4	colourless	window glass
1642	587750.48	5285123.351	47.114	4	glass		5	olive	bottle shard
1643	587750.17	5285122.844	47.179	4	glass		1	colourless	window glass
1644	587750.302	5285122.773	47.21	4	glass	base	4	colourless	bottle shard
1645	587750.32	5285122.592	47.234	4	glass		3	colourless	bottle shard
1646	587750.283	5285122.509	47.329	4	ceramic	rim	2	white	earthenware
1647	587749.994	5285122.548	47.242	4	ceramic	rim	3	black	Earthenware, black and white transfer print, floral pattern

1648	587750.015	5285122.359	47.307	4	glass		4	olive	bottle shard
1649	587750.106	5285121.961	47.475	4	glass		2	blue	medicine bottle, ridges on side "TA…"
1650	587749.774	5285122.025	47.385	4	glass		3	light green	bottle shard
1651	587749.546	5285121.633	47.559	4	glass		3	olive	slightly curved
1652	587749.62	5285121.092	47.723	4	glass		4	light green	window glass
1653	587749.562	5285121.277	47.666	4	glass		3	colourless	slightly curved
1654	587749.878	5285120.619	47.962	4	glass		5	green	
1655	587748.858	5285120.572	47.888	4	glass		5	green	bottle shard
1656	587748.881	5285120.93	47.827	4	glass		3	olive	bottle shard
1657	587748.973	5285121.827	47.372	4	glass		4	olive	slightly curved
1658	587749.122	5285122.513	47.18	4	glass		5	olive	air bubbles in glass, striations
1659	587749.42	5285122.753	47.16	4	glass		3	olive	curved shard, dimples
1660	587747.514	5285122.405	47.097	4	glass		3	light green	window glass
1661	587747.604	5285122.402	47.124	4	glass		2	light green	bottle shard
1662	587747.661	5285122.65	47.082	4	glass		2	colourless	jar
1663	587747.304	5285122.427	47.104	4	glass	rim	3	green	slightly curved
1664	587747.174	5285122.391	47.085	4	glass		3	amber	bottle shard
1665	587748.669	5285123.117	47.073	4	ceramic	rim	1	white	porcelain
1666	587750.639	5285122.904	47.193	4	glass	base	4	olive	bottle shard
1728	587769.432	5285130.163	47.532	3	glass		3	amber	bottle shard
1729	587770.96	5285129.723	47.543	3	ceramic		3	white	earthenware
1730	587772.318	5285129.332	47.605	3	glass		2	light green	aquamarine
1731	587774.123	5285129.62	47.665	3	ceramic	rim	1	white	porcelain, cup?
1732	587774.932	5285129.999	47.669	3	glass		3	colourless	window glass
1733	587777.155	5285130.606	47.689	3	ceramic	rim	2	white	porcelain, decal of green leaves and pink flowers on interior. Similar to 1731

1734	587777.725	5285130.71	47.66	3	glass		3	light green	aquamarine
1735	587778.583	5285130.783	47.814	3	glass	finish, neck	3	colourless	bottle shard
1736	587778.444	5285130.602	47.846	3	glass		2	colourless	window glass
1737	587779.12	5285130.035	48.175	3	ceramic	rim	4	blue	earthenware, blue transfer print, botanical design - Asiatic pheasant
1738	587779.138	5285129.85	48.214	3	glass		4	colourless	window glass
1739	587777.202	5285129.609	48.114	3	glass	finish, neck	5	amber	machine made, horizontal seam below lip
1740	587775.342	5285129.264	47.966	3	glass		7	olive	
1741	587775.318	5285128.764	48.138	3	ceramic		4	white	earthenware, thick (lead?) glaze
1742	587774.605	5285128.671	47.972	3	ceramic	rim	4	white	earthenware, possible cup, similar to 1743
1743	587774.957	5285127.917	48.232	3	ceramic	base	4	white	earthenware, part of 1742?
1744	587773.107	5285128.657	47.866	3	glass		1	colourless	bottle shard
1745	587772.84	5285128.563	47.864	3	ceramic	rim	4	white	earthenware
1746	587770.934	5285128.009	47.831	3	glass	rim	8	colourless	moulded glass, double rim, design is moulded on the interior
1747	587769.916	5285127.503	47.872	3	glass		3	light green	flat top of a club sauce stopper
1748	587768.38	5285126.855	47.851	3	glass	partial stopper	3	colourless	bottle shard, early machine made
1749	587780.286	5285127.837	48.616	3	ceramic	rim	3	white	earthenware
1750	587778.143	5285128.522	48.395	3	ceramic	rim	2	white	porcelain, red bands on interior
1751	587778.499	5285127.91	48.558	3	glass		4	colourless	window glass
1752	587775.969	5285127.313	48.379	3	glass	finish	2	colourless	bottle, joins with 1753
1753	587775.985	5285127.176	48.407	3	glass	finish	1	colourless	bottle, joins with 1752
1754	587779.353	5285126.324	48.854	3	ceramic		2	white	porcelain
1755	587778.62	5285124.972	49.026	3	ceramic	base	2	white	porcelain
1756	587778.57	5285125.736	48.897	3	glass	finish	2	colourless	bottle shard
1766	587771.498	5285124.176	48.625	3	ceramic		4	white	earthenware
1767	587771.457	5285123.448	48.78	3	glass		2	olive	bottle shard

1768	587770.972	5285123.222	48.741	3	ceramic	base	6	white	earthenware, plate
1769	587771.257	5285120.177	49.442	3	ceramic		1	white	porcelain, curved cup fragment
1770	587772.699	5285122.427	49.116	3	ceramic	rim	4	white	earthenware
1771	587775.069	5285121.441	49.437	3	ceramic	base	3	white	earthenware
1772	587774.477	5285121.308	49.458	3	ceramic	rim	3	green	earthenware, transfer print, Rhine
1773	587775.134	5285121.744	49.385	3	glass		2	light green	aquamarine bottle shard
1774	587775.733	5285123.626	49.069	3	ceramic	base	4	green	earthenware, green transfer print, lake and trees
1775	587775.019	5285122.664	49.188	3	glass		3	olive	bottle shard
1776	587775.664	5285123.303	49.157	3	glass		3	colourless	machine made, side seam
1777	587777.265	5285122.661	49.303	3	glass	neck	3	amethyst	
1778	587777.506	5285123.324	49.212	3	glass		4	olive	bottle shard
1781	587779.186	5285122.709	49.391	3	glass	neck	6	colourless	bottle shard
1812	587728.702	5285114.097	47.71	5	glass		2	olive	bottle shard
1813	587728.594	5285114.877	47.451	5	glass		2	amethyst	bottle shard
1814	587728.822	5285114.815	47.414	5	ceramic	rim	2	white	earthenware
1815	587729.011	5285114.556	47.509	5	ceramic		2	white	
1816	587729.296	5285114.53	47.554	5	glass		3	colourless	bottle shard
1817	587729.382	5285114.436	47.577	5	glass		3	olive	bottle shard
1818	587729.653	5285114.327	47.611	5	glass		4	colourless	bottle shard
1819	587731.112	5285114.917	47.435	5	glass		3	colourless	bottle shard
1820	587731.206	5285114.242	47.701	5	glass	base	3	amber	bottle, base seam, machine made
1821	587731.558	5285114.454	47.654	5	glass		4	olive	bottle shard
1822	587732.237	5285114.727	47.685	5	glass		1	olive	bottle shard
1823	587731.884	5285113.966	47.909	5	glass		2	light green	bottle shard
1824	587732.051	5285114.053	47.945	5	glass		2	colourless	bottle shard
1825	587732.132	5285114.032	47.968	5	ceramic		2	white	earthenware

1826	587732.317	5285114.132	47.934	5	glass		3	olive	bottle shard
1827	587732.436	5285114.068	48.048	5	glass		2	amber	bottle shard
1828	587731.799	5285115.001	47.447	5	glass	finish	1	blue	top of lip has curved decorative features, horizontal seam
1829	587731.835	5285115.666	47.224	5	glass		3	olive	bottle shard
1830	587731.955	5285115.797	47.184	5	glass	base	3	olive	bottle shard
1831	587731.889	5285115.947	47.125	5	glass		1	colourless	moulded with leaves and dots, 3mm thick
1832	587731.791	5285116.002	47.128	5	glass		3	olive	bottle shard
1833	587731.824	5285116.035	47.101	5	glass		3	olive	bottle shard
1834	587731.789	5285116.182	47.091	5	glass		3	olive	bottle shard
1835	587733.038	5285115.993	47.25	5	glass		3	colourless	bottle shard
1836	587733.063	5285115.598	47.419	5	glass		1	colourless	window glass
1837	587733.126	5285115.496	47.451	5	glass		4	light green	bottle shard
1838	587733.174	5285115.473	47.469	5	glass		3	olive	bottle shard
1839	587733.184	5285115.418	47.499	5	glass		2	amber	bottle shard
1840	587733.434	5285114.885	47.711	5	glass		5	olive	bottle shard
1841	587733.042	5285114.518	47.797	5	ceramic		4	white	earthenware
1842	587734.097	5285116.698	47.162	5	glass		4	olive	bottle shard
1843	587734.54	5285116.633	47.194	5	glass		2	olive	bottle shard
1844	587734.403	5285116.546	47.199	5	glass		4	light green	pale aquamarine, bottle shard
1845	587734.707	5285116.238	47.302	5	glass		3	light green	aquamarine, bottle shard
1846	587734.484	5285116.011	47.323	5	glass		4	olive	bottle shard
1847	587734.553	5285115.93	47.381	5	glass		3	amber	bottle shard
1848	587734.95	5285115.666	47.569	5	ceramic		3	black	whiteware, thick, possibly a painted flower
1849	587735.077	5285115.448	47.644	5	glass		2	colourless	bottle shard
1850	587735.834	5285115.359	47.834	5	glass		2	colourless	bottle shard

1851	587736.571	5285115.779	47.752	5	glass		2	light green	1mm thick
1852	587736.222	5285116.093	47.504	5	glass		4	colourless	bottle shard
1853	587735.829	5285116.962	47.151	5	glass		2	colourless	bottle shard
1854	587736.122	5285116.965	47.166	5	glass		4	colourless	bottle shard
1855	587737.013	5285117.643	47.182	5	glass		1	colourless	bottle shard
1856	587737.03	5285117.34	47.185	5	glass		7	olive	bottle shard
1857	587736.959	5285117.12	47.216	5	glass		2	colourless	"EU…"
1858	587737.61	5285117.392	47.263	5	glass		1	colourless	bottle shard
1859	587737.552	5285117.577	47.227	5	glass		2	olive	bottle shard
1860	587737.574	5285117.646	47.224	5	ceramic		4	white	porcelain
1861	587737.82	5285117.916	47.179	5	glass	base	2	colourless	bottle shard
1862	587737.842	5285118.022	47.16	5	glass	finish	2	colourless	window glass
1863	587737.96	5285118.081	47.154	5	glass		2	amber	bottle shard
1864	587738.325	5285118.807	47.079	5	glass		3	colourless	slightly curved
1865	587738.886	5285118.006	47.241	5	glass		3	colourless	bottle shard
1866	587738.79	5285117.616	47.321	5	glass		4	colourless	bottle shard, angular edge
1867	587740.237	5285116.03	48.173	5	ceramic		5	red	earthenware, red transfer print, floral on exterior, possible cup
1868	587739.256	5285114.739	48.574	5	glass		4	amber	thick base, machine made, seam "[T]HIS / [PRO]PERTY / [BO]TTLE COM[PANY]"
1869	587737.276	5285114.532	48.449	5	ceramic	rim	2	white	earthenware
1870	587738.517	5285116.239	47.848	5	glass	finish	4	colourless	bottle, horizontal seam
1871	587738.357	5285115.739	47.964	5	glass	base	3	amber	machine made bottle, seams
1872	587736.466	5285114.091	48.531	5	metal	complete	1		circular, central hole, may be a button
1873	587735.187	5285113.398	48.581	5	glass	base	5	colourless	bottle, two seams
1874	587735.116	5285113.438	48.525	5	glass	finish, neck	3	colourless	machine made bottle, seams
1875	587734.162	5285114.209	48.152	5	glass		4	colourless	bottle shard
1876	587734.11	5285113.528	48.49	5	glass		4	colourless	window glass

1877	587733.818	5285113.744	48.436	5	metal	complete	2		washer
1878	587733.439	5285113.796	48.388	5	glass		3	olive	bottle shard
1879	587733.589	5285112.953	48.649	5	glass		4	olive	bottle shard
1880	587732.67	5285113.299	48.359	5	glass		1	olive	bottle shard
1881	587731.928	5285113.39	48.171	5	glass		3	colourless	bottle shard
1882	587731.914	5285113.398	48.171	5	ceramic		2	red	earthenware, red transfer print, on exterior
1883	587731.726	5285113.117	48.291	5	glass		3	colourless	bottle shard
1884	587731.242	5285113.201	48.253	5	glass		3	olive	bottle shard
1885	587730.929	5285113.47	48.095	5	glass		3	light green	aquamarine, early machine made
1886	587730.516	5285113.172	48.296	5	glass		3	light green	aquamarine, bottle shard
1887	587730.015	5285113.127	48.252	5	glass		3	colourless	window glass
1888	587730.092	5285113.602	47.993	5	glass		2	olive	
1889	587729.895	5285113.588	47.979	5	glass		2	olive	bottle shard
1890	587729.817	5285113.618	48.006	5	glass		3	olive	bottle shard
1891	587729.832	5285113.55	48.001	5	glass	finish, neck	5	colourless	square bottle, seam, machine made
1892	587729.796	5285113.685	47.956	5	ceramic		2	green	earthenware, green transfer print, on interior, floral/botanical design
1893	587729.66	5285113.476	48.022	5	glass		1	colourless	bottle shard
1894	587730.742	5285108.03	49.438	5	glass	base	8	colourless	early machine-made bottle. "X" on base with numbers in top "A34" and left "23" corners of the X
1895	587732.417	5285107.206	49.635	5	glass	base	4	colourless	early machine made, bottle
1896	587733.865	5285108.977	49.266	5	glass	neck	3	colourless	bottle shard, machine made
1897	587736.135	5285109.694	49.296	5	ceramic		4	white	earthenware, slight curve, 4mm thick
1898	587737.167	5285109.443	49.457	5	glass	finish	3	amethyst	bottle shard
1899	587739.502	5285109.297	49.604	5	glass		5	amber	bottle shard
1900	587741.195	5285110.388	49.408	5	glass		4	colourless	window glass
1901	587740.876	5285110.53	49.373	5	glass		4	colourless	window glass

