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For A Few Horses More:
The Role of Domesticated Livestock in the
Development of North Queensland

Thesis submitted by
Daniel 'Danny' England

September
2022

In fulfilment of the
Master of Philosophy (Society and Culture)
in the College of Arts, Society and Education,
At
James Cook University.

Form A

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Acknowledgements

First, I would like to acknowledge and thank my supervisory team of Dr Nigel Chang and Dr Claire Brennan for their continued interest in this research project as well as their advice and support throughout my candidature. Furthermore, I would like to thank the Townsville City Council Heritage Office, in particular Ted Brandi, for assisting in providing access to the research site of the Range Gazetted Camping Ground. I would also like to acknowledge and thank the Queensland State Government (who also oversees this state heritage listed site) for allowing the archaeological surveys and excavations to take place.

I would also like to thank the volunteers who assisted in archaeological fieldwork and artefact analysis, who at all times gave 100%. Thank you Helen Ball, Zach Callanan, Kate Cameron, Tate Devantier-Thomas, Jaimi Kitchen, Lucille Pedersen, Craig Smith, and Jason Hunter. I would also like to thank my family (Cheryl, Trevor, and Jessica), for their interest in this research topic. The support of the above individuals and organisations greatly aided this research project to reach completion.

On a personal note, this project began in 2020, shortly before the global pandemic struck. Despite the difficulties of Covid, the many delays it caused to fieldwork and the challenges of post-graduate studies, 2020 was one of the better experiences of my life. I absolutely loved the academic process of research and whilst many bemoan a literature review or presenting to an audience during their candidature, I found these to be both thrilling and deeply rewarding experiences.

On a more sombre note, both my horses passed away during the course of my candidature, one of whom did so in a very sudden and violent manner – her tragic death was deeply upsetting. Throughout the majority of my candidature in 2021 and 2022, I also faced an adverse and deeply distressing academic/work environment outside of Covid, which was both needlessly disheartening and traumatic.

Despite this, the research topic renewed my long held passion and love for horses. In some small way, the memories of my beautiful and beloved Delly and Smokey live on within this project, as my horses were truly a masterclass in *animal agency*. This thesis is dedicated to them and the joyous time we shared together over many years.

Statement of Contribution by Others

Supervision

Dr Nigel Chang and Dr Claire Brennan.

Stipend Support

This thesis was completed with a Commonwealth Supported by Research Training Program Fee Offset of up to 2 years, in addition to a competitive scholarship stipend for 2 years full-time and Minimum Resource Funds from the College of Arts Society and Education. Further to this I was awarded both a two-week Covid extension (full-time) and completion grant in my final year of candidature.

Statement of Contributions to Jointly Authored Works Contained in the Thesis

No jointly authored works.

Statement of Contributions by Others to the Thesis as a Whole

No contribution by others.

Published Works by the Author Incorporated into the Thesis

None.

Abstract

The development of colonial frontiers and their economies has been examined by many scholars; however the important role of horses and their contribution to this endeavour has either been overlooked or not fully explored. Many scholars assert that the goldfields were the main driving force behind the development of the frontier, and in doing so have discounted the critical role that horses played in enabling human access to numerous resources on the frontier. This is especially true in north Queensland, where the goldrushes have drawn the attention of historians and archaeologists alike, who have intrinsically linked mineral wealth with economic development. The result is a knowledge gap whereby the contribution of horses to frontier expansion and economic success has not been fully realised.

The research project addresses this knowledge gap through the application of a model for colonial settler expansion known as 'the progress industry' which allowed the research thesis to more comprehensively explore the role of the horse in the development of north Queensland against established and accepted histories and narratives. In addition, the second main research methodology to this project involved the examination of the role of animal agency through the adoption of an ethnographic approach to archival research. This included the investigation of the letters, diaries, and written accounts of settlers who interacted with domesticated livestock. This material facilitated the identification of how the agency of horses featured in the pattern of colonial settlement on the frontier and the cultural practices associated with the use of horses. An outcome of this approach provided the thesis with the foundation for classifying and preserving these human/equine traditions and cultural practices as heritage.

Furthermore, this research also involved a series of archaeological surveys and excavations at the Range Gazetted Camping Ground along Townsville's first roadway. Those surveys provided archaeological material that was analysed to assess the impact of horses on north Queensland's settlement and subsequent economic development. Artefacts acquired from these sites during earlier excavations were re-examined using a material culture approach and reassessed through the lens of both animal agency and the theoretical framework of the progress industry (a model for colonial expansion). Additional archival information such

as sketch maps, cadastral maps, and land surveys were incorporated for further analysis with a landscape archaeology approach.

This research project will demonstrate that horses were a means to an end, an invaluable resource that featured prominently on the colonial frontier as active participants in the construction of vital infrastructure, as well as a platform for military conquest and further facilitated the transportation of both colonial settlers and their goods. This thesis will argue that ultimately the colonial economy was focused on and around the use of horses as a resource for expansion and that without these creatures the benefits of the goldfields would have gone unrealised.

Chapter 1

-Introduction-



"Life, as I came to know it, revolved around feeding the horses, preparing them for work and making the implements they were to haul. Horses pulled wagons; they hauled the wool, the wheat, and the merchandise. They had to be shod, and the harness and other equipment kept in repair"

(R. M. Williams, 2001:120)

1.0 Introduction

Early settler colonial economies and their frontier histories have played a major role in shaping the modern nations of Australia, New Zealand, and the United States. Historical and archaeological investigations into the economies of these frontiers have primarily focussed on the goldrushes, where mineral wealth has been viewed as the most important factor in early colonial settlement and economic development. Furthermore, the focus on human history has overlooked not only the sizeable contribution of animals (specifically horses), on the frontier, but also denied these creatures any sense of agency or impact in our own human world. Thus, despite the widespread use of horses during the nineteenth century and their prominent visibility, there is limited archaeological investigation into their role in enabling the economic success of frontier societies. Thus the title for this thesis 'For A Few Horses More' The Role of Domesticated Livestock in the Development of North Queensland draws in a comparative element where it is noted that the success of economic development was dependent on the presence of horses.

This research project focuses on the contribution and cultural heritage of domesticated livestock (specially horses) in the economic development of frontier societies, where north Queensland is the main focus area of research. The emphasis on more-than-human history where it is recognised that history does not occur in a vacuum and animals can affect the human world, means this research adds to our existing knowledge of frontier economies. Furthermore, the cultural practices of Indigenous human interaction with the landscape has received much attention from academics, whereas the cultural practices and heritage value of non-Indigenous land use has often been overlooked. Therefore, the rationale behind this thesis is to explore and examine non-Indigenous (specifically colonial) cultural practices which involve the use of horses and domesticated livestock within the landscape with the aim of addressing this. This will be achieved through addressing gaps within the literature, which is dominated by goldfields in archaeology and history alike. In particular, the themes of animal agency (derived from the animal turn) and the progress industry (a model for colonial development) adopted by this research have challenged the longstanding bias that regards horses as tools of human society and denies them agency. This research project identifies the ways in which the agency of domesticated livestock (with a focus on horses) impacted patterns of settlement on the frontier. Furthermore, this project clarifies how the

cultural practices associated with these animals can be classified as heritage, and proposes measures for managing this ambition.

Archaeological fieldwork for this research was conducted at sites along Townsville's first roadway into the interior Hervey Range Road, which is located on the traditional lands of the Bindal people and extends through to Gugu-Badhun country. The archaeological fieldwork provided material remains for further analysis which aided in the assessment of the impact of horses in Townsville's colonial settlement and subsequent economic development, see Figure 1.1.



Figure 1.1: Google Earth imagery of Townsville and Hervey Range where fieldwork took place. (Google Earth: 2022).

By developing a more nuanced picture of early colonial economies and their development, this project will supplement, and critique the existing work of historians and historical archaeologists. The research focus on domesticated livestock, with an emphasis on horses will provide new insight into how non-Indigenous settlers established their economies and expanded into lands and territories which were both alien to them and occupied by First Nations groups who were hostile to the unwanted foreign invasion. Of further note, this thesis represents an interdisciplinary approach whereby research themes and methods from

both history and historical archaeology serve to inform each other and allow for the cross-examination of the historical record with the archaeological findings.