1902	587740.269	5285111.58	49.179	5	glass		4	colourless	window glass
1903	587738.151	5285111.203	49.187	5	ceramic		2	green	Earthenware, green transfer print, both sides
1904	587738.041	5285112.275	48.97	5	glass	rim	5	colourless	moulded diamond pattern on outside. "968" below pattern
1905	587737.897	5285112.68	48.826	5	glass		2	green	bottle shard
2129	587638.341	5285079.367	49.48	10	glass		4	olive	bottle shard
2130	587639.738	5285079.644	49.658	10	glass		2	colourless	window glass
2131	587640.482	5285078.813	49.697	10	glass		5	olive	bottle shard
2132	587640.893	5285079.928	49.677	10	metal	complete	2		washer
2133	587641.919	5285080.512	49.703	10	glass	finish, neck	3	colourless	possibly a square bottle, seam either side
2134	587646.196	5285083.082	49.773	10	glass	base	8	amber	Flat base, machine made, seams "[C]OMPANY [LIMI]TED"
2135	587646.064	5285084.537	49.633	10	glass		6	olive	bottle shard
2136	587649.39	5285083.003	50.267	10	glass		3	colourless	bottle shard
2137	587648.546	5285080.98	50.516	10	glass		2	colourless	window glass
2138	587647.881	5285081.055	50.382	10	glass		2		
2139	587646.455	5285081.447	50.161	10	glass		5	white	milk glass, probably a jar "PROPERTY OF / MAR...COMPANY" inscribed around base on the underside. Inside the inscription square "A" with "G" and "M" inside.
2140	587647.806	5285079.429	50.627	10	glass	finish, neck	2	colourless	bottle shard
2141	587648.335	5285079.521	50.7	10	glass		4	colourless	bottle shard
2142	587646.85	5285078.461	50.615	10	glass		3	amber	bottle shard
2143	587645.497	5285079.702	50.303	10	glass		2	olive	bottle shard
2144	587643.379	5285078.077	50.263	10	glass		4	amber	bottle shard
2145	587643.278	5285077.441	50.362	10	glass		3	colourless	bottle shard, early machine made
2146	587644.068	5285077.503	50.417	10	glass		4	amber	bottle shard
2147	587643.719	5285076.39	50.546	10	glass		8	amber	bottle shard, "THIS BOTTLE /PROPERTY OF / BOTTLE C[OMPANY]"
2148	587643.921	5285075.849	50.653	10	glass	base	6	colourless	bottle shard, machine made, seam
2149	587644.875	5285077.468	50.549	10	glass	base	4	colourless	two seams, machine made

2150	587645.061	5285076.919	50.607	10	glass		2	amber	bottle shard
2151	587645.084	5285076.561	50.656	10	glass		5	colourless	"...F ROSELLA /[8]970"
2152	587645.256	5285076.585	50.674	10	glass		5	colourless	bottle shard, machine made
2153	587645.463	5285076.54	50.695	10	glass		3	olive	bottle shard
2154	587645.384	5285076.388	50.709	10	glass		2	colourless	bottle shard
2155	587646.075	5285076.227	50.853	10	glass		1	colourless	bottle shard
2156	587645.772	5285076.03	50.848	10	ceramic		1	white	earthenware, moulded rib pattern on exterior
2157	587645.252	5285075.935	50.789	10	glass	finish	2	colourless	early machine made, bottle
2158	587644.908	5285075.67	50.78	10	glass	base	6	amber	bottle shard, machine made, seam, "M"
2159	587644.433	5285076.122	50.647	10	glass	base	5	amber	bottle shard
2160	587646.193	5285076.724	50.807	10	ceramic	base, rim	3	white	porcelain, plate/saucer
2161	587646.684	5285076.282	50.956	10	glass	rim	4	colourless	
2162	587646.758	5285076.79	50.847	10	glass		3	colourless	flat bottle frags
2163	587646.985	5285076.782	50.887	10	glass		2	colourless	window glass
2164	587646.575	5285077.16	50.798	10	ceramic	base, rim	3	white	porcelain, plate/saucer
2166	587647.73	5285076.633	51.041	10	glass		3	colourless	"LEO" bottle, angle (hexagon?) bottle "PR"
2167	587647.767	5285076.715	51.031	10	glass	base	4	colourless	machine made bottle, seams
2168	587647.836	5285077.11	51.001	10	glass		2	colourless	bottle shard
2169	587647.941	5285078.157	50.868	10	glass		1	colourless	bottle shard
2170	587648.309	5285078.036	50.9	10	glass		1	colourless	bottle shard
2171	587649.008	5285077.327	51.185	10	glass		3	colourless	bottle shard
2173	587651.308	5285079.769	51.089	10	glass		4	colourless	bottle shard
2174	587651.379	5285079.841	51.087	10	glass		4	colourless	bottle shard
2175	587651.753	5285079.853	51.154	10	glass		3	colourless	bottle shard, oval cartouche on side panel with "REGD NO / 2767"inside/ "...ERTY" underneath
2176	587651.222	5285079.164	51.211	10	glass		4	colourless	bottle shard, seam "IS THE PROPERTY ", "...RN..."
2177	587652.164	5285078.599	51.45	10	glass		4	colourless	bottle shard, square cartouche "D&S" inside

2178	587652.352	5285078.448	51.534	10	glass		3	colourless	bottle shard
2179	587653.911	5285076.469	51.954	10	ceramic	base	6	white	earthenware
2180	587651.594	5285075.127	51.921	10	glass		2	colourless	bottle shard, flat
2181	587651.284	5285075.196	51.87	10	glass	neck	2	colourless	bottle shard
2182	587648.69	5285075.606	51.462	10	glass		4	colourless	bottle shard
2183	587647.939	5285075.903	51.279	10	glass	base	6	colourless	hexagon bottle base, complete base
2184	587647.519	5285075.8	51.223	10	glass		2	colourless	bottle shard
2185	587647.635	5285075.608	51.282	10	glass		2	colourless	slightly curved
2186	587647.394	5285076.073	51.108	10	glass		3	colourless	bottle shard, early machine made
2187	587647.267	5285075.925	51.112	10	glass		3	colourless	hexagon bottle
2188	587646.936	5285075.697	51.133	10	glass		3	colourless	flat bottle fragment
2189	587646.809	5285075.627	51.059	10	glass		2	colourless	bottle shard
2190	587646.694	5285075.352	51.141	10	glass	neck	5	olive	bottle shard
2191	587646.879	5285075.07	51.237	10	glass		3	colourless	thick flat glass
2192	587647.023	5285074.944	51.267	10	glass	finish, neck	3	colourless	separate finish
2193	587646.54	5285075.19	51.182	10	glass	base	2	colourless	bottle shard
2194	587646.374	5285075.052	51.181	10	glass		4	amber	bottle shard
2195	587646.176	5285074.838	51.18	10	glass	neck	4	colourless	bottle shard, early machine made
2196	587645.948	5285074.998	51.15	10	glass		3	colourless	bottle shard, "O"
2197	587645.764	5285075.169	51.022	10	glass		4	colourless	bottle shard
2198	587645.651	5285075.058	51.025	10	glass		3	colourless	bottle shard
2199	587645.829	5285074.61	51.183	10	ceramic	rim	2	amber	Stoneware
2200	587644.79	5285074.505	51.001	10	glass		3	colourless	bottle shard, seam
2201	587644.509	5285074.672	50.963	10	glass		2	colourless	bottle shard
2203	587643.456	5285074.936	50.705	10	glass	base	3	colourless	Square bottle. On the side: "TASMANIAN / [COM]PANY LIMITED / 5/927"
2204	587643.234	5285073.94	50.856	10	glass	base	3	colourless	bottle shard

2205	587643.608	5285071.734	51.418	10	glass		3	colourless	bottle shard
2206	587644.691	5285071.479	51.52	10	ceramic		3	white	earthenware
2207	587647.155	5285072.105	51.811	10	glass	neck	3	colourless	bottle shard
2208	587647.534	5285072.5	51.794	10	ceramic	base	3	blue	earthenware, blue transfer print, underside stamped "ASIATIC PHEASANT"
2209	587648.068	5285072.527	51.871	10	glass		5	colourless	bottle shard
2210	587646.91	5285073.1	51.619	10	glass	base	4	light green	aquamarine, bottle shard
2211	587646.918	5285073.959	51.497	10	glass		3	colourless	bottle shard
2212	587648.04	5285074.322	51.596	10	glass		3	olive	bottle shard
2213	587647.837	5285073.81	51.646	10	ceramic		2	grey	earthenware, greyish light blue transfer print
2214	587647.974	5285073.725	51.675	10	ceramic		1	white	earthenware, flower mould on inside of plate
2215	587648.014	5285073.553	51.711	10	glass		4	olive	bottle shard
2216	587648.636	5285073.678	51.763	10	glass		4	amber	raised, moulded line (Tasmania map?)
2218	587673.373	5285088.254	51.685	8	glass	base	5	olive	bottle shard
2219	587674.022	5285088.762	51.67	8	ceramic		2	white	earthenware
2220	587674.063	5285089	51.628	8	glass		2	amber	machine made bottle, seams
2221	587675.443	5285088.937	51.71	8	glass	base	4	colourless	square bottle, seam, machine made, joins 2222
2222	587675.817	5285089.909	51.559	8	glass		2	colourless	square bottle, seam, machine made, joins 2221
2223	587676.292	5285089.46	51.654	8	glass		2	colourless	aquamarine, bottle shard
2224	587676.334	5285089.369	51.67	8	ceramic		3	white	earthenware
2225	587676.719	5285089.864	51.597	8	glass	finish, neck	4	amber	bottle shard
2226	587676.959	5285089.733	51.632	8	glass		5	amber	bottle shard, machine made, seam
2227	587677.755	5285089.974	51.661	8	glass		2	amber	bottle shard, machine made, seam
2229	587681.561	5285091.069	51.592	8	ceramic	lid	2	pink	earthenware, circular lid
2230	587681.589	5285090.926	51.635	8	glass	finish, neck, shoulder	3	amber	small bottle
2231	587682.041	5285090.758	51.709	8	ceramic	base	2	white	porcelain

2232	587681.106	5285091.525	51.505	8	glass		3	colourless	angled side
2233	587682.317	5285091.608	51.566	8	glass		2	colourless	bottle shard
2234	587684.774	5285092.589	51.425	8	ceramic	rim	3	white	porcelain
2235	587682.864	5285092.852	51.378	8	ceramic	rim, base	3	white	porcelain footing, saucer
2236	587682.037	5285093.388	51.269	8	ceramic		3	white	porcelain footing, saucer
2237	587681.969	5285093.397	51.244	8	glass		3	colourless	bottle shard, "URLEI / [?S]YDN[E]'
2238	587680.518	5285092.606	51.268	8	glass		4	colourless	jar fragment, indents in glass
2239	587679.865	5285092.297	51.322	8	glass		3	amber	bottle shard, "HA"
2248	587672.516	5285090.866	51.339	8	glass		2	colourless	bottle shard
2249	587672.804	5285091.582	51.089	8	glass		2	colourless	bottle shard, angled, machine made
2250	587671.843	5285091.861	50.971	8	glass		3	olive	bottle shard
2251	587672.268	5285092.493	50.824	8	glass		6	amber	bottle shard, moulded lines
2252	587674.276	5285091.72	51.216	8	ceramic	rim	2	white	earthenware
2253	587674.783	5285092.177	51.09	8	glass		5	colourless	bottle shard, angled - jar?
2254	587674.707	5285093.078	50.901	8	glass		3	colourless	bottle shard
2255	587673.9	5285093.029	50.826	8	ceramic	base	4	white	earthenware
2256	587673.897	5285093.157	50.759	8	glass		3	amber	bottle shard
2257	587674.029	5285093.386	50.719	8	glass		3	colourless	jar, angled sides
2258	587674.443	5285093.578	50.733	8	glass	rim	5	colourless	Approximately 6 cm diameter. Jar, square lip, straight sides
2259	587673.602	5285093.994	50.509	8	glass	base	4	amber	machine made bottle, "[T]ASMAN…/ …Y LIMIT[ED]"
2260	587673.505	5285094.202	50.447	8	ceramic		2	white	earthenware
2261	587671.934	5285093.811	50.46	8	glass		3	colourless	bottle shard
2262	587671.955	5285093.625	50.509	8	glass		3	light green	aquamarine, bottle shard, angled glass, jar?
2263	587671.79	5285093.511	50.487	8	glass		4	colourless	bottle shard
2264	587671.718	5285093.546	50.481	8	glass	base	7	colourless	bottle shard
2265	587671.696	5285093.509	50.468	8	glass		6	colourless	bottle shard

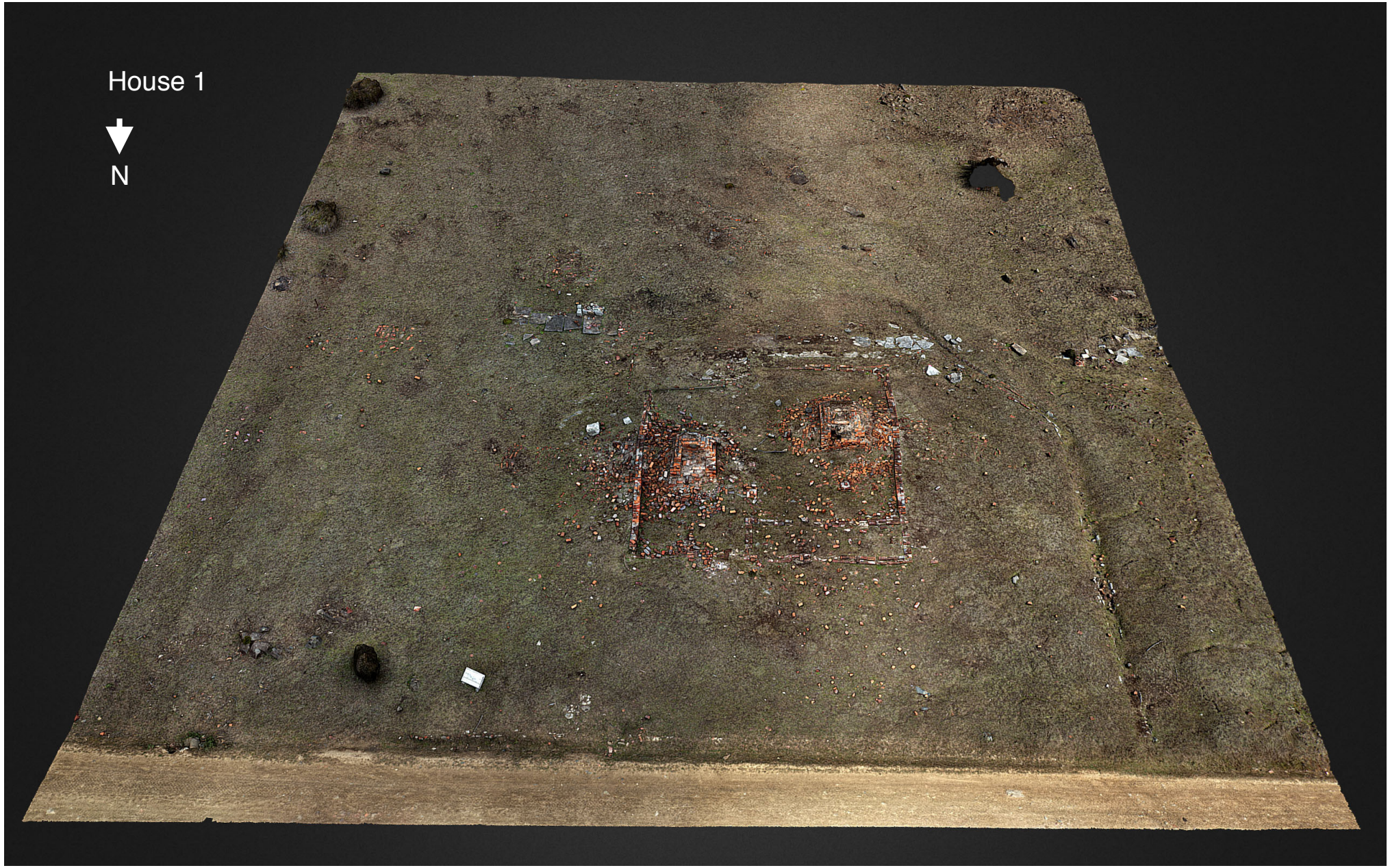
2266	587671.664	5285093.75	50.422	8	glass		4	colourless	bottle shard
2267	587671.227	5285093.22	50.478	8	glass	base	3	amethyst	bottle shard, "ND"
2268	587671.215	5285093.458	50.431	8	glass		2	amethyst	bottle shard
2269	587671.249	5285093.739	50.381	8	glass		4	amber	bottle shard
2270	587670.974	5285093.908	50.358	8	glass		3	amber	bottle shard
2271	587671.316	5285094.003	50.359	8	glass		2	colourless	bottle shard
2272	587671.227	5285093.992	50.34	8	glass		4	colourless	bottle shard
2273	587670.969	5285094.239	50.287	8	glass		3	colourless	bottle shard
2275	587671.953	5285094.537	50.297	8	glass		3	colourless	bottle shard
2276	587672.151	5285094.453	50.33	8	glass		3	colourless	bottle shard
2277	587671.388	5285095.239	50.171	8	glass	rim, shoulder	3	colourless	jar, screw top, no neck, rounded shoulder
2279	587673.796	5285095.914	50.176	8	glass		2	amber	bottle shard
2280	587673.964	5285095.655	50.208	8	glass		2	colourless	bottle shard
2283	587679.87	5285096.429	50.457	8	glass		2	amber	bottle shard
2284	587679.804	5285096.027	50.52	8	glass		4	amber	bottle shard, "IS THE … [T]ASMANI… LI"
2285	587680.304	5285095.107	50.7	8	glass		3	colourless	bottle shard with angled side
2286	587681.489	5285099.99	49.691	8	metal	button	2		Copper alloy button, 1.4cm diameter, 4-hole, sunk eye, slight detailing around outer edge
2287	587680.526	5285100.39	49.413	8	glass		2	colourless	slightly curved
2288	587679.362	5285100.432	49.329	8	glass	neck	5	amber	bottle, striations - hand finished?
2289	587678.851	5285099.73	49.55	8	glass		3	light green	bottle shard
2290	587676.429	5285098.112	49.922	8	ceramic	handle	4	white	porcelain, comes to a point where it joins body
2291	587674.776	5285097.826	49.78	8	ceramic		3	white	earthenware
2292	587674.234	5285097.422	49.946	8	ceramic	base	4	white	porcelain, diameter of base is 4cm
2293	587673.331	5285096.961	49.938	8	glass		2	colourless	Thick glass "JA [M or N]"
2294	587672.372	5285096.292	50.004	8	glass		8	light green	window glass

2295	587671.713	5285097.327	49.453	8	ceramic	marble	2	orange/brown	1.3cm diameter, hand rolled marbled
2296	587671.488	5285097.653	49.333	8	ceramic		2	blue	earthenware, blue transfer print, floral pattern, 4mm thick
2411	587653.485	5285082.812	51.84	9	glass		1	colourless	bottle shard
2412	587652.443	5285083.045	51.766	9	glass		4	colourless	moulded pattern on outside, diamonds/lines
2413	587653.045	5285083.523	51.717	9	glass		2	colourless	bottle shard
2414	587652.441	5285083.477	51.728	9	glass		1	colourless	bottle shard
2415	587651.902	5285083.969	51.637	9	glass		2	colourless	bottle shard
2416	587652.844	5285084.409	51.582	9	ceramic	handle	2	white	porcelain, teacup handle fragment
2417	587653.375	5285084.176	51.624	9	glass		2	colourless	bottle shard
2418	587653.199	5285084.575	51.569	9	glass		2	colourless	flat glass, 2mm thick
2419	587651.931	5285085.267	51.42	9	leather		5		fragment of leather with small perforations along one edge, possibly a baby shoe
2420	587651.927	5285085.314	51.42	9	leather		5		fragment of leather with small perforations along one edge, possibly a baby shoe
2421	587651.181	5285086.077	51.258	9	glass		2	colourless	flat glass, 1-2mm thick
2422	587651.691	5285087.228	50.998	9	glass		3	amber	bottle shard
2423	587651.01	5285089.264	50.372	9	glass		4	olive	bottle shard
2424	587654.485	5285086.252	51.371	9	glass		2	colourless	bottle shard
2425	587654.391	5285085.104	51.502	9	glass		2	colourless	bottle shard, "BELONG…F…COY"
2426	587655.919	5285083.693	51.761	9	glass		2	colourless	bottle sherd, moulded line
2427	587655.969	5285084.086	51.698	9	glass		1	amethyst	flat bottle fragment
2428	587657.419	5285083.099	51.929	9	glass	stopper	3	light green	aquamarine, club sauce stopper
2429	587657.373	5285083.268	51.905	9	glass	rim	4	colourless	jar rim
2430	587657.317	5285083.347	51.867	9	glass	finish	2	colourless	bottle shard
2431	587657.489	5285083.374	51.875	9	glass		2	amber	bottle shard
2432	587656.972	5285083.489	51.888	9	glass		2	amber	bottle shard
2433	587657.073	5285083.727	51.833	9	glass		2	amber	bottle shard

2434	587656.71	5285084.234	51.683	9	glass		2	colourless	bottle shard
2435	587656.753	5285084.445	51.663	9	glass		4	amber	bottle shard
2436	587656.988	5285084.459	51.68	9	glass		4	amber	bottle shard
2437	587656.716	5285085.02	51.574	9	glass		2	colourless	flat glass, 3mm thick
2438	587657.212	5285085.162	51.574	9	glass	rim, neck	4	colourless	jar rim
2439	587657.552	5285085.422	51.513	9	glass		2	colourless	bottle shard
2440	587656.929	5285086.164	51.379	9	glass		4	amber	bottle shard
2441	587655.698	5285087.286	51.226	9	glass		2	colourless	bottle shard
2442	587658.355	5285084.482	51.658	9	glass		3	olive	bottle shard
2443	587661.142	5285084.737	51.647	9	glass		1	colourless	bottle shard
2444	587661.171	5285084.475	51.676	9	glass		1	colourless	bottle shard
2445	587661.776	5285084.376	51.77	9	glass		3	amber	bottle shard, thick
2446	587661.82	5285084.81	51.702	9	glass		2	colourless	window glass
2447	587662.665	5285083.963	51.935	9	glass	finish, neck	4	colourless	moulded series of elongated ovals side by side
2448	587663.128	5285085.331	51.577	9	ceramic	base	3	white	porcelain, footing
2449	587662.106	5285087.506	51.275	9	glass		3	olive	bottle shard
2450	587662.672	5285087.797	51.248	9	glass	base	2	light green	bottle shard
2451	587661.378	5285088.245	51.146	9	glass		3	colourless	bottle shard
2452	587662.223	5285088.704	51.055	9	glass	base	3	olive	bottle shard
2453	587662.301	5285088.702	51.044	9	glass	base	3	olive	bottle shard
2454	587660.331	5285089.474	50.735	9	glass		3	colourless	bottle shard
2455	587659.689	5285090.998	50.32	9	ceramic		3	white	earthenware
2456	587659.694	5285091.602	50.027	9	glass		1	amber	bottle shard
2457	587660.179	5285092.098	49.874	9	ceramic	base	2	white	earthenware
2458	587658.798	5285091.495	50.119	9	ceramic	base	3	white	porcelain footing
2459	587657.797	5285091.187	50.251	9	ceramic	base	4	white	earthenware, storage container, large diameter, straight body, right angle to base, 8mm thick

2460	587656.156	5285091.916	49.807	9	ceramic		2	white	porcelain, brown line
2461	587656.097	5285092.539	49.815	9	ceramic		2	white	porcelain
2462	587654.705	5285090.96	50.011	9	glass		2	colourless	bottle shard