1.1 Research Questions

This research addressed three key questions that add to our understanding of the colonial development of north Queensland:

- How does the agency of horses and other livestock affect the pattern of settlement?
- How can examining the cultural practices associated with horses and other livestock add to the social history of north Queensland?
- Can these cultural practices be classified as heritage and how should they be managed?

These questions extend our view of the non-Indigenous colonisation of Townsville and the greater north Queensland landscape, and allow for the identification of the importance of horses in enabling the economic practices which underpinned the impetus for settlement. During this research two central themes emerged: animal agency as an approach which was derived from the animal turn; and the progress industry, a model for colonial expansion. The first recognises issues with history whereby living technologies such as domesticated livestock are viewed as passive tools, subject to the machinations of humans. The theme of animal agency provided the means with which to address this shortcoming and further informed the second research theme of the progress industry. The second theme draws on ideas first expounded by James Belich in his analysis of colonial economies. These themes add to and problematise existing narratives on frontier societies and their economic development. The desired outcome of this research project is to identify how we can classify colonial cultural practices associated with horses as heritage and how best to manage and preserve them. In doing so, this thesis aims to enrich the existing social history of north Queensland through the inclusion of the often overlooked and forgotten contributions of domestic livestock that were ultimately a requirement for economic success on the frontier. These questions are answered using historical research techniques, map analysis, ground-truthing, archaeological excavations, and topographic surveying.

1.2 Chapter Outlines

The unique aspects of the shared social history and cultural practices of settler-equine and other domesticate relations will be examined through each subsequent chapter of this thesis. The order of these chapters and their topics are as follows.

Chapter Two focuses on the themes and approaches adopted by this thesis to address the research questions: animal agency and the progress industry. First, the theme of animal agency will allow the thesis to assess the impact horses had on the pattern of non-Indigenous settlement in north Queensland. Then, the progress industry will provide context and understanding in how non-Indigenous settlers established and developed economic practices in a foreign environment. Furthermore, using ideas of animal agency and the progress industry together will provide a new lens with which to re-examine existing historical material and the written record.

Chapter Three provides a comparative history of Australia, New Zealand, and the western United States of America. This chapter further examines the prominence of horses within the progress industry and provides additional insight into why addressing their absence in the literature is of importance. This chapter will provide the foundation for understanding the many roles domesticated livestock were engaged in by frontier societies and how the agency of these animals affected interpersonal relationships between Indigenous and non-Indigenous peoples, and influenced colonial patterns of settlement.

Chapter Four will detail the strategies and methodologies used in the thesis: archaeological surveys/excavation and archival research. The archaeological surveys and excavations provided a means with which to interrogate and cross-examine the written record for a comparative analysis with the visibility of horses in the archaeological record. Archival research was important to the project and included extensive examination and analysis of newspaper and government documents, and the firsthand accounts of settlers who interacted with domesticated livestock. Further to this, the exploration of contemporary animal management plans by state and local governments also provided insight into equine heritage classification and management.

Chapter Five details the results of the archaeological surveys/excavations and archival research. The results and findings of the archaeological surveys and excavations are

presented in this chapter along with the topographical maps that were produced during the fieldwork. Further to this, an ethnographic approach was adopted for archival research to better understand the agency of these animals and to identify potential cultural practices. Archival research included an examination of the accounts and interactions of settlers with horses and other domesticated livestock which was then cross-examined with the findings and results of the archaeological excavations. The information gathered in this chapter provides additional insight into the shared social history of north Queensland through the inclusion of non-human domesticated species such as horses, sheep, and cattle.

Chapter Six considers and discusses the findings of the archaeological surveys and excavations at the sites associated with north Queensland's progress industry. Next, through the lens of both animal agency and the progress industry existing literature and historical material is compared against the archaeological record and new research findings to address the knowledge and challenge the longstanding assertion that goldfields were of the most importance to the economic development of frontier societies. Further to this, the themes of agency and the progress industry will illuminate aspects of First Nation's history and agency within the complexity of colonial/livestock relationships. In addition, the cultural practices and shared social history of inter-species relations will be investigated to identify the potential for heritage and to assess how this heritage should be managed. This chapter will then discuss the findings of the research undertaken and address each of the thesis questions.

Chapter Seven will summarise and conclude the findings related to the research questions addressed in this thesis and discuss potential further archaeological research and work in the area. The ethnographic approach to livestock archaeology as suggested by Reid (2019: 115) will also be interrogated to gauge the effectiveness of this methodology. The progress industry as a model for non-Indigenous settler expansion will also be assessed to determine its value in addressing the thesis questions from a regional perspective. Finally, further fieldwork and future research directions which could occur from the findings of this thesis will also be examined.

Chapter 2

-Themes and Approaches-



"When riding a horse, we borrow freedom."

(Spanish Proverb, cited in Pickerall, 1999:2)

2.0 Introduction

The themes and approaches adopted by this research project were influenced by the literature and previous academic work of historical archaeologists, zooarchaeologists, frontier historians and animal historians. As a result, a diverse set of themes and approaches centred around interrogating and cross-examining animal and human histories were addressed. These themes form the foundation for an ethnographic approach to historical archaeology, combining aspects of more-than-human history, frontier history (in particular the model of the Progress Industry), animal agency, cultural practices, and heritage management.

These themes and approaches provide a valuable lens with which to examine new data and compare this information to the existing historical literature as well as previous archaeological research. Furthermore, the themes and approaches adopted by this thesis allow the research to address a long-held bias which has seen historians and archaeologists focus on the goldfields of the frontier at the expense of other aspects of human and animal history.

2.1 Historical Archaeology

This is an interdisciplinary research project between history and archaeology, and requires a brief background on historical archaeology and how its use during this project better informed the research.

Firstly, archaeology is the study of the human past through material remains which can include objects (classified as artefacts), structures (whether still standing or in ruin), features (mounds, trenches, landfill) and landscapes which have been modified by human activity. Historical archaeology is a subdiscipline within archaeology that concentrates on societies with historical records, usually with a focus on colonial and post-colonial contexts influenced by European imperialism. Historical archaeology in Australia began in the late 1960s with William Culican and Jim Allen conducting research and excavations in Victoria and the Northern Territory in collaboration with the Australian National University (Allen, 2008:11. Culican, 1972:44). There was initially resistance to historical archaeology in Australia among academics as conservative archaeologists argued much of the research into Australia's historic period could be categorised as industrial archaeology (Jack, 2006:24).

While there are many similarities between historical and industrial archaeology, (such as surveying and research techniques), historical archaeology in Australia is not strictly limited to industrial societies. The Australasian society for historical archaeology (2020) defines the field as including the remains left by Dutch explorers, Asian fishing fleets and settlers of European, Chinese, and other cultural groups. While historical archaeology does not directly concern itself with Aboriginal sites, often these sites are studied to understand the interaction between the Indigenous peoples of Australia and invading cultures. Known as 'Contact Archaeology', the study of early European and Indigenous interaction often features elements and research themes associated with historical archaeology as a secondary focus (Barker et al. 2020:2). Historical archaeologists studying the period of European settlement in Australia investigate topics such as early interactions between First Nations people and colonisers, the processes of settlement and cultural adaptation by colonists, and environmental change during the last 250 years. Historical archaeology in Australia deals with recent sites, and deals with, topics including urbanisation, transportation systems, trade networks, conflict and warfare, agricultural practices, industrialisation, and the archaeology of institutions such as schools, prisons, asylums, and hospitals. Historical archaeology accounts for twenty-five percent of archaeological research projects in Australia today according to prominent Queensland historical archaeologist Geraldine Mate (2020:1). Further to this, Mate (2020:1) has argued that approximately half of every other type of archaeological research incorporates historical archaeology as a second focus.

Due to the quantity and availability of written records from the historic period, this might seem to make archaeology superfluous to traditional historians. However, historical archaeology can make a significant contribution to understandings of this period of the past by interrogating the written record with the archaeological record (physical remains). While written records are of great importance to historians and archaeologists alike, they do not comprehensively contain all the information of the past, rather only specific accounts which are often biased. An example of this was documented by Nelson (2017:113) in his 2017 honours thesis into Townsville's first roadway. Nelson, (2017:113) notes the inaccuracies of many early maps in the historical archives and stresses the importance of fieldwork and surveys in establishing where old and unused roadways exist within the current landscape. As the roadway featured in Nelson's research directly passes through the areas of research

for this thesis, this provides valuable insight into the necessity of fieldwork at this location. Nelson, (2017:114) further contends the benefit of adopting historical archaeology as a means to substantiate or refute information found in written records through comparison to the archaeological evidence. In addition to incorrect information in the archives, not all information was recorded, such as the more mundane details of people's daily lives which often do not appear within the historical record. Studies of nineteenth century populations by Eric Richards (1999:345) show literacy further created a gender divide with seventy-six percent of the Australian male population being able to both read and write while only sixty-three percent of women in Australia could do so. In particular this gender divide was greater among Irish migrants whereby sixty-eight percent of men were literate compared to forty percent for women (Richards, 1999:348).