Appendix D: Screen shots of photogrammetry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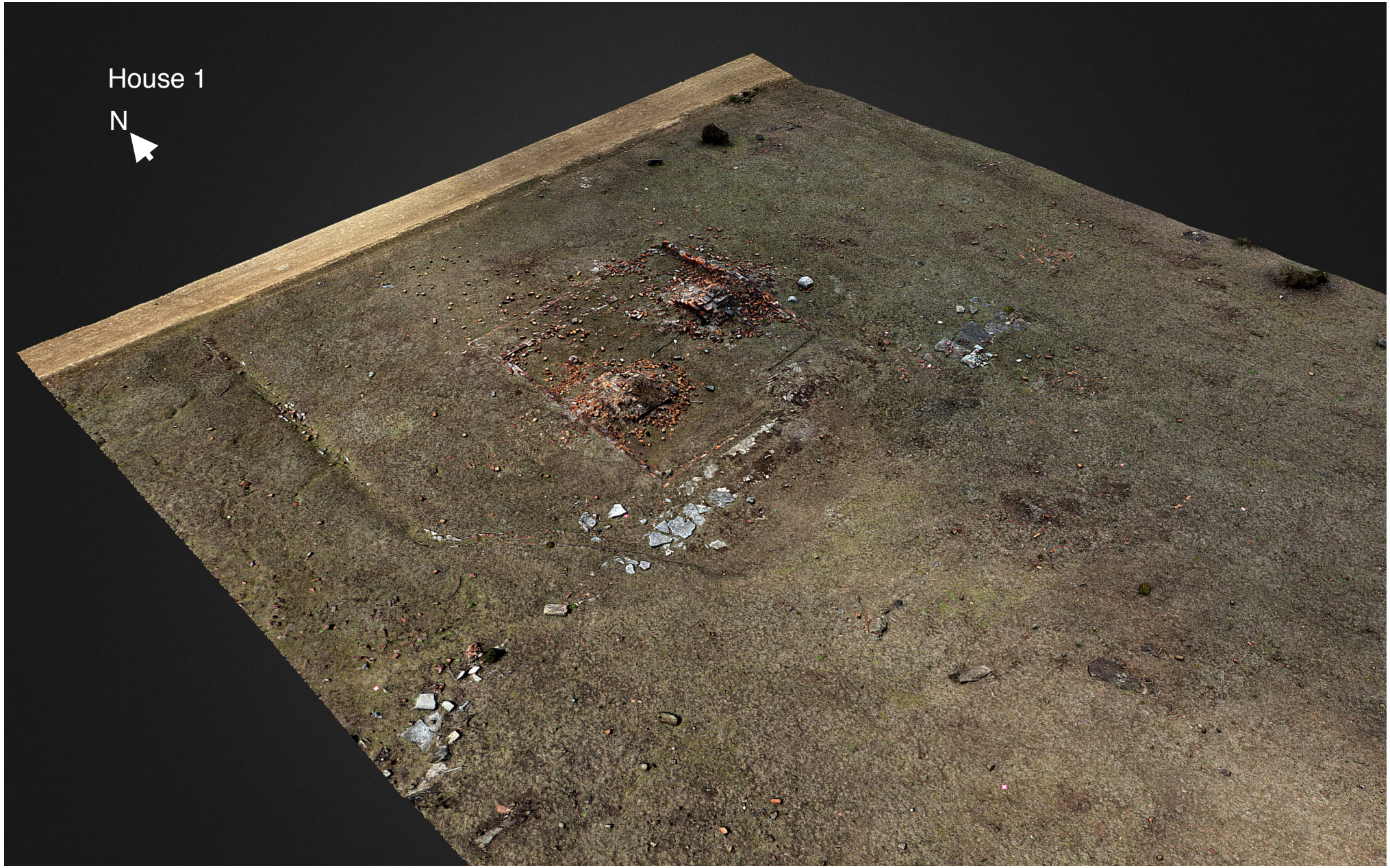
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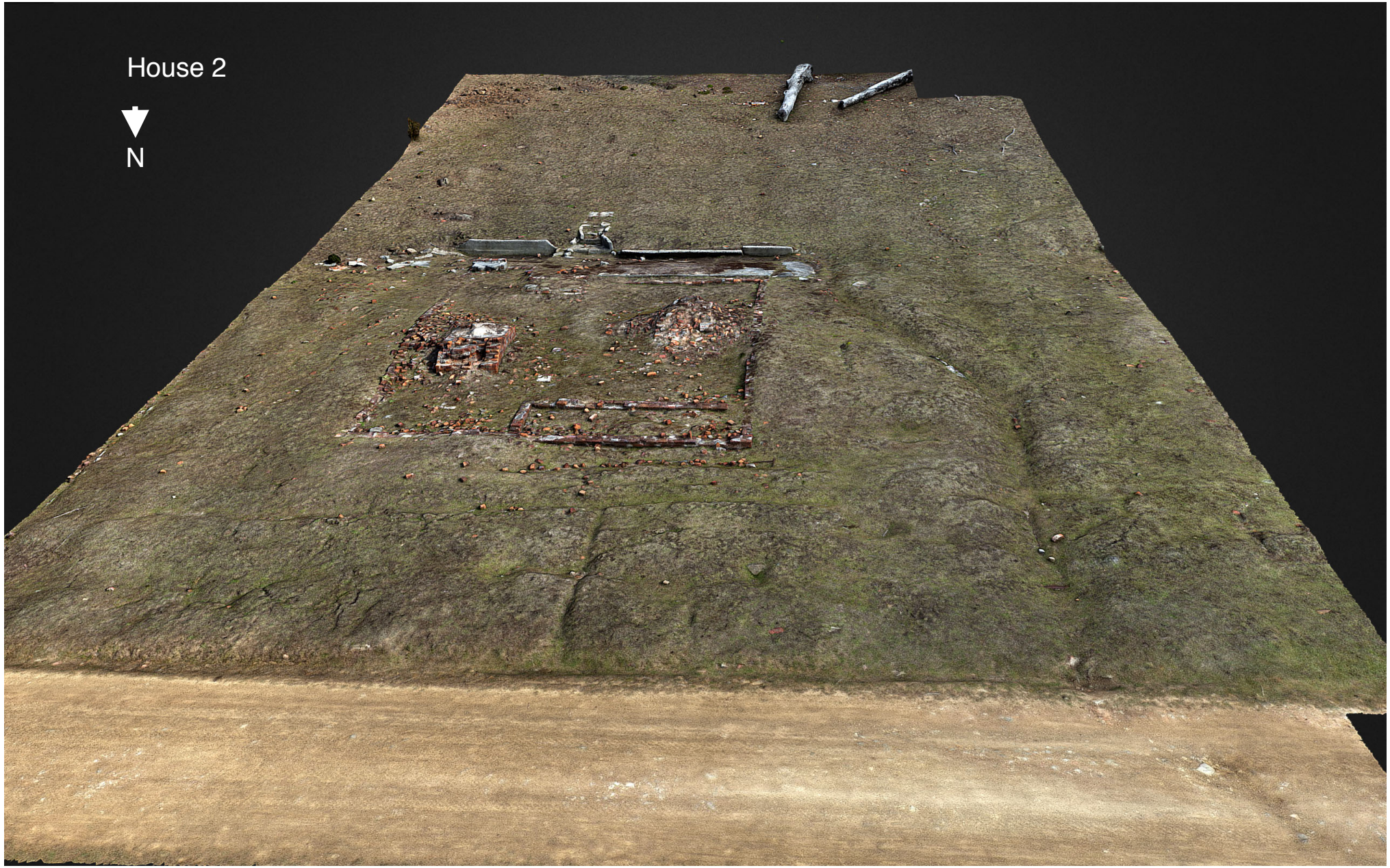
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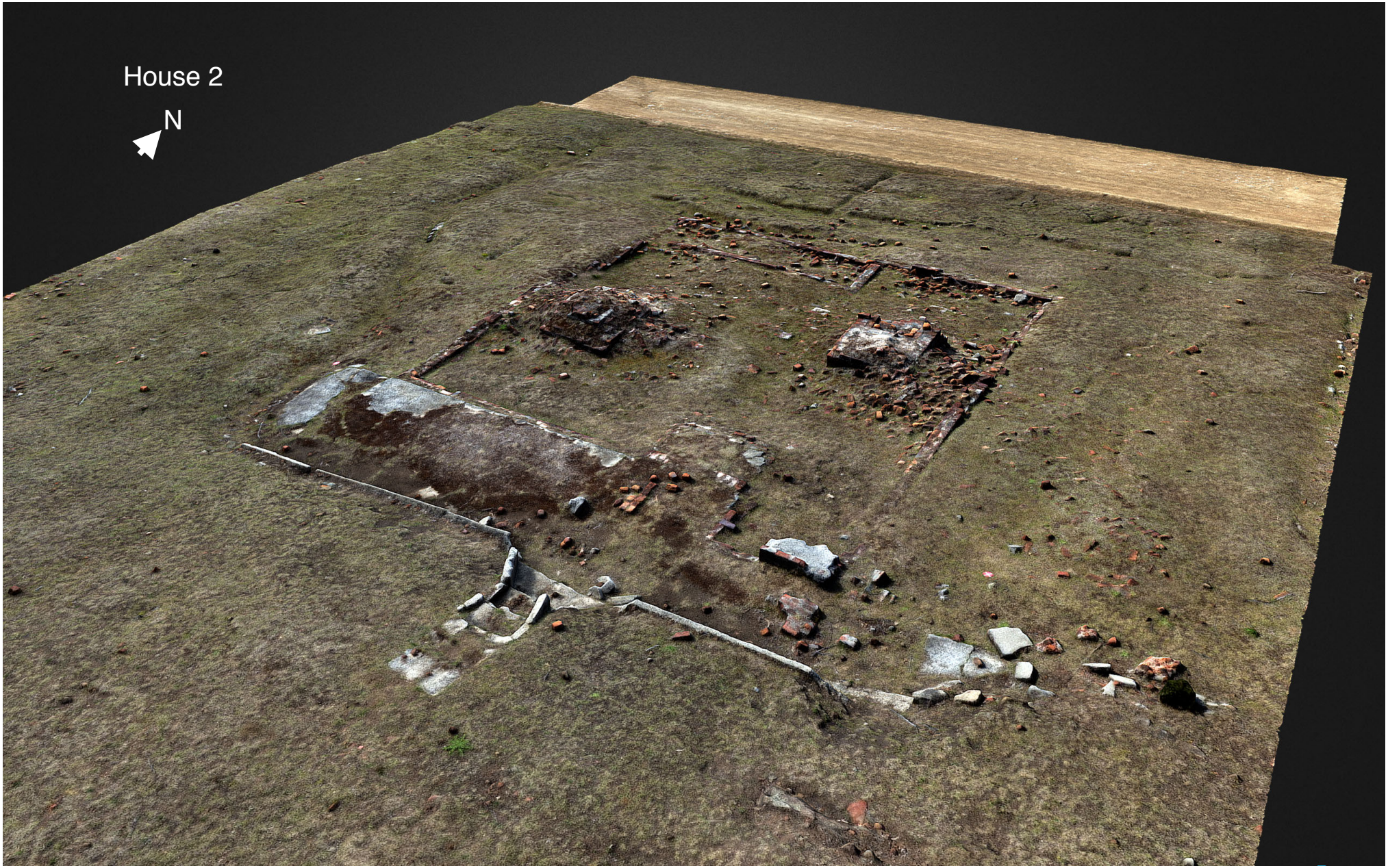
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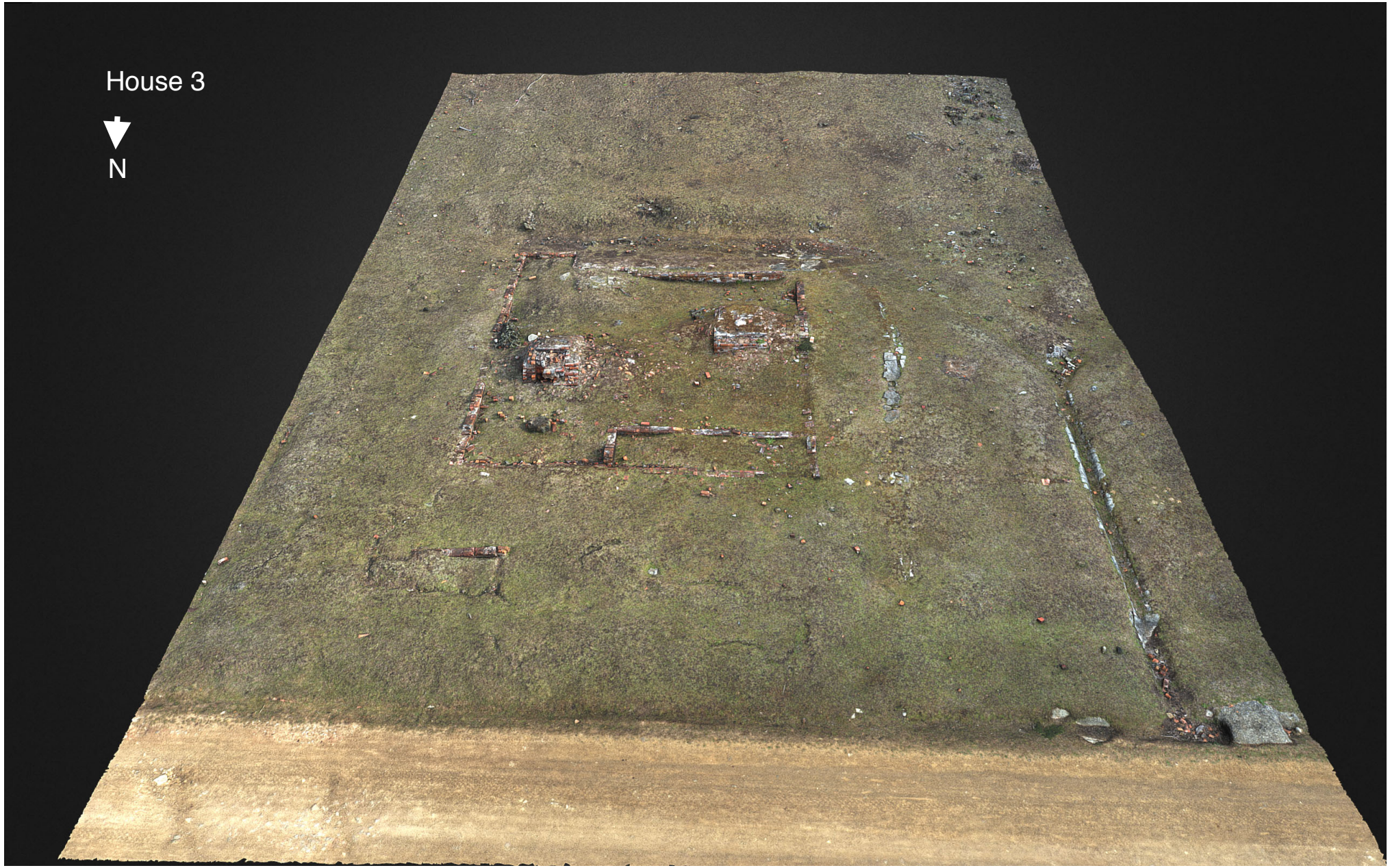
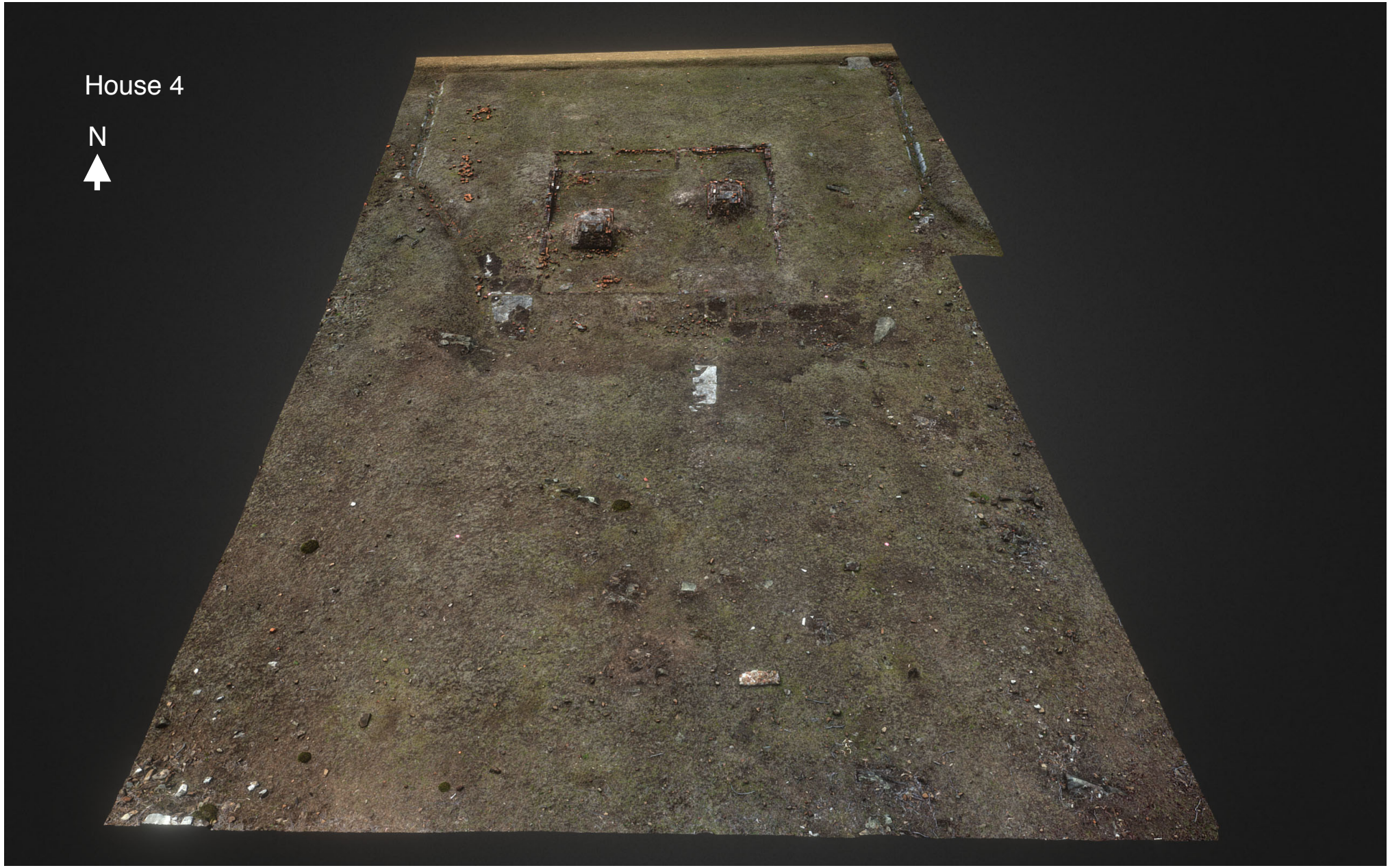