Given colonial Australia's large migrant population it is relevant to note that literacy played an important role in historical archives as written documents were largely recorded and transcribed by middle and upper class males of Christian and European (specifically English) backgrounds. As a result, documentary records are often implicitly or explicitly biased to a point of view, selective in what they describe and how they describe it.

Many cultural groups who did not write (including Indigenous Australians) did not produce written records during this period of written history. As a result, the historical records lack first-hand accounts from these populations and instead contain written accounts of these people recorded by outsiders. For example, the Native American tribes of the southern plains (who did not possess a writing system) had traditional knowledge that was passed through generations via oral history, and later recorded by Western observers (Pitcock, 2000:391). Through their own cultural biases (which many were not aware of) Western observers inadvertently framed the traditional knowledge of First Nations people in the right direction, but with a limited knowledge of subtle nuance and details which was otherwise important to First Nations people.

Historical archaeology therefore presents the opportunity to further investigate the past by interrogating the physical remains and landscape, alongside the written record, to better understand past human populations and activities. Through detailed comparison and investigation of these resources, previously held accounts or beliefs can be challenged with

many new questions arising in the process. In particular, this research thesis will further incorporate animal history and agency into historical archaeology to provide greater insight into our understanding of frontier societies by addressing the importance of horses and domesticated livestock as an essential factor to the success of colonial economies. In this manner, the interdisciplinary approach undertaken in this thesis provides an excellent case study as to the benefits and effectiveness of adopting archaeological practices to interrogate existing written records, literature, and add to our existing knowledge.

2.2 Agency and the 'Animal Turn'

Zooarchaeologist Andrew Reid (2019:114), contends that traditional approaches to animal history and research within archaeology often exhibit a bias towards human control and influence over animals, and therefore fail to acknowledge the living nature of the subject matter. Reid (2019:114) argues that zooarchaeologists who emphasise the domestication and direct exploitation of livestock (often exclusively through their faunal remains) do not adequately consider the agency of animals, nor examine the complex human relationships that are formed through animal interaction. Reid (2019:124) asserts the importance of livestock to human society and relationships does not begin and end with the initial process of domestication, nor lie in the economic potential of an animal's carcass weight as is the focus of traditional faunal analysis. He argues that living animals impact human societies in different ways and that individual animals can shape human behaviour through their actions, expressing their agency. Reid (2019:124) writes that while animal bones have an important role in exploring activity and behaviour in the acts of butchery and meat distribution, different means such as ethnographic studies are required to explore the impact of living livestock. He elaborates that the focus on the faunal remains of animals often ignores the significance of livestock to human societies as it fails to examine the creation of complex social relationships between humans and domesticated animals, in particular that of living animals. Reid (2019:115) further asserts that modern animal behavioural studies demonstrate livestock are not merely passive creatures but are capable of independent action. Reid (2019:115), presents the argument that livestock have been and continue to be an important means for constructing human relationships within contemporary society. One such example Reid provides is that of an ethnographic study of Maasai herders, their settlements, and cultural events – all of which involve livestock. He

explains that a flock collectively forms a statement about their owner. The flock's physical appearance, health, productivity, and cohesion all reflect on their owner, and other Maasai observe these attributes when evaluating the herder's skill and standing within the community. The use of animals to provide insights into the character of their owners is not limited to the Maasai, there can be observed some similarity with historian Caroline Mincham's work on horses in New Zealand. Mincham (2011:85) argues the care and attendance teamsters provide to their horses and how animals of similar coats are paired in order to appear more reliable and aesthetically pleasing to attract customers similarly reflects the social standing of these operators.

While Reid argues for zooarchaeologists (and archaeologists alike) to consider the agency of animals, he never provides a direct example nor definition of animal agency. It is worth noting then, that environmental historian Shelly R. Scott (2009:45) who has examined the agency of racehorses defines animal agency as the intentional exertion of power, involving more than action or reaction. Scott (2009:45) argues that as agency is imbedded in freewill it involves both choice and responsibility. Further to this, Scott (2009:46) reasons that performance animals (such as show dogs, racehorses, circus animals) do not make for strong examples of animal agents as these creatures are coerced, directed, or led by human handlers where they are not given free reign as it would impact their performance in unpredictable (and potentially undesirable) ways. Scott (2009:47) expounds that agency by performative animals is exercised in a manner similar to that of colonised peoples, whereby their actions are rebellious and/or subversive when exerting their freewill. To this end, Scott (2009:47) elaborates that performing animals do not always follow the instructions of their human handlers, thereby exerting agency and autonomy, even when humans are holding the reins the horse may operate independently of the rider.

As the horses explored in this thesis are directed by human handlers, it is relevant to further explore the role of animal agency when a human handler is present. To this end, Scott (2009:54) examines racehorses and jockeys in the sport of horseracing as unlike other sports, the human is not solely responsible for the performance in this domain. Scott (2009:55) argues that the jockey must be able to adjust to the horse in order to foster a better outcome in the race. It is the job of the jockey to respond to the horse's actions

whereby the agency exerted by the rider depends on the agency exerted by the horse. In particular Scott (2009:55) notes that the human agent in this example must respond to the behaviours exhibited by the horse before they can use their own timing, tactics, and experience to navigate the horse through the field of other riders. Communication between human and animal agents is therefore key to achieving the desired outcome as the jockey must be able to comprehend the capabilities and limitations of their mount, such as how much energy the horse has in reserve and how far the animal can be pushed before exhaustion takes hold. The direct means of communication with this example are the reins and whip which the human agent uses at every stage of the race to convey their instructions to the animal agent. Scott (2009:56) provides the example of 'switching sticks' a method whereby some jockeys alternate their whip between their hands (from left to right and vice versa). This action by the rider can be viewed as communicating the horse to accelerate, which implies the animal cannot be forced to do anything against their will according to Scott (2009:45). Here, we can view the agency of the horse where the animal responds by galloping faster or ignoring the prompt. While Scott provides this thesis with a definition of animal agency and an example, it is relevant to explore this idea further.

Biologist Marek Spinka (2019:11) argues that in nature, animals need to actively engage with their environment in order to flourish and survive and thus, agency is an essential characteristic of animal life. Spinka (2009:12) argues that behavioural interaction with the environment is a defining feature of animals where they need to behave proactively in order to survive and thrive. He contends that if animals were only ever to react to events in the external environment, the animal would quickly succumb to other creatures. This is interesting to note as the animals whose history this thesis aims to explore (horses) are domesticated creatures that are largely dependent on their human owners. Spinka however does propose four levels of agency can be distinguished when examining animal agency which are, passive/reactive, action-driven, competence-building, and aspirational. These definitions are provided in the table below.

Table 2.1: Spina’s four levels of agency, affective functioning, and awareness.

Behavioural agency level	Type of overt behaviour	Awareness levels
Passive/reactive agency	The animal does not express overt behaviour or the animal’s direct behaviour only responds to external stimuli or events.	Anoetic self: experiencing without knowing/sentience awareness.
Action-driven agency	Actively behaving to achieve current outcomes such as procuring food, safety and raising offspring	Anoetic self: experiencing without knowing/sentience awareness.
Competence-building agency	Actions that do not produce immediate outcomes but build skills and acquire information for further beneficial use.	Noetic self: knowing/competence and awareness.
Aspirational agency	Actively behaving in the pursuit of planned and reflected goals.	Auto-noetic self: recalling, planning and introspective awareness.

Table 2.1: The four levels of agency, affective functioning, and awareness in mammals.

It is relevant to note that Spinka (2009:13) contends that aspirational agency is much less prominent and difficult to detect in animals than action-driven and competence-building agency, while passive/reactive agency is most prevalent. Therefore, this thesis will focus primarily on the first three levels of agency as defined by Spinka which are, passive/reactive agency, action-driven agency, and competence-building agency.

It is interesting to note that the theme of animal agency and freewill is a growing area of interest for historians of animals such as Greg Bankoff and Sandra Swart (2007:1), who argue that history has long denied animals in close proximity to humans any sense of sentience, freewill or agency. Both Bankoff and Swart have written extensively on the history of horses. In their book, *Breeds of Empire, the ‘invention’ of the horse in Southeast Asia and Southern Africa 1500-1950* they examine equine agency and the many roles of horses in empire building. Bankoff and Swart (2007:1) argue that historians have traditionally viewed empire building as an entirely ‘manmade’ endeavour and that while there has been a push among academics to re-examine this masculine history where women were invisible, the same effort has not occurred in acknowledging the hidden history of horses. As such, Bankoff and Swart (2007:3) argue that horses have been incorrectly viewed

as the product of the environment, and of natural selection through human managed breeding programmes, whereby these animals are held as the passive victims of the machinations of humans.

Swart (2007:273) in particular describes the 'animal turn' as an approach where we can examine how humans have been changed by domesticated animals, noting how such creatures affect relationships between groups (such as First Nations and Europeans) but also how among Europeans, different breeds of working animals and even horses can change the status or identity of their human owner. Bankoff and Swart (2007:5) argue that animal species represent a way of naturalising social classifications and distinctions with the example of the donkey as a peasant animal while the horse is considered a much more intelligent creature when owned by nobility. In this manner, whenever the horse has achieved something or been of use in colonising/conquering foreign lands, the animal's agency has been denied and instead its actions and achievements have been seen as the act of a human, thus diminishing the role of the animal, and assigning it to the background in history. Swart (2007:273) further asserts that the animal turn as a research approach in animal history incorporates environmental history, psychology, cultural geography, bioethics, and anthropology; all of which resonate with Reid's ethnographic (and agency) approach to zooarchaeology.

It is interesting to note similar overlap when comparing the work of Reid and Swart to that of historical Australian archaeologist Geraldine Mate. Of particular note in informing this research direction is Mate's (2014:32) observation that many of the goldfields in Queensland have been investigated with limited analysis on the social impacts or ramifications of these sites. In particular, Mate (2014:32) has noted that the majority of archaeological studies into goldfields and colonial economies have focussed on mining equipment and technologies such as ground and hydraulic sluicing, hydraulic elevating, and historical detail. Mate (2014:32) contends that there is potential to revisit these sites with a greater in-depth examination which could benefit from a focus on interpreting the social and environmental aspects of mining and colonial economies, to complement existing knowledge on the technological achievements of the mineral industry. While this project is not directly concerned with the archaeological sites of the goldfields, Mate's appeal for a

more social approach to historical archaeology resonates with that of Reid and Swart. From this the views of Mate, Reid and Swart indicate the significance of qualitative approaches and their potential to address new questions, such as the research questions that underpin this thesis.

To this end, the works of Bankoff, Swart and Reid have been important triggers when developing themes and approaches key to this thesis such as agency and the animal turn. This allows the thesis to consider domesticated animals as central actors in north Queensland's development where their agency impacted inter-species relationships and drove change. In particular, Reid's argument that livestock are often viewed as lacking freewill with their influence and impact on human behaviours having been overlooked, highlights the limitations of traditional faunal analysis and approaches to zooarchaeology. Further to this, is the difficulty for archaeologists to reliably locate the faunal remains of nineteenth century livestock in the research area. Therefore, animal agency presents an approach more suited to address the thesis questions of a living population. However, Reid, Bankoff, and Swart do not provide a definition of animal agency, despite mentioning this term numerous times in their work. Therefore it is relevant for this thesis to consider agency, a term usually reserved for human actors and explore how this might translate for animal actors.

While animal agency and the animal turn is important to the overall research theme of this project, it is important to note the central theme of this thesis involves the examination of early colonial expansion and development. In order to best address this, it is important for the research project to both acknowledge and apply the model of the 'Progress Industry' in order to better contextualise the animal agency as a central approach.

2.3 The Progress Industry

The progress industry is a model for economic development and settler expansion developed by New Zealand historian James Belich in 1996 in his book *'Making Peoples: A history of the New Zealanders'*. Specifically, the model applies to non-Indigenous settlers who aim to settle a foreign land and in doing so, develop the landscape to better suit their economic pursuits. While this model is heavily influenced by the values of a western

government and often refers to settlers of European origin, it should be noted that other non-Indigenous and non-European settlers also contribute toward the progress industry. Belich's model consists of three important phases, **boom**, **bust**, and **export rescue** which are observable during and after the frontier goldrushes which occurred in Australia, New Zealand, and the western United States of America.

The **boom** phase (which is a central focus of the thesis) is characterised by a sudden surge in the mass transfer of peoples, goods, and information via wagons, trains, ships, post offices, newspapers, banks, and migration organisations. Belich, (2010:58) argues the main economic focus during the boom phase was growth, and imperial/colonial governments encouraged and managed inflows of people, goods, money; the supply of housing, and the establishment of towns, farms, and transport infrastructure; and construction. Additionally, conflict is a prevalent feature during the boom phase of the progress industry as settler expansion into the frontier would appropriate new lands or provoke armed resistance from Indigenous populations who resisted the unwanted invasion of their territories. This conflict on the frontier between settlers and First Nation peoples would provide sufficient grounds and justification for colonial/imperial governments to invade and annex Native territory and aided in the support of the boom phase of the progress industry.

The second phase of the progress industry **bust** is characterised as the crash which follows the boom, in which growth rates plummet due to bankruptcy when the momentum of expansion becomes financially unsustainable (Belich, 2010:55). The final phase of the progress industry is that of **export rescue**, in which the economic endeavours of settlers focus on the mass export of one or two staples to a limited number of metropolitan markets. During this phase, smaller farms or pastoral runs are absorbed by much larger neighbours. Belich (2010:63) argues the success of this phase of the progress industry is built upon the failures of others as assets can be acquired at a mere fraction of their original cost.

The progress industry represents a model for settler expansion typified by a series of economic activities that not only opened up landscapes for settlement but created an economy based on a huge demand for resources to power itself. Belich (1996:374) surmises that the progress industry did more than facilitate the growth of an early settler economy,

to a greater extent it *was* the economy. While this model has been researched and written about extensively by Belich, it has not yet been widely adopted by other historians or academics. This presents an opportunity for this project to extend and test Belich's work through examination of Townsville's settlement and development using the lens of the progress industry, evaluating earlier assertions of the importance of goldfields, and assessing the contribution of domesticated animals (primarily horses) to the establishment and success of the region. In particular, the progress industry provides both the background context of frontier history in the region, and a new lens with which to re-examine existing information and historical records. The implementation of this model will further provide a case study where the research area of north Queensland's progress industry can be compared against those of greater Australia, New Zealand, and the western United States of America. This approach will provide greater insight into how the colonial settlement of, and subsequent economic development of north Queensland compares to other nineteenth century frontiers.

2.4 Cultural Practices and Heritage Preservation

Cultural practices and preservation of this heritage is essential to ensuring important knowledge of our past is protected and available for future generations. However, one such valuable aspect of human society which has often been overlooked is our relationship with horses and the cultural practices and heritage associated with their use. German historian Ulrich Raulff (2017:32) argues that no other animal has had such an impact on human societies development, settlement, warfare, and economy as the horse. He presents a very real problem in his book aptly titled, *Farewell to the Horse: the Final Century of Our Relationship*, in which he contends that the once treasured cultural practices associated with our equine companions are at risk of being lost in the current mechanised, digitised, and industrialised times. Raulff (2017:208) elaborates that during the Second World War, Germany contained the single biggest population of horses of any nation, both privately owned and in use with the military. For example, some 2.5 million animals were in use at any given time within the German army and a total of 4.7 million horses and mules were used throughout the war. Raulff (2017:135), writes that this animal population was decimated during the Second World War due to casualties sustained and that horse numbers continued to decline gradually during post war periods due to mechanisation

replacing these animals. Raulff (2017:135) argues the steep decline in the visibility and use of horses from the post war period onward has resulted in the weakening of cultural ties and links between the German people and horses. Raulff (2017:135) further contends that the breakage of these longstanding human links to equine cultural practices (with millions of horses that shared our existence having vanished) greatly affects the potential of this heritage to survive into the twenty first century, with horses now surviving in a marginal existence on race-tracks and pony clubs. Raulff (2017:302) ultimately contends that if historians and horse enthusiasts from Germany and other nations do not address the decline in equine heritage preservation, such information and cultural practices could be lost forever.