House 3
N

House 3
N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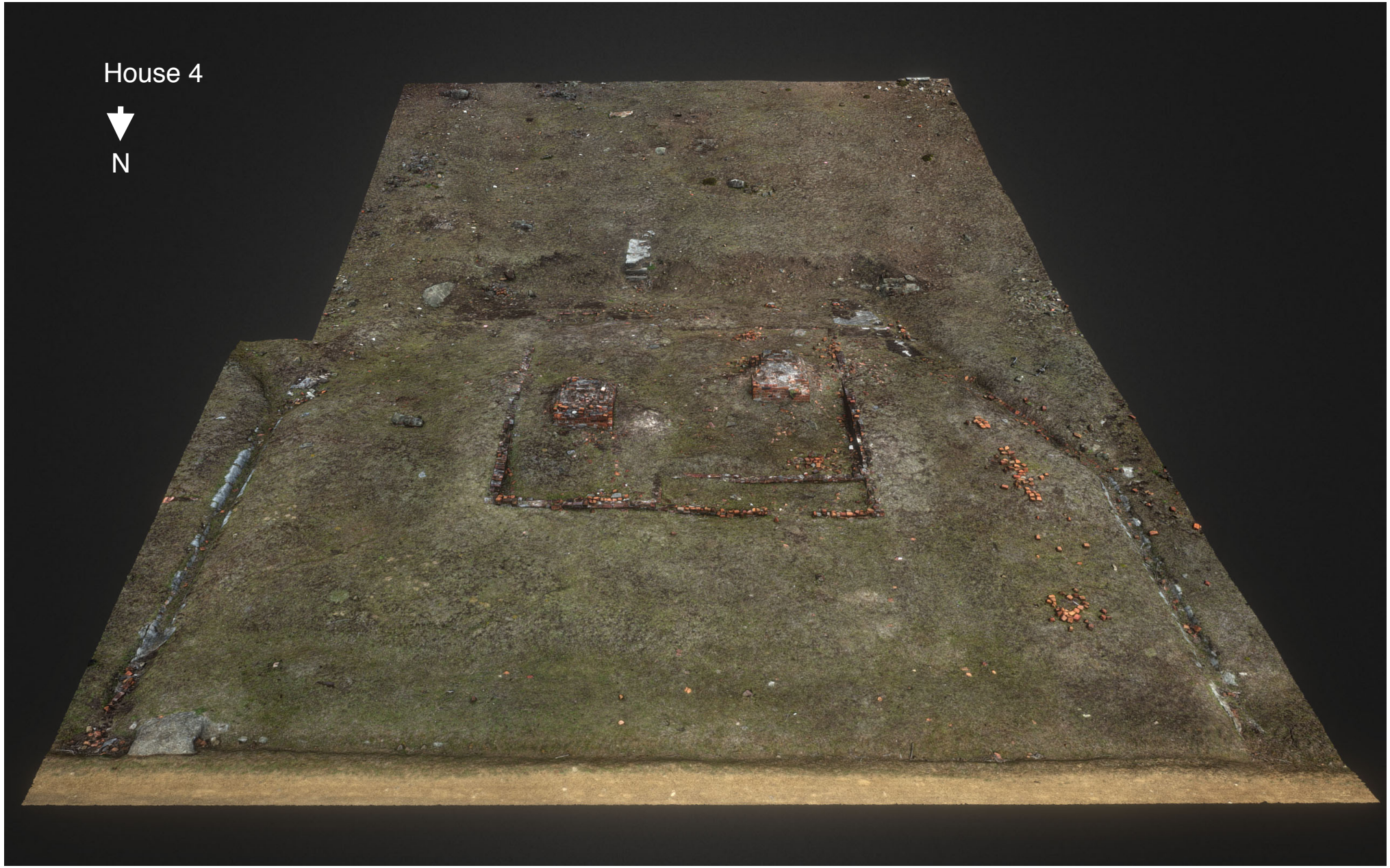
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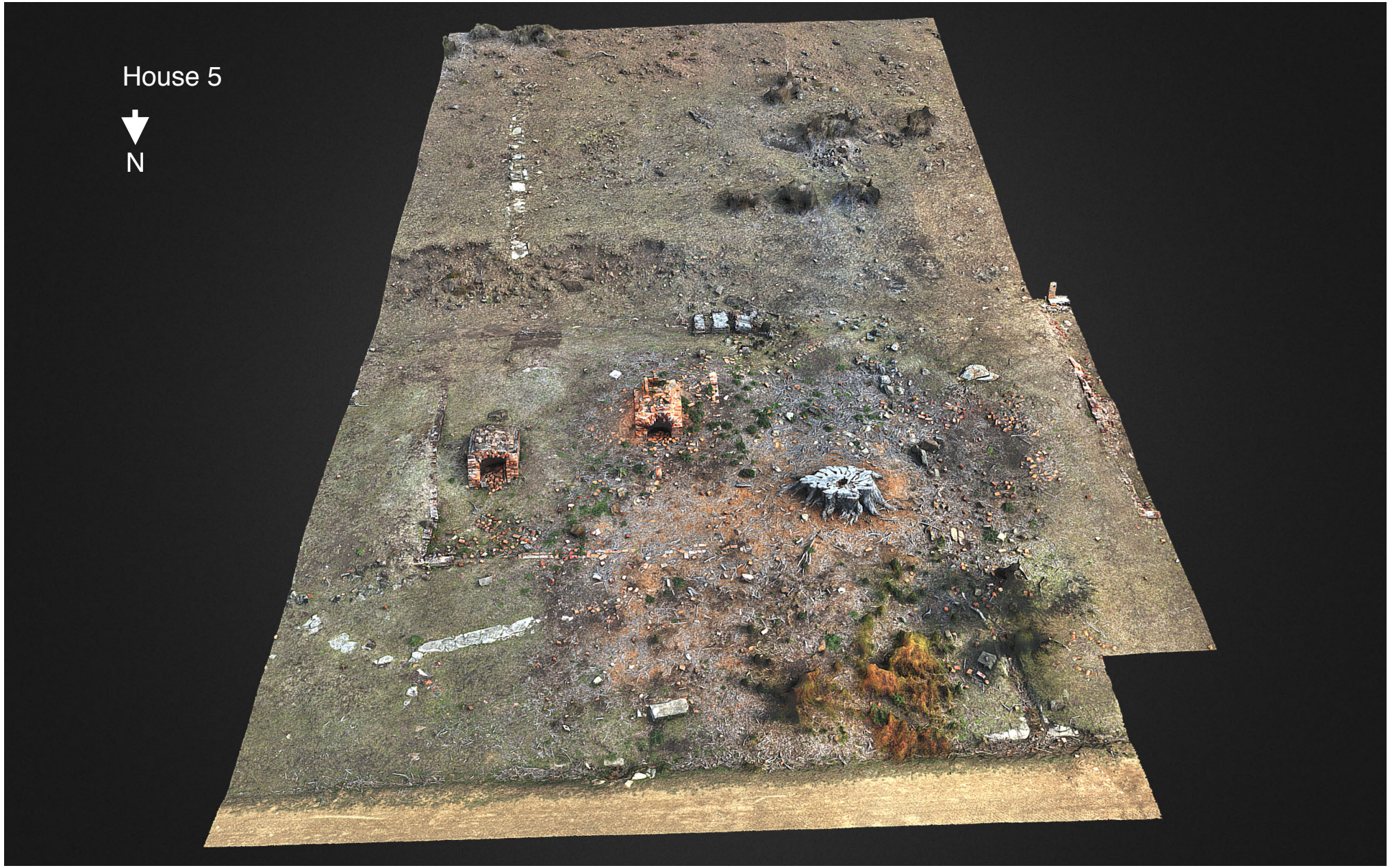
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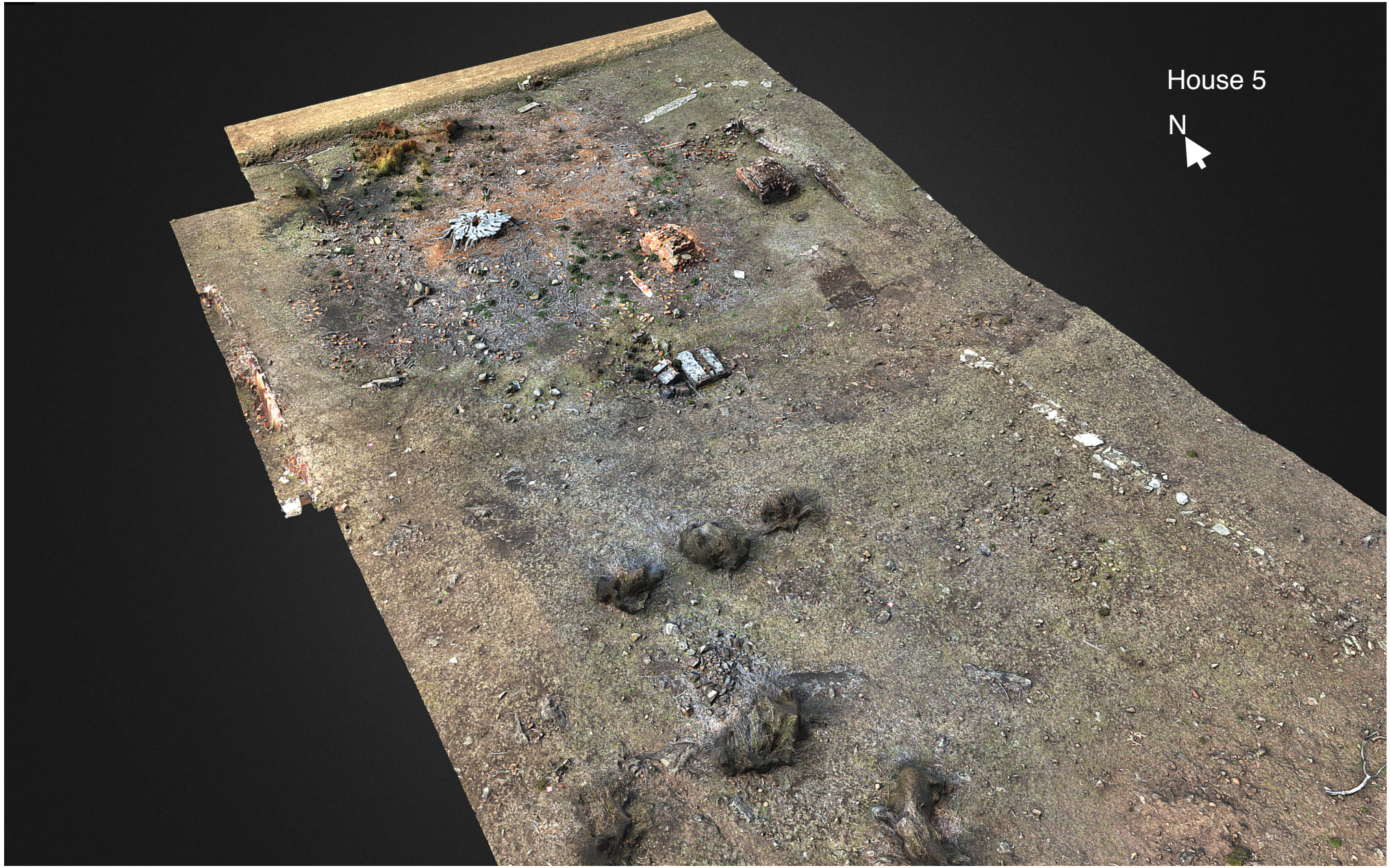
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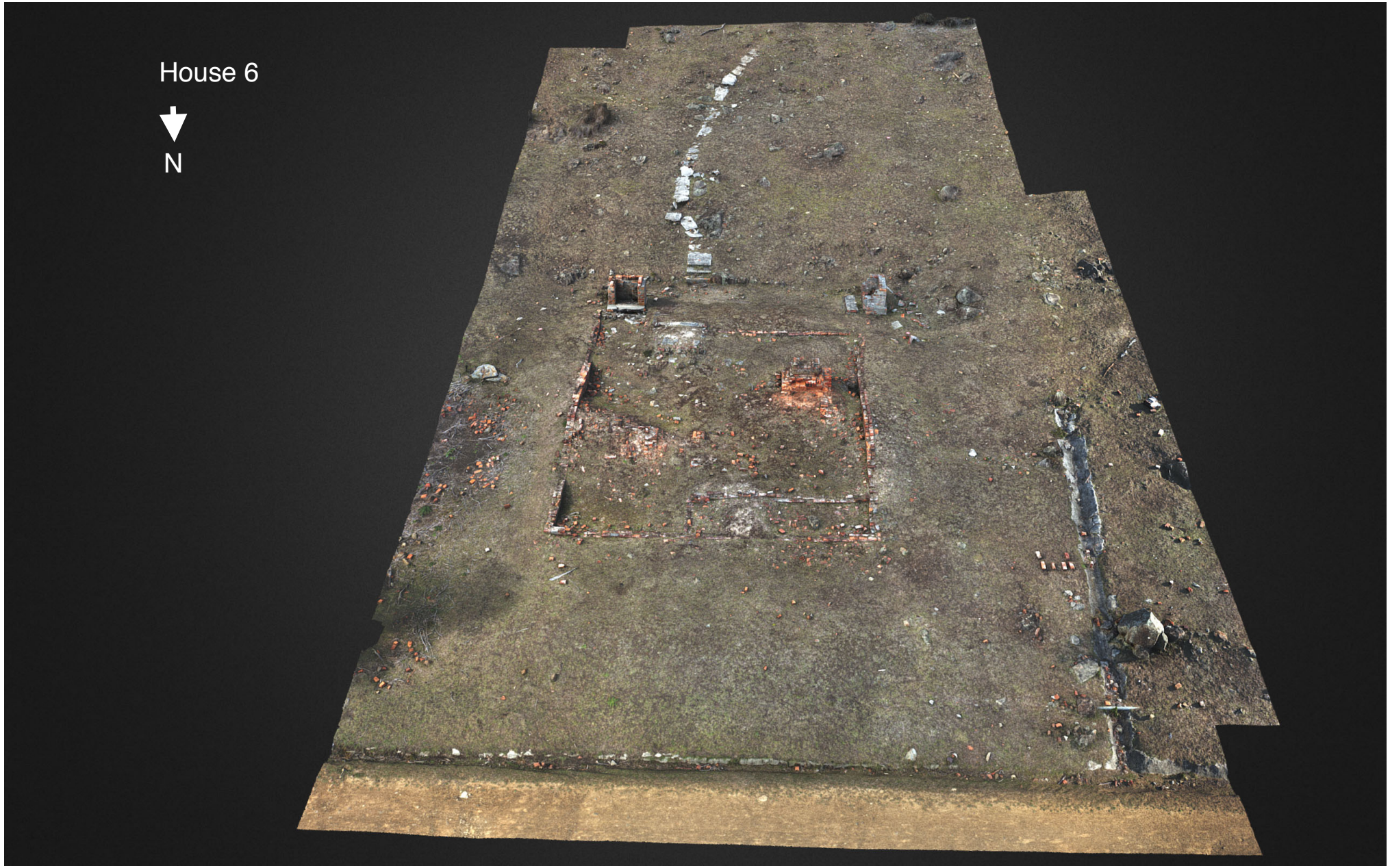
House 6
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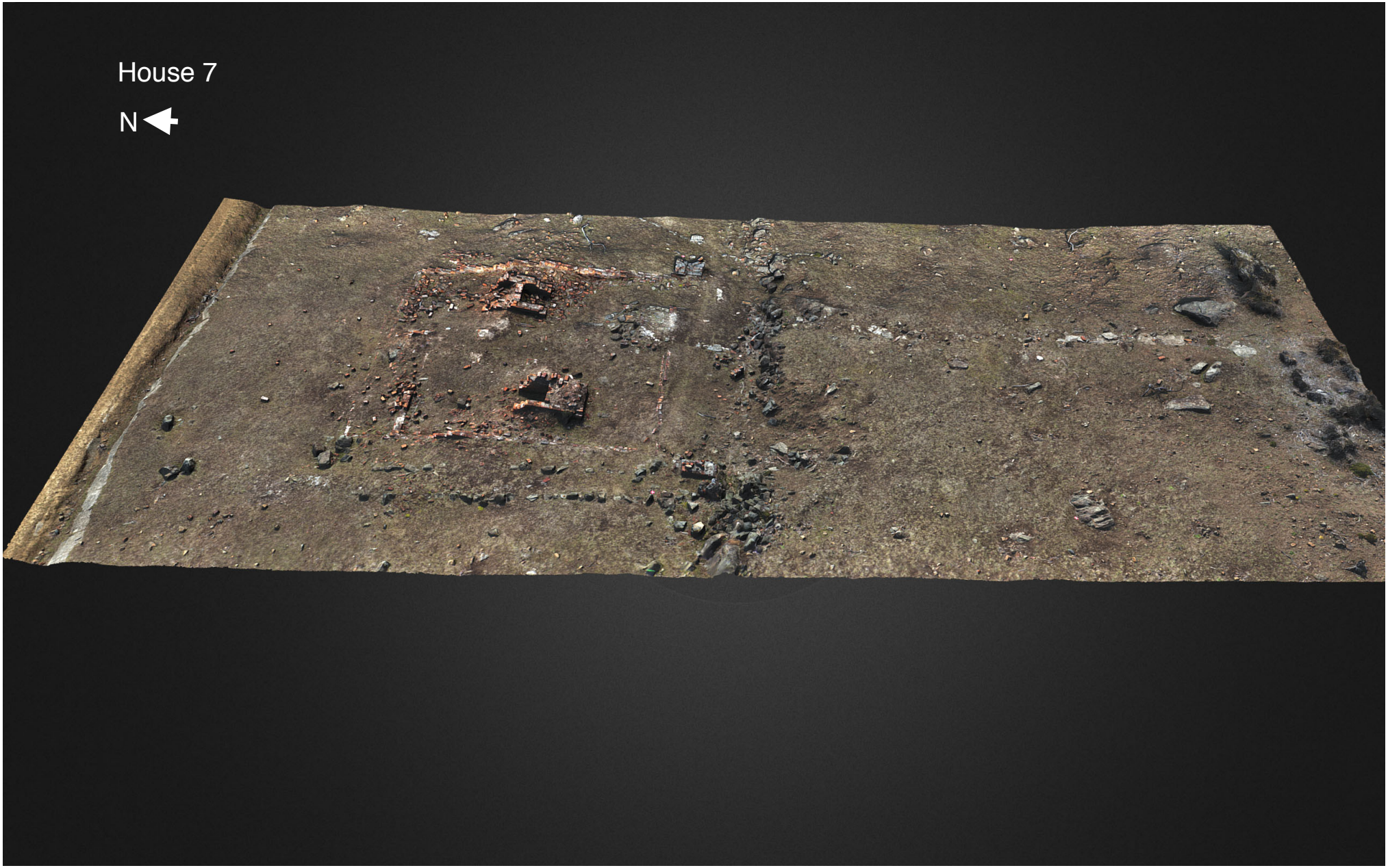
House 6
N