Another example of preserving heritage and cultural practices relating to the use of horses can be observed in Tricia Martineau Wagner's book *Black Cowboys of the Old West* which focusses on the history of African-American cowboys in the United States of America during the post-Civil War era. Wagner (like Raulff) identifies the cultural practices between humans and animals as an area where there has traditionally not been a strong focus on heritage preservation by westerners (2010:11). Wagner (2010:15) does however note a distinctive difference between the United States of America and Germany when it comes to equine heritage preservation, which she identifies as the continued presence of working animals on the landscape and the continuation of ranch work where horses (not vehicles) are still used. Wagner argues that scholars and academics need to rethink how they have traditionally viewed horses as a tool for western society and instead recognise that these animals were more than merely human tools (2010:65). In particular, Wagner (2010:66) notes that efforts to identify cultural practices with the landscape resulted in the Wild Free-Roaming Horses and Burros Act of 1971, which played a significant role recognising the cultural significance of horses and their heritage value to the United States. This act protects feral/wild horses and burros in the United States as it established that the very presence of these animals on the landscape enriched the cultural heritage of the nation.

The cultural links between humans and horses is of great importance to this thesis, and we can look closer to home in Australia when it comes to cultural practices and heritage management. In particular, Australian archaeologist Alistair Paterson (2017:13) argues

European and Indigenous land use and interaction in Australia has attracted much interest within archaeology. Paterson's own research argues for an archaeology of agrarian Australia that aims to understand the emergence of historical landscapes from both Indigenous and European (and other immigrant) origins. Paterson's work draws upon numerous Indigenous archaeological studies conducted over three decades by archaeologists. These works examine a wide variety of topics such as Indigenous domiculture and plant cultivation, fire-stick burning, the cultivation and use of roots by Indigenous Australians and the archaeobotany of wild plants in relation to Indigenous farming practices and the social implications of these. Paterson (2017:6) contends these studies have promoted the concept that Indigenous people intentionally modified the landscape of their local environment to increase food yields and facilitate easier and more reliable foraging. He argues this concept underlines the importance of complex relationships between Indigenous people and environmental systems which promoted a history of anthropogenic-influenced ecosystems that pre-date European arrival. Paterson's work and those of the archaeologists he has drawn upon are ultimately concerned with Indigenous Australian land use and practices. However, of greatest importance for this thesis, is Paterson's (2017:13) argument that the establishment of agrarian and pastoral practices by colonial settlers is equally deserving of attention. This presents an opportunity for the thesis research to address a gap in the knowledge through a focus on non-Indigenous and colonial cultural practices within the landscape, specifically with regards to their use of domesticated livestock. This focus allows this thesis to identify cultural practices of between settlers and their animals and further explore how this heritage could be best managed.

2.5 Summary of the Themes and Approaches Adopted

The works of animal historians Greg Bankoff and Sandra Swart and zooarchaeologist Andrew Reid underpin the thesis's use of the approach of animal agency. Critically, Marek Spinka's definition and table of animal agency will be used in the thesis to assess the agency of horses as the thesis engages with the animal turn through agency in order to address its research questions. Belich's model of the progress industry represents both a viable method of framing and understanding the research area. His work also provides a case study with which to compare north Queensland's colonial development with that of other nineteenth century colonial undertakings. In particular his detailed examination of New Zealand

provides a convenient comparison for this case study given its proximity in both time and space. Finally, Ulrich Raulf's assertion of the importance of cultural practices and heritage highlights an opportunity for a tangible outcome for this research project to identify cultural practices between humans and domesticated animals and present a case for how this heritage could be managed. The importance of this research focus is highlighted by the works of archaeologist Alistair Paterson who has identified potential knowledge gaps in colonial history which have been inspired by the long tradition of research that focuses on Indigenous land use, the cultural practices and the heritage associated with this. Further to this, the cultural practices between humans, livestock and the landscape has not received much attention in archaeological literature, and the identification of cultural practices and heritage preservation has often been overlooked.

Therefore the themes and approaches of this research project will facilitate the development of new perspectives on the interplay of human interactions with livestock and their by-products, especially with living animals. Such new perspectives and lines of inquiry which may emerge from approaches such as this could involve the examination of settlement shapes and patterns, the role of violence and authority on the frontier, the use of water, patterns of consumption and the emergence of contemporary Australian landscapes.

However, before applying these themes and approaches to the archival research and the archaeological excavations and surveys conducted during this research project it is important to establish the historical background of the colonial settlement of north Queensland and its subsequent economic development. This will take place in the following chapter, **frontier histories**.

Chapter 3

-Frontier Histories-



"I can make a General in five minutes, but a good horse is hard to replace."

(Abraham Lincoln, cited in Donald, 1996:323)

3.0 Introduction

This chapter will explore the history of frontiers and the early colonial economies of Australia, New Zealand, and the western United States (not including the original thirteen colonies) of America in comparative perspective. Furthermore, this chapter will detail the prominent roles played by horses in the colonial conquest and subsequent economic development of these frontiers. Including an examination of livestock and extending this history to be a more than just a human story promises to increase our understanding of the relationships between the pattern of colonial settlement on the frontier. This chapter will begin by applying a comparative perspective to history of frontier economies across Australia, New Zealand, and the United States before focusing more directly on animal history and the research area of north Queensland. These three regions were selected due to their similar periods of colonisation by mostly European settlers who followed similar patterns of migration and undertook similar economic activities. This comparison will begin with an examination of the early Australasian colonies (that would later become Australia and New Zealand), with a concise focus on the research area of north Queensland and a broader emphasis on the western United States of America. The goldrushes will be placed in comparative context of the progress industry. This is in contrast to the usual historical and archaeological treatment of the goldrushes as an exceptional form of colonial economic development. The next section, 'the progress industry and expansion, will detail the history of this model of colonial development and investigate the role of horses and livestock in the violence of the frontier wars. The longer term economic benefits and outcomes of the progress industry will then be addressed, followed by an examination of the importance of domesticated animals to society. Finally, this chapter will conclude with a more thorough examination/explication of the history of the research area of the road from Townsville to Dalrymple. This chapter will therefore provide a foundational knowledge to better contextualise the research (including fieldwork) undertaken during this project.

3.1 The Early Colonial Economy

The development of early colonial settler economies has received particular attention from historian James Belich. After examining the European settlement and economic development of New Zealand during the nineteenth century, Belich's work broadened to include the examination of other frontier societies including Australia, Argentina, and the

United States of America. His works provide an appropriate interpretation on how colonial settlers of the time sought to establish economies after settlement. It should be noted the term colonial settlers refers to non-Indigenous settlers who are of varied ethnic backgrounds but are all directed under a European model of government. While the majority of the colonial settler population consisted of persons of European heritage (British, Irish, German, Italian, Spanish, etc.) non-European peoples also featured such as Chinese and Japanese. Further clarification will occur where specific ethnic groups are involved (such as frontier violence), where these colonial settlers may be referred to specifically as white or of European descent and origin. Therefore, the terminology colonial settler refers to an individual under the direction of a European government model which administers a colony of non-Indigenous settlers, as in the case of the governments of Australia, New Zealand, and the United States (Belich, 2001:49). This terminology is therefore useful in differentiating between the economic practices and settlement of First Nations groups and that of non-Indigenous foreigners (colonial settlers) whose occupation and expansion into the same landscape was directed by a colonial government.

To better understand the background of frontier economies it is relevant to understand the approaches of early colonial settlers in their attempt to create new industries and economic opportunities in lands that proved very different from the European origins of the vast majority. In *Making Peoples* Belich identifies a key problem in the early organised colonial settlement of New Zealand, principally the lack of an established colonial economy. Belich (1996:340) contends that early economic planning vaguely envisaged mixed farming on the English model, supplying the local, Australian, and British markets mainly with grain, and supplemented by commerce based on Māori trade and the already established New Zealand extractive industries such as flax and whaling. However, the expansion of whaling and flax did not occur as originally anticipated. To compound this economic shortfall, the development of agriculture by colonial settlers came far too slowly to support any meaningful economy as traditional European farming methods (crops and livestock) often proved ill-suited to the new landscape. The colonial economy incurred periods of relatively low productivity as time was required to develop these practices, specifically to increase the number of livestock through breeding as well as the successful maturing and cultivation of

crops. As a result, the early organised colonial settlements of New Zealand were incapable of both feeding themselves and providing sufficient resources for export (Belich, 1996:341).