House 7
N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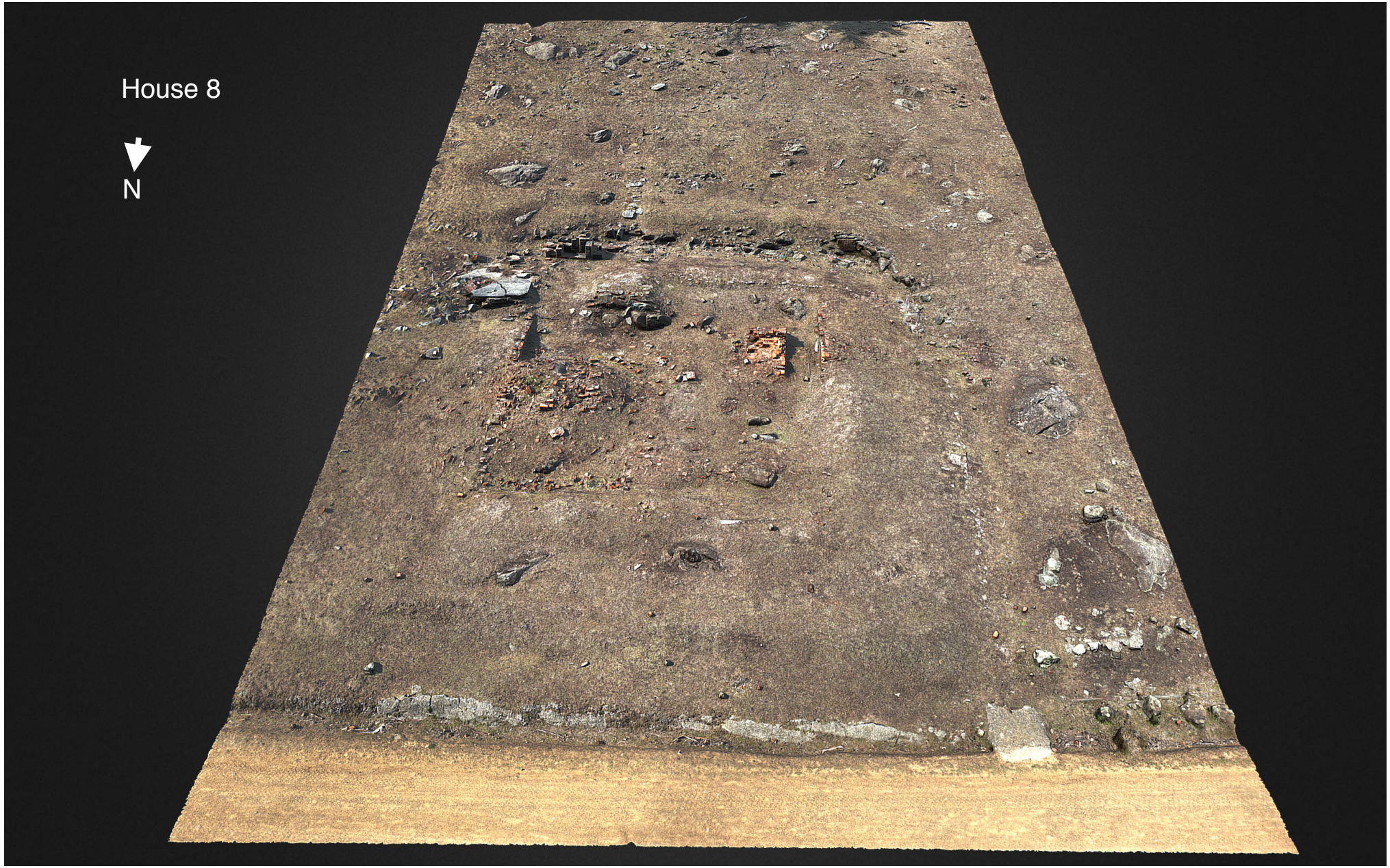
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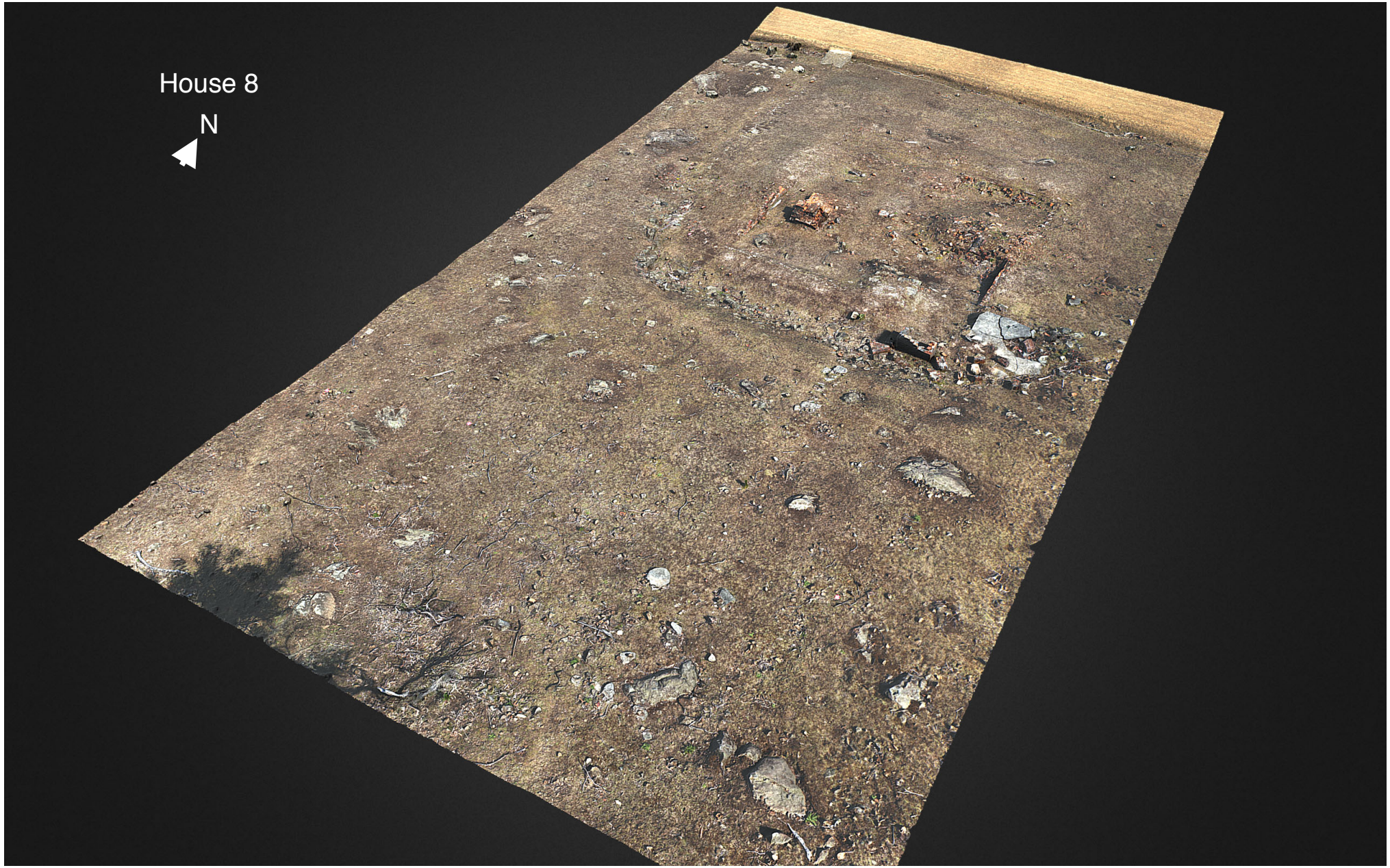
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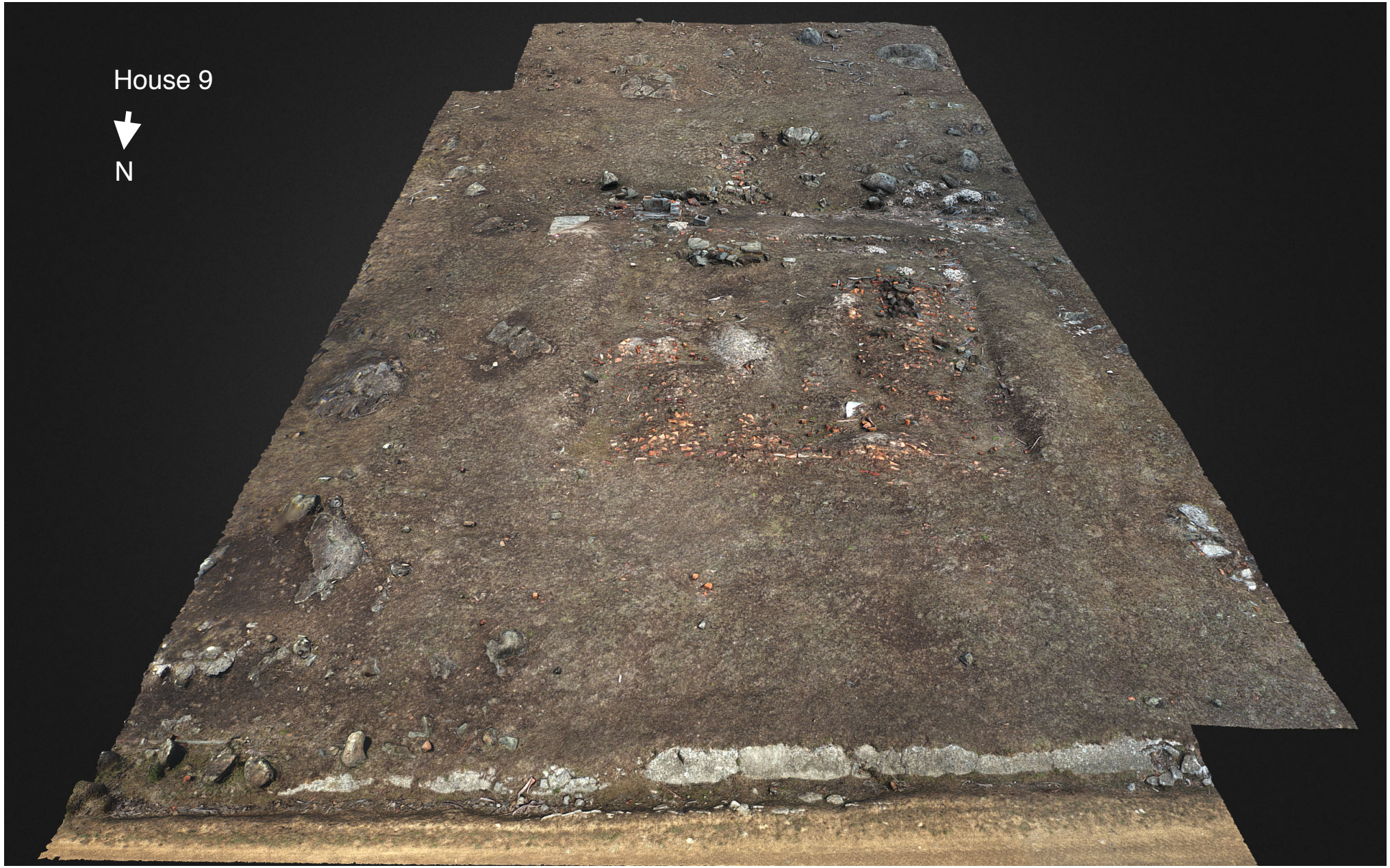