In terms of this research project, we can observe an overlap between Belich's work in New Zealand and that of north Queensland historian Dorothy Gibson-Wilde, whose research into Townsville's early colonial settlement in her book *Gateway to a Golden Land: Townsville 1884*, provides comparable observations to those made by Belich. Gibson-Wilde (1984:36), presents a similar economic quandary for the early colonial settlers of Cape Cleveland (the area later known as Townsville) in that, just as in New Zealand, they did not possess a clear understanding of what economic activities would be viable or profitable in the landscape. The founder of Townsville (John Melton Black) had originally envisioned a colonial economy centred around the exploitation of livestock, specifically sheep which had proven to be profitable in the states of Victoria and New South Wales (Gibson-Wilde, 1984:36). In Townsville's founding year of 1864, the settlement was restricted to a limited section of coastline due to impenetrable scrubland further inland. Melton Black had sketched several rough ideas for the future vision of the settlement's economic endeavours, which were to feature a head station (where sheep from smaller outlying stations would be transported for shearing) and a boiling down works (Gibson-Wilde, 1984:36), see Figure 3.1



Figure 3.1: John Melton Black's 1864 map of Cleveland Bay (Townsville) with potential head stations and boiling down works sites indicated by red arrows. 'Fine cattle country' was also identified west of the settlement which indicates the early colonial desires for a pastoral economy. (J.M. Black, 1864)

As the settlement of Townsville occurred during the mid-1860s, colonial settlers in the north also hoped to engage in agricultural commerce, and some attempted to grow cotton. The American Civil War had reduced Europe's supply from that source, promising a ready market for cotton grown elsewhere. In addition to cotton, sugar and tobacco plantations were also established near the settlement, again with the intention of stocking European markets that were undersupplied from the United States (Gibson-Wilde, 1984:57). While Gibson-Wilde covers some aspects of early settler economies, the main focus of her research is on the townscape itself. As such, to better understand the early economy of Townsville and north Queensland, historian Helga Griffin's book *Frontier Town* provides a broader insight into the issues which affected these colonial settlers and their economy. Griffin (2014:87) provides further clarification as to the difficulties the north Queensland colonial settlers faced in developing their agricultural economies, principally that the climate was ill-suited for cotton. Thus, this product was abandoned in 1872, despite the high demand for the commodity. In its place, sugar plantations provided a much more profitable trade although the remoteness of the settlement and its limited access to migrants caused further complications in the form of a labour shortage. This led to blackbirding by some businessmen, which involved the coercion or kidnapping of Pacific Islanders to work on the plantations (Griffin, 2014:86). A further problem that arose from sugar plantations (after blackbirding addressed the labour shortages) was that sugarcane, while well suited to the tropical climate of north Queensland, took time to grow and cultivate before it could be harvested and prove profitable.

However, the original impetus by John Melton Black for Townsville's settlement and expansion had always been to service the existing fledging pastoral economy in the interior of the region, although this was met with limited success (Griffin, 2014:87). While sheep proved well adapted (and highly profitable) in the cool and temperate climates of Victoria and New South Wales, these animals encountered greater hardships in north Queensland's extreme climate which featured extreme hot and wet seasons, as well as periods of extended drought. As a result, sheep quickly proved financially unviable in north Queensland due to the harsh tropical climate and its unforgiving landscape which included spear grass that resulted in poor fleece for trade or sickly creatures with less saleable meat than sheep from Victoria and New South Wales (Griffin, 2014:87). Due to poor returns on

investment from sheep and the competition with other states (who produced better wool and mutton), pastoralists found that sheep were an inadequate means to stimulate the early economy of north Queensland. Cattle were gradually introduced to replace sheep on pastoral runs, given these creatures were hardier in their composition and better suited to the environmental conditions of the region where they were able to subsist on the native grasses that sheep did not find palatable. This transition from sheep to cattle is evident by the early 1870s. In north Queensland in 1871 cattle outnumbered sheep 47,828 to 3,483, a ratio of nearly 14:1 (Gibson-Wilde, 1984:40; Griffin, 2014:87).

Drawing a comparison between the colonial societies of New Zealand and north Queensland we can observe similar patterns of settlement and shared outcomes with their limited successes and failures to establish their early economies. In both colonial undertakings the unfamiliar and often hostile native landscapes proved troublesome as time was required to modify their existing European agricultural methods in order to find success. While these alien environments and guesswork underpin the basis for these failures, the work of American historian Henry Brands provides additional insight into the difficulties of early colonial economies. Brands, (2003:18) contends a key problem for the early settlers of the western United States was not only the guesswork involved in establishing economic practices, but also included limited investment and risk. Brands, (2003:18) argues the economies on the American frontier in its westward expansion, were founded based on guesswork as to what crops and livestock could be profitable based on the successes of practices in other regions or continents, as similarly identified by Belich, Griffin and Gibson-Wilde in New Zealand and north Queensland. Brands' work, therefore, serves as a useful comparison between the frontier economy of the United States of America of those of Australasia. Brands (2003:21) further asserts that all early settler economies represented a risky venture, as there was little certainty as to how an unfamiliar landscape with its own unique flora and fauna would sustain traditional European agricultural and pastoral activities. As a result, these early and often agriculturally-based economies were frequently limited by a lack of return on investment, as was the case for Townsville where while sugar proved profitable, the time this crop took to cultivate led to minimal investment (Griffin, 2014:86). This accords with Brands' (2003:22) assertion that the risk of returns on investment in new and untested frontier economies often resulted in a lack of financial

interest from the larger and more established metropolitan centres of the eastern United States. A comparison can be made in this regard to the research area of north Queensland where colonial settlers actively sought investment from the metropolitan southeast of Queensland to help finance and develop their economic undertakings. While Brands (2003:22), argues that the metropolitan centres of the United States were less inclined to finance agrarian and pastoralist ventures on the frontier, he identifies economies based on mineral wealth (from goldrushes) attracted more investment given the possibility of greater returns on investment. Specifically the California goldrush which took place between 1854 and 1855 which occurred in the Northern California Goldfields near Yreka and the Sierra Nevada Goldfields east of Sacramento. This is a relevant point as Belich (2011:181), also identifies mineral wealth from the goldrushes as a stable industry which supported New Zealand's colonial economy beyond its initial early failings. The benefit of these goldrushes to New Zealand's colonial settlers is evident as the West Coast Goldrushes accounted for some two-thirds of the country's economy during their time between 1864 and 1867. This illustrates the importance of low-risk/high-reward economic activities for frontier settlers which served to both encourage greater population growth and financial investment over more traditional economic practices such as agriculture and pastoralism.

North Queensland historian Geoff Hansen (2018:5), provides evidence to support these assertions in *Goldfields That Made Townsville*, where he details that both the early cotton and pastoral industries of Townsville proved unviable. Hansen (2018:5) presents the additional argument, however, that this was due to a range of factors that not only included the aforementioned poor climate of the region (in terms of economic output), but also isolation from export markets in conjunction with armed conflict between the Indigenous population and colonial settlers. These obstacles presented additional challenges to Townsville's growth and expansion and served to further deter significant investment and capital in the region. This compounded the existing labour shortage as Townsville's population remained relatively low with colonial migrants choosing to settle in nearby rival townships in the region, such as Bowen (Gibson-Wilde, 1984:40; (Hansen, 2018:6).

Thus far we can observe that the colonial settlers on the frontiers of Australia, New Zealand, and the United States, did not *initially* possess a clear understanding of what economic activities would be viable. Furthermore, as these settlers were unable to identify what long

term agricultural or pastoral industries could successfully support further frontier growth and development, another type of economic undertaking was required. This would necessitate an activity that could easily sustain itself while encouraging investment in infrastructure and facilitate the growth of the labour market to expand the frontier. While this is not something the colonial settlers could manufacture themselves, the goldfields and the goldrushes that followed would prove important drivers in frontier settlement and development. These goldrushes, which are the focus of much of the literature for frontier economies, will now be examined in greater detail.