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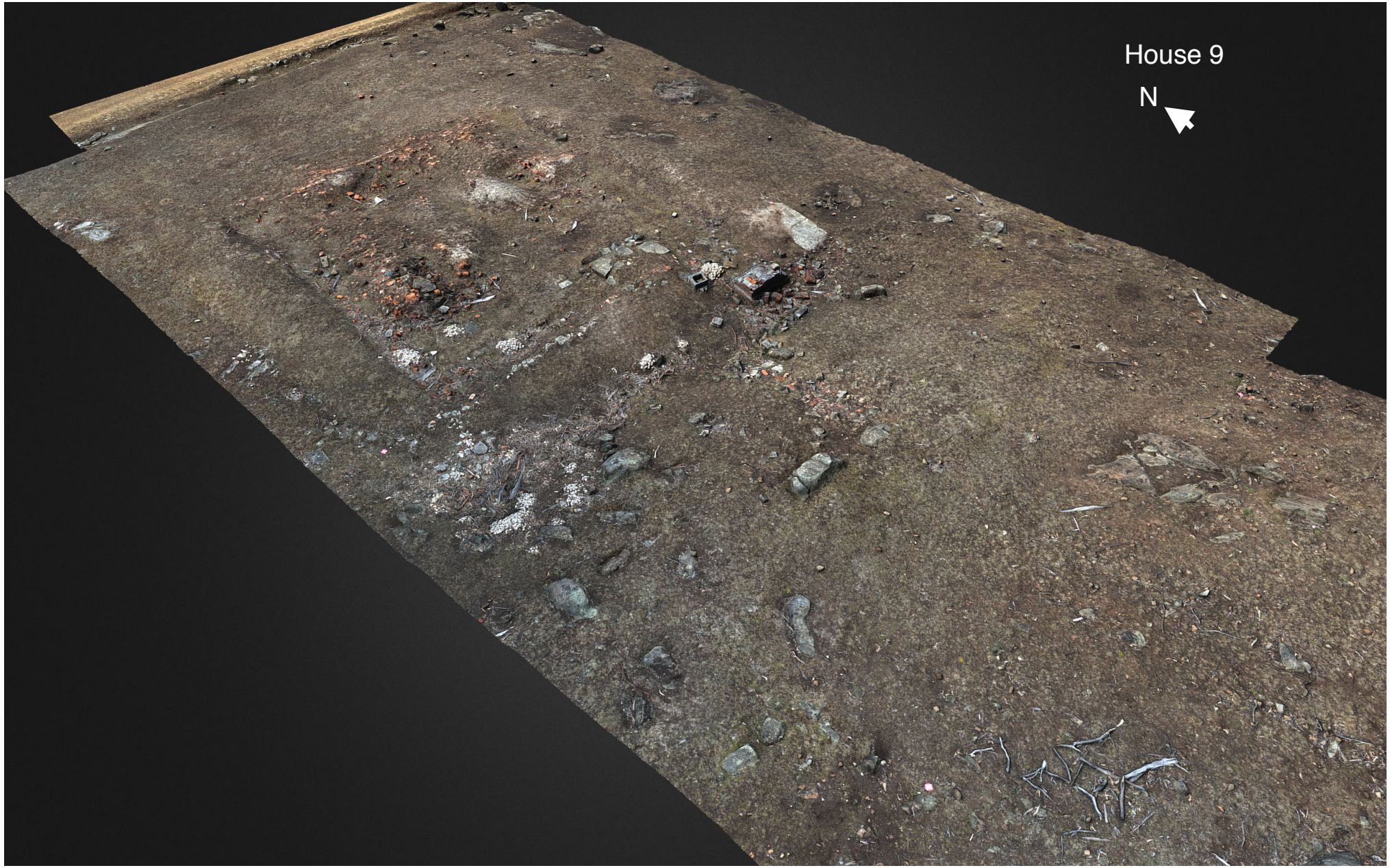
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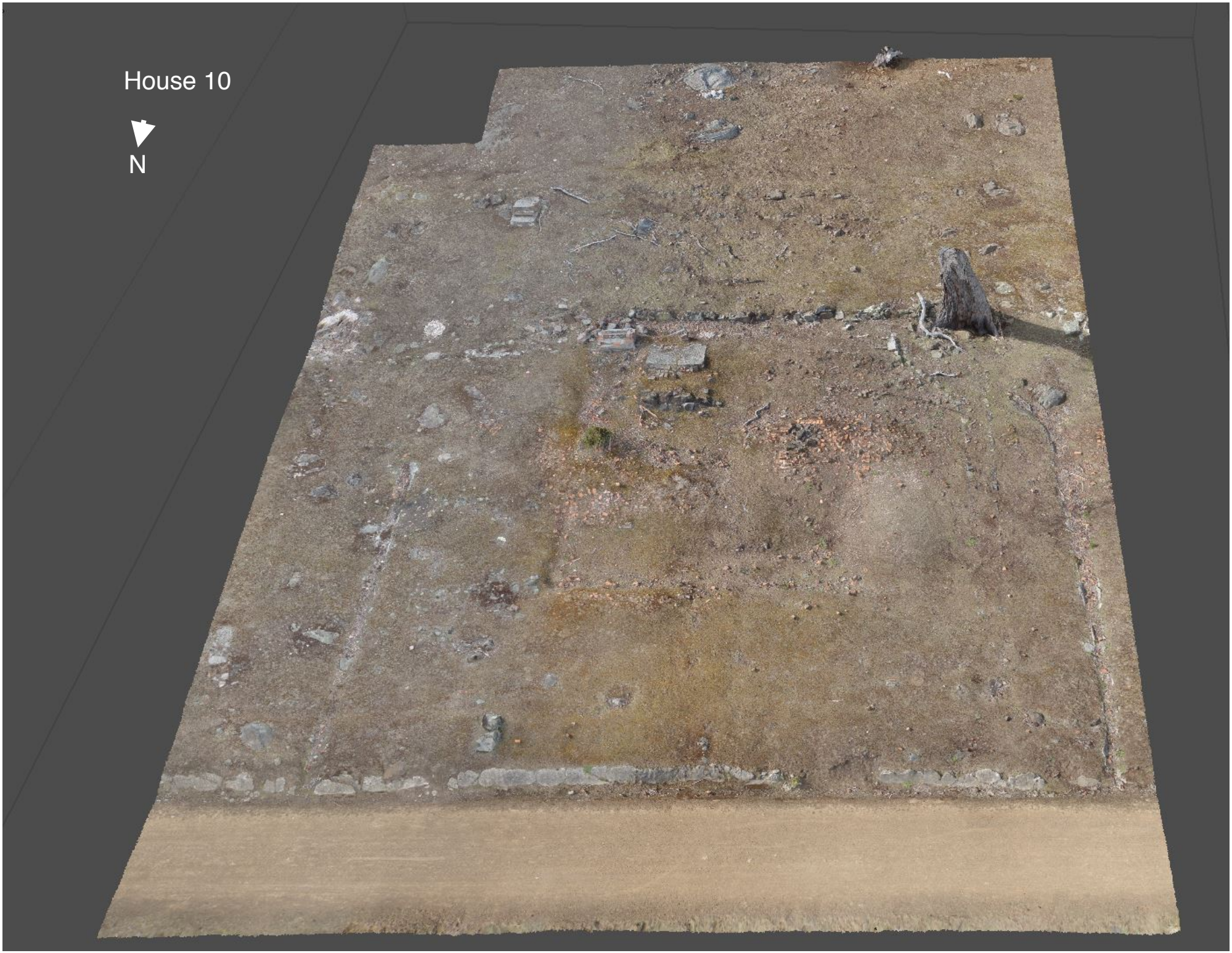
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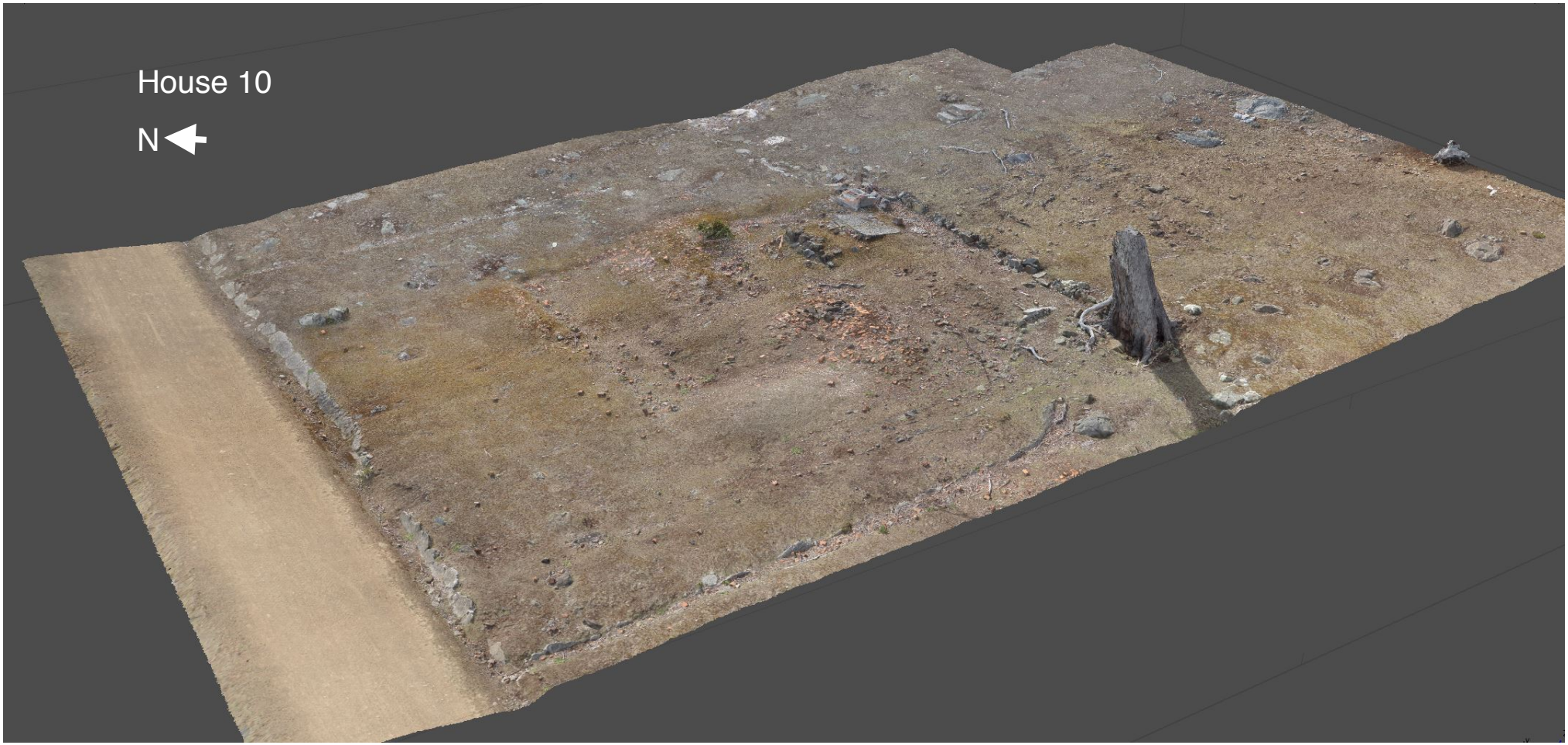
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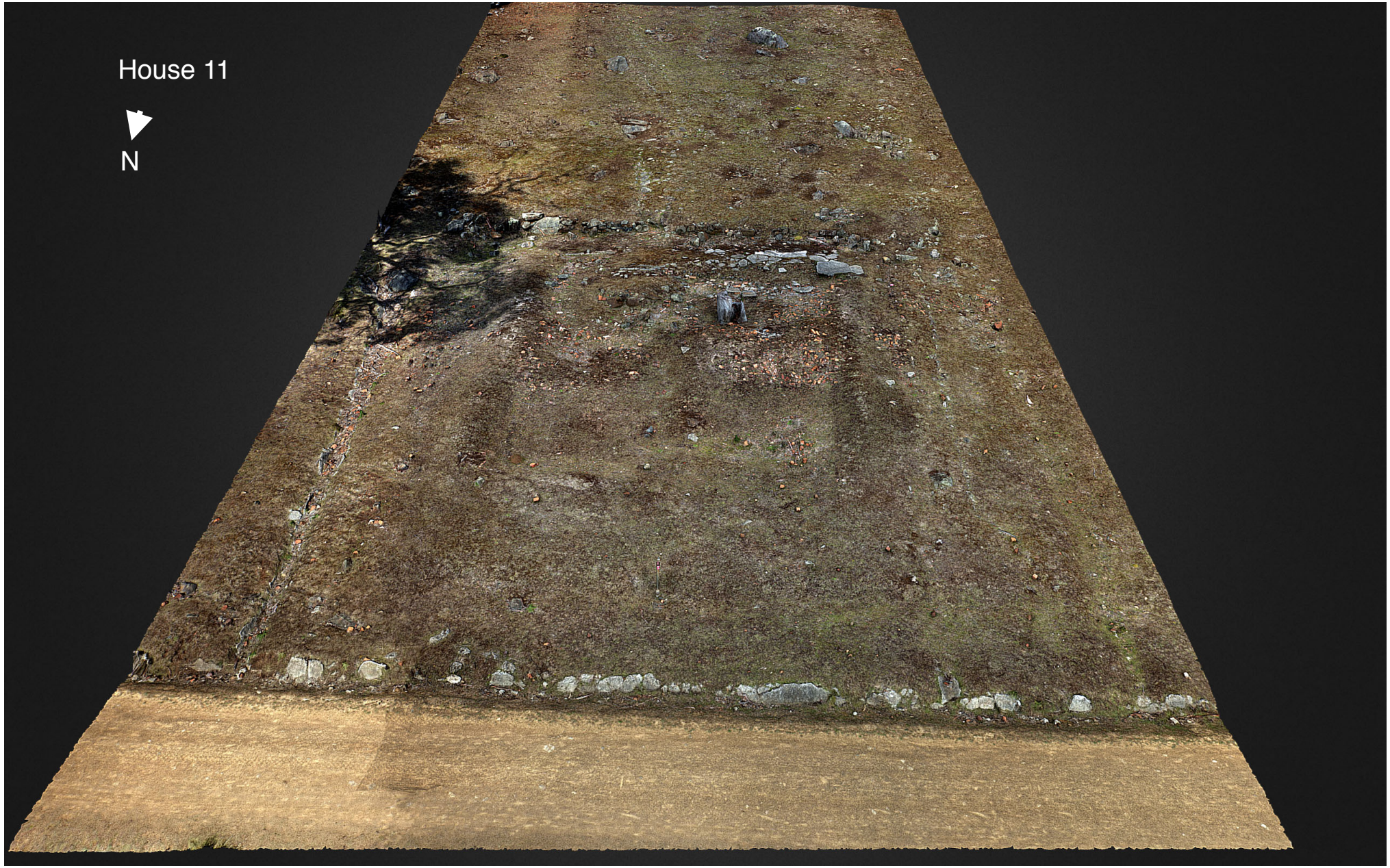