3.2 The Narrative of the Goldrushes

In 1867 the colonial government for the state of Queensland viewed gold as a possible means of providing revenue for itself and employment opportunities for settlers (Hansen, 2018:5). In particular, rewards of up to £1,000 were offered by the Queensland government for workable gold diggings in the north Queensland region. The contribution of the goldfields to north Queensland's (in particular Townsville's) colonial economy has been the focus of many historical and archaeological examinations and undertakings. A prominent narrative among north Queensland historians is that gold in effect, saved the fledging settlement of Townsville from financial ruin when the agricultural and pastoralist industries under-delivered on expectations (Gibson-Wilde, 1984:83; Griffin, 2014:65; Hansen, 2018:6). The financial reward for the discovery of gold alone led to a boom in settlers pouring into the region of north Queensland. This directly benefited service industries such as hotels, pubs, blacksmiths, and transportation such as coach services, which in turn helped sustain the township's early economy (Griffin, 2014:65; Hansen, 2018:6). The financial benefit of the mineral economy and its gold can be observed further in Townsville when shipping doubled at the port after the nearby discovery of gold at Cape River in 1867. This brought new investment to Townsville, which was otherwise known as a *squatter's port*, as wool, mutton and animal tallow were the principal exports prior the discovery of the Cape River goldfield (Griffin, 2014:65). A significant benefit of this goldfield was the subsequent commercial interest and investment in Townsville and its infrastructure from Queensland's colonial government which resulted in efforts to establish telegram stations and develop roadways to and from Townsville and the goldfields (Gibson-Wilde, 1984:81). While Cape River was only a short-lived goldfield, its discovery and exploitation occurred shortly after a

cyclone devastated the township of Townsville. This has contributed to an enduring narrative among scholars, where it is widely accepted that the investment in the region that followed this goldrush enabled the township to avoid financial ruin (Gibson-Wilde, 1984:81; Griffin, 2014:65; Hansen, 2018:11). Further goldrushes at Ravenswood and Charters Towers have been the focus of research by historians Lyndon Megarrity and Diane Menghetti where these works have examined the relationship between the goldfields and Townsville. In particular the roadways which linked Townsville and its port to the goldfields afforded greater access than that of rival township, Port Denison (Bowen), which had been founded some three years earlier in 1861. Bowen did not enjoy the same financial successes that Townsville did, as the township had been established south of the Burdekin River, which was both prone to flooding and difficult to cross even during drought. The Burdekin River, therefore, functioned as a natural boundary as it presented an impediment for travel to and from Bowen to both the goldfields and the interior pastoral stations (Gibson-Wilde, 1984:81; Griffin, 2014:65), see Figure 3.2.



Figure 3.2: The Burdekin River presented a challenge to cross given its sandy composition, wide banks, and proclivity for flash flooding. (University of Queensland, Richardson Collection: FLP131)

The discovery of goldfields in north Queensland led to an intense rivalry between the townships of Townsville and Bowen, whereby both were vying for financial investment from the Queensland Government to boost their infrastructure. Megarrity and Menghetti

(2018:12) contend that had Bowen been established north of the Burdekin River, the town would have benefited from greater access to the early colonial economy, and therefore Townsville's economic successes would have been greatly reduced. However, Townsville's favourable position on the coast north of the Burdekin River, provided the most accessible harbour for both the interior goldfields and pastoral stations (Gibson-Wilde, 1984:81; Griffin, 2014:65). Townsville's early success led to Bowen offering of £1,000 (similar to the state government) for the discovery of goldfields in the region where Bowen (not Townsville) would be the natural shipping port for the mineral wealth, see Figure 3.3.

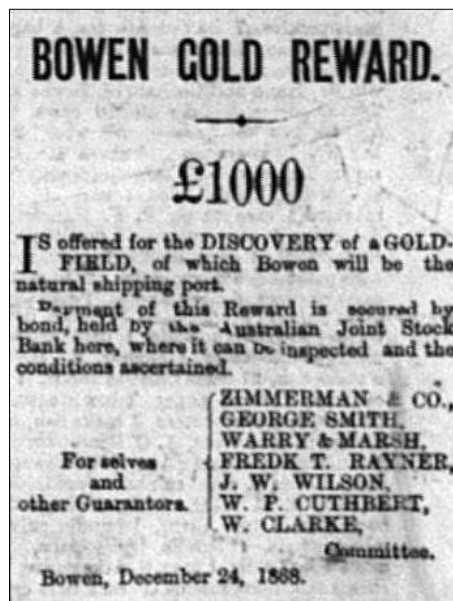


Figure 3.3: Reward offered for the discovery of gold where Bowen (Townsville's rival) would be the natural shipping port. (Cleveland Bay Express. January 16, 1869)

The first roadway which connected Townsville's harbour to the hinterland was commissioned by founder John Melton Black in 1864, while no more than a crude trail over difficult terrain it proved pivotal to Townsville's economy first as a stock route, and later affording prospectors access to the goldfields. These early economic windfalls led to the Queensland state government recognising Townsville as being of greater importance than Bowen, which resulted in an increase in expenditure on Townsville's infrastructure (Gibson-Wilde, 1984:81; Griffin, 2014:65). This investment led to the establishment of another more accessible roadway into the interior, connected in part to the existing track commissioned by John Melton Black. This new roadway, (originally named the road to Dalrymple) provided more reliable access between Townsville's port and both the goldfields and pastoral stations

of the interior (Gibson-Wilde, 1984:81; Griffin, 2014:65; Megarrity and Menghetti, 2018:12). The road to Dalrymple (later Hervey Range Road) which connected Townsville to the interior through Thornton's Gap was functional, reliable, and cut hundreds of kilometres from a single journey (Nelson, 2017:109). As a result, the Hervey Range Roadway proved pivotal in enabling the success of Townsville's early settler economy both for the goldfields and the latter economic benefits that arose from the interior pastoral stations. It is interesting, therefore, that the goldfield of Cape River features so prominently as Townsville's saviour rather than the road networks which enabled the transfer of wealth before, during and after the goldrushes. As the Hervey Range Roadway is the core focus area of research for this thesis project, its role will be examined in greater detail later in this chapter.

The importance of roadways and trade networks are of relevance in understanding early colonial economies as we can observe that the risk to returns on investment are an important factor to their success. The mineral wealth that flowed from the three goldfields of Cape River, Charters Towers and Ravenswood to Townsville's port along the Hervey Range Roadway provided the growth and capital required to support the township until other economic activities such as sugar plantations and pastoralism (cattle) became financially viable during the latter 1870s (Griffin, 2014:65). From the competition between Townsville and Bowen for access to resources (both the goldfields and government spending) we can further identify that the goldfields still presented considerable risks to colonial economies. This risk was manifested in the form of violence and competition for resources among prospectors, where there was no guarantee their efforts would be successful in the discovery of sufficient amounts of payable gold (Edgar, 2014:338). This highlights the importance of accessible road networks in conjunction with goldfields to produce short-term profits for colonial economies. Despite these risks, Brands (2003:12) maintains that gold as a resource, retains its value in any market, domestic, international, or otherwise. Belich, (1996:346) however argues that despite the mass of wealth from gold, (which as of 1890 in New Zealand totalled £46 million in exports), that goldfields represent a short lived occurrence, akin to an economic bubble. In particular the goldrushes in Australia, New Zealand and the United States were concentrated both in time and space and as such only directly provided frontier settlements with a short-term economy, albeit a highly lucrative one (Belich, 1996:346). Despite this, the goldrushes served the further purpose of

growing the population of frontier settlements through attracting, migrants (as a form of labour), prospectors, and investors (Belich, 1996:346; Brands, 2003:88). In this regard it is relevant to note that Australian mining historian Bill Peach, asserts that goldfields are a non-renewable and finite resource, upon which no economy can rely on for long-term financial returns (Peach, 1983:156). This is a relevant point by Peach, as it indicates that goldfields and access to mineral wealth alone does not ensure a frontier town's long term financial and economic success. On that note, both Peach and Brands acknowledge that many townships disappeared from the landscape after their goldfields were depleted (Brands, 2003:190; Peach, 1983:156).