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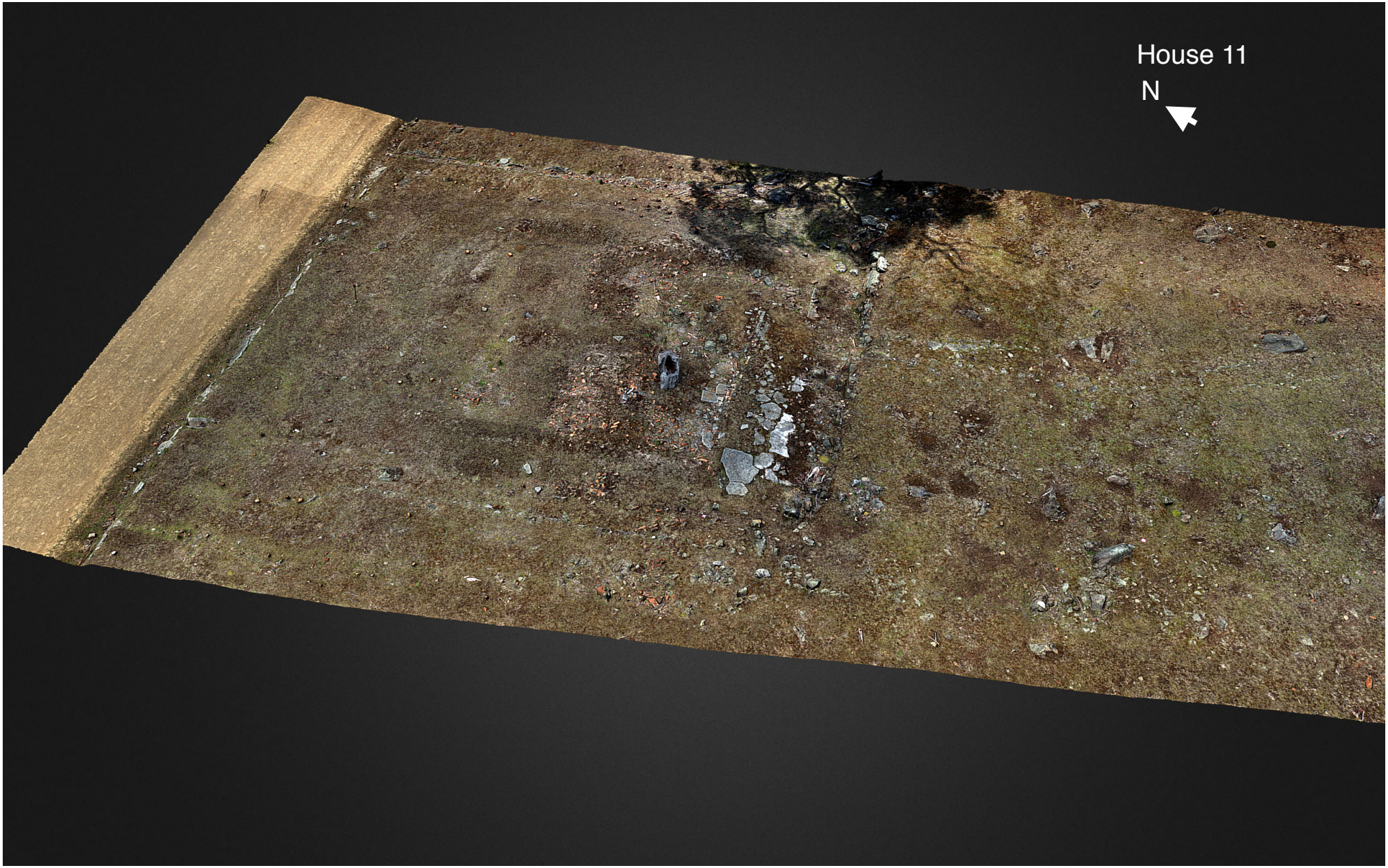
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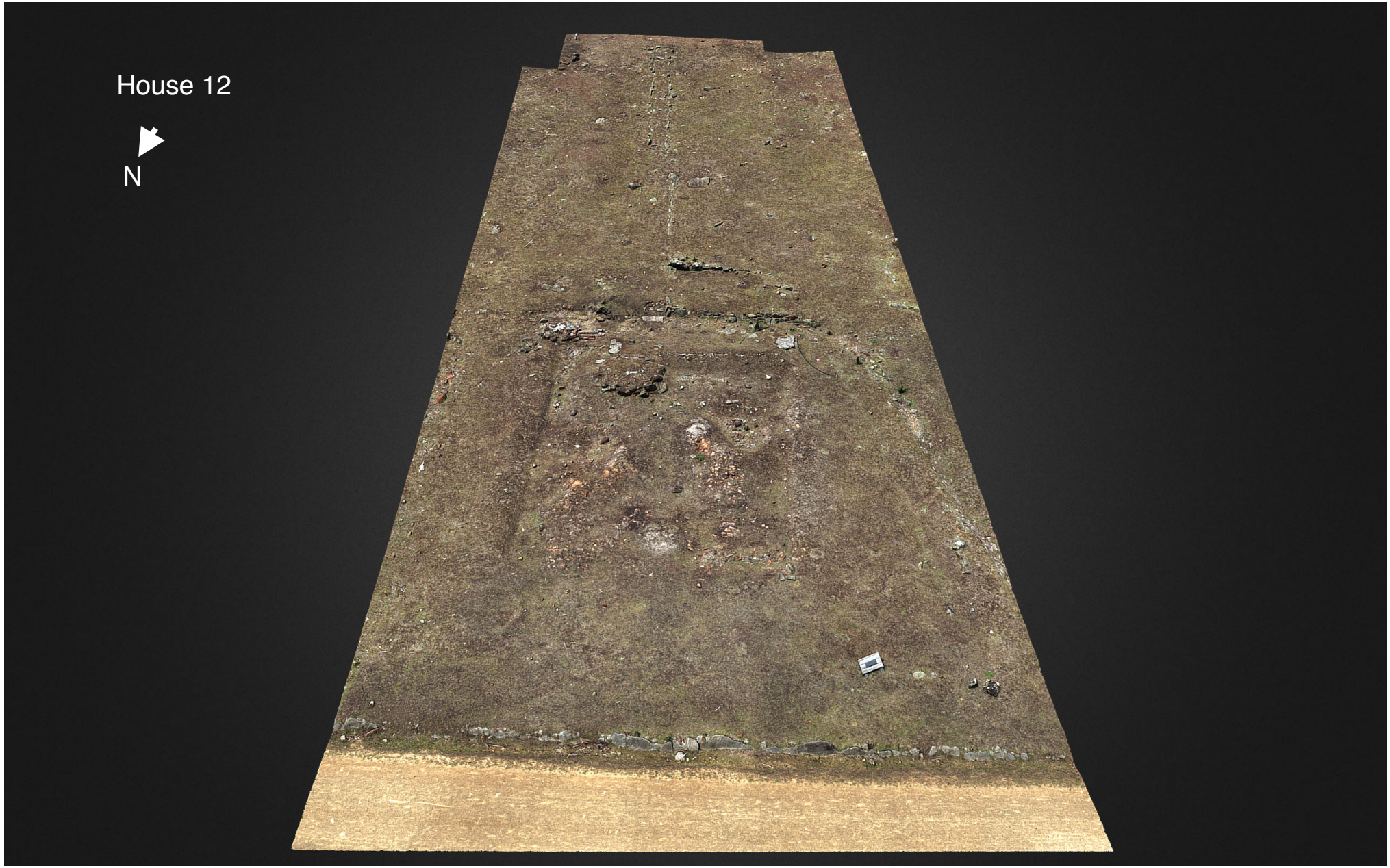
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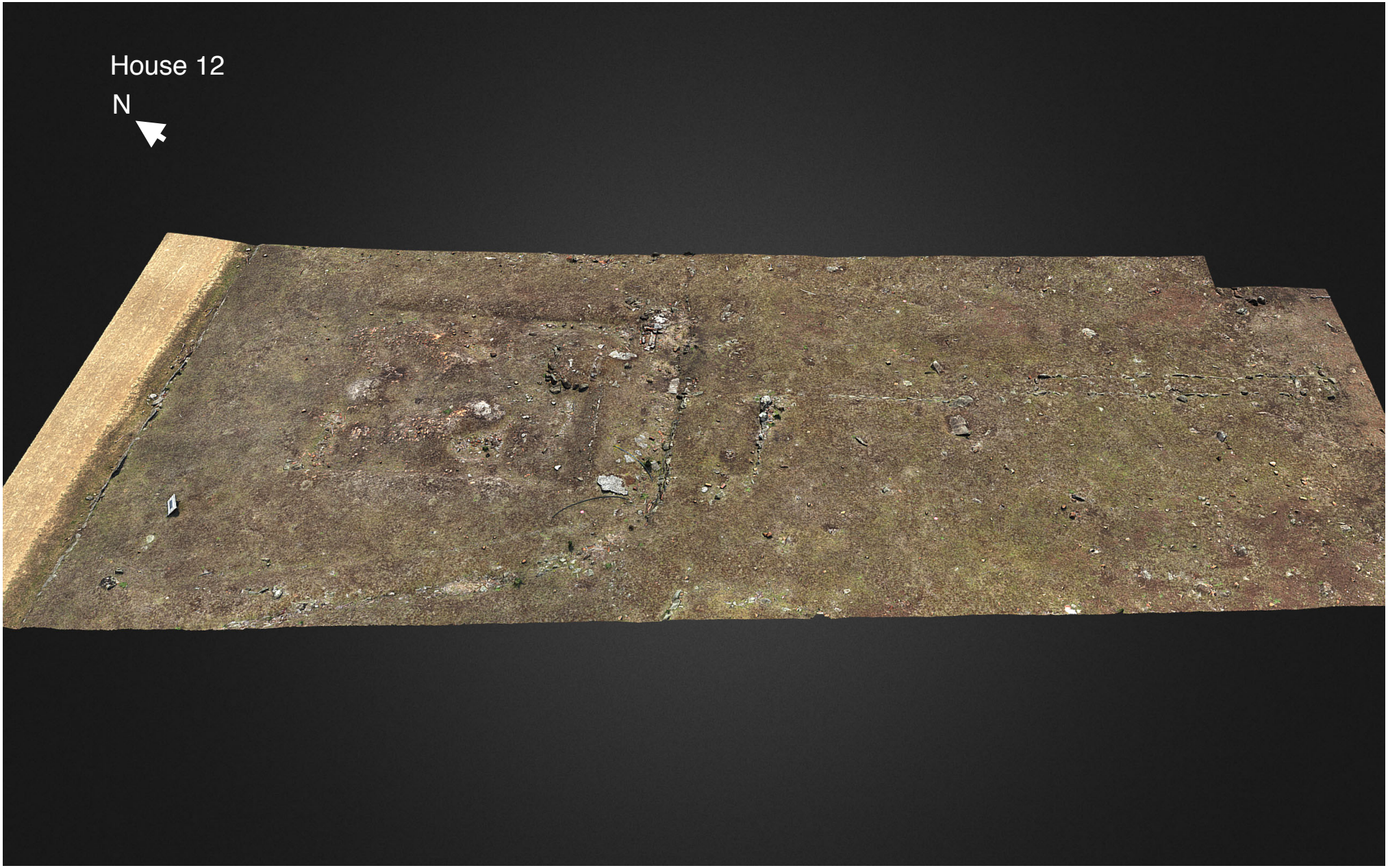
House 12
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