It is interesting to note that this point of the long-term fallibility of goldfields is notably absent in the works of many historians and archaeologists who have instead intrinsically linked the enduring success of frontier settlements to their short-lived goldfield access. There is also a focus on human history and achievement, that these goldfields were discovered by humans, exploited by humans and throughout the life of these goldrushes, humans were the ones to benefit. This does not take into account the fact that animals, specifically horses provided the transportation for colonial explorers to discover the goldfields, as well as animal transportation being required to transport people and goods to and from the goldfields. Belich (1996:374) argues that while the goldrushes themselves may have been a transitory phenomenon which contributed briefly to the economy, their real importance was the facilitation of what he has labelled the 'progress industry.' The progress industry, which can be best understood as a model for colonial economic development and frontier conquest will now be examined in greater detail.

3.3 The Progress Industry and Expansion

The background history of frontier economies thus far has established that these early colonial economies were vulnerable and high-risk ventures from the outset. In addition, opportunistic economies such as mineral wealth from the goldrushes provided economic prospects for some of these developing colonial economies if they were fortunate enough to secure access to these resources. This section will now focus on one of the most important aspects of colonial development, the progress industry, a model developed and

refined by Belich (2010:54), in which he lists the three important and observable phases as **boom, bust and export rescue**.

In this model, the **boom** phase is characterised by a sudden surge in the mass transfer of peoples, goods, and information via wagons, trains, ships, post offices, newspapers, banks, and migration organisations. Belich, (2010:58) argues the main economic focus during the boom phase is that of growth, with the encouragement and management of inflows of people, goods, and money. These efforts were to increase the supply construction, housing, transport infrastructure to support the frontier towns and their farms. The **bust** phase is typified by the crash which followed after the goldfields ceased to produce sufficient quantities of resources to support continued investment. During the bust phase, growth rates plummet due to bankruptcy and the momentum of expansion became financially unsustainable (Belich, 2010:55). The final phase of the progress industry is that of **export rescue**, in which the economic endeavours of colonial settlers focus on the mass export of one or two staples to a limited number of metropolitan markets. During this phase, smaller farms or pastoral runs were absorbed by their much larger rivals. Belich (2010:63) argues the success of this phase of the progress industry is built upon the failures of others, as assets could be acquired at a mere fraction of their original cost. The model of these economic activities and undertakings have been labelled the 'the progress industry' by Belich.

Looking in more depth, the progress industry provides a framework for economic growth and colonial expansion with two components centred around the processes of public works and immigration (Belich, 1996:348). The first component of the progress industry's boom phase in frontier economies involved public works, roads, railways, telegraph communications and bridges which addressed distance concerns. The development of this infrastructure aided in the development of other industries such as goldrushes and pastoralism as both people and material were able to easily traverse across the country to access local, domestic, and international markets with greater ease (Belich, 1996:348). Whether public or private, transport projects were generally funded by metropolitan loans, but most of their inputs were local: manpower, work animals, food for both, and raw materials such as wood. They had a double effect, once completed they facilitated communications and access to markets, but were also valuable business boosters during the

process of construction (Belich, 2011:192). The creation of infrastructure during the boom phase was responsible for enabling vast amounts of employment as the road networks which formed part of the progress industry were of vital importance in the colonial expansion of Australia, New Zealand, and the western United States. Replacing a mere trail with even a modest road allowed the replacement of oxen with more efficient horses. Replacing modest roads with good roads halved the travelling time of coaches and doubled the loads of wagons (Belich, 2010:73).

The second component of the progress industry's boom phase is that of organised immigration with the founding of instant townships through government assistance and the encouragement of subsequent immigration (Belich, 1996:349). In this regard, Belich, (1996:349) considers the New Zealand example and describes war as an ally of the progress industry as attacks on the Māori population in New Zealand served a similar purpose as the clearing of obstacles to colonial progress. The injection of large amounts of people and money into specific regions initiated conflict with and displaced Māori populations. Colonial settlers would then establish townships in the absence of the supplanted Māori (Belich, 1996:349).

These conflicts (known as frontier wars) are of relevance when understanding colonial economies. The frontier of the United States experienced the same transformation during the mid-nineteenth century as conflict with the Native American population and the subsequent development of transportation infrastructure allowed the mass movement of settlers (Brands, 2003:58). This similarly opened up vast swathes of land for non-Indigenous settlement and economic development as it did in Australia and New Zealand (Belich, 2010:58). In the western United States of America, Native American tribes were displaced through armed conflict with colonial settlers and the United States military (which supported this expansion), the result of which was the capture and settlement of native territories. In this manner, the early colonial expansion into territories traditionally owned by Native Americans represented the invasion and occupation of hostile territory rather than the peaceful settlement of a foreign landscape (Brands, 2003:74). The development of roads and railways served a dual purpose in this endeavour, as they not only enabled this expansion and invasion to occur within the physical landscape, but also created an economy which sustained the onslaught of colonial settlement (Belich, 2010:59). The First Nations

people of North America responded to the unwelcome invasion of colonial settlers through the creation of a series of 'warpaths' which served a similar purpose as the colonial road and rail networks. The trails developed by Native Americans enabled their mounted warriors to strike out in retaliation against their colonial invaders to impede this undesirable invasion (Snead,2011:478). The horse was of great importance for the First Nations people in this regard as it provided them with a platform for mobile warfare where they could out manoeuvre the United States military, which at this time was focussed on infantry combat as a result of the American Civil War. However, despite the success of Native Americans in mounted guerrilla warfare, the ultimate defeat of the First Nations people came as the result of population pressure from exposure to European diseases which decimated their populations as well as starvation from the loss of hunting grounds which the colonial settlers had invaded (Snead, 2011:479). American historian Peter Cozzens sheds further light on the 'Indian Wars' of the United States' western frontier in his book, *The Earth is Weeping*. Cozzens (2017:62) argues that colonial settlers followed a deliberate strategy by invading territories owned by Native Americans where gold had been discovered, which led to armed conflict and the displacement of First Nation peoples from these lands. The United States military was then compelled to ensure the safety of these frontier settlements who were part of the boom phase of the progress industry. These settlers were encouraged to expand into the lands and territories west of the United States for 'Manifest Destiny', a term created by the United States Government in 1845, whereby the settlement (invasion and conquest) of the continent was seen as inevitable by God (Cozzens, 2017:69; Snead, 2011:478). This in turn led to an almost ceaseless escalation in conflict between the United States military and the various Native American tribes on the Great Plains which exerted pressure on First Nations peoples' way of life when colonial settlers and their frontier settlements seized traditional hunting grounds. First Nations tribes were thus deprived of both their traditional subsistence source (bison) as well as annual buffalo hunts, which were an important ritual activity (Cozzens, 2017:192; Mitchell, 2015:115; Snead, 2011:477). The loss of these territories and the traditional way of life they supported led to increased hostilities between First Nations peoples and the invading colonial settlers. When violence erupted between invading colonial settlers and First Nations tribes, the United States military would intervene and retaliate against the Native American population with punitive expeditions. In numerous instances the United States forces would unknowingly target and

attack the innocent First Nation tribes who had otherwise not engaged in hostilities towards the invading colonial settlers. However, after suffering unprovoked attacks by U.S forces (or colonial migrants/militia) these tribes responded with indiscriminate violence towards any foreign incursion or trespass. Thus native peoples were forced to constantly vacate their lands in order to sustain a campaign of guerrilla warfare against their colonial invaders. When peace was negotiated between the U.S military and the warring First Nations people, these tribes were displaced from their traditional lands and forced onto reservations whereby it was hoped they would adopt agricultural pursuits. The 'Indian Reservations' as they were titled, frequently featured poor soil not suitability for agriculture and presented limited or no access to traditional food sources such as buffalo (Cozzens, 2017:192).

Belich's and Cozzens's investigation into frontier violence serves to provide comparative context as to how conflict is incorporated into the model of the progress industry during the boom phase. The aggressive expansion of colonial settlers into lands which were occupied by First Nations groups also occurred in the research area of north Queensland. North Queensland historian Henry Reynolds (1993:4) provides further insight into these violent encounters in which he argues that Indigenous Australian resistance to frontier settlements was a reality of life to colonial settlers in the mid-nineteenth century. Reynolds' book *Race Relations in North Queensland* is one of the few texts which seeks to illuminate the campaign of guerrilla warfare Indigenous Australians waged on colonial settlers in resistance to the undesirable invasion and conquest of their traditional lands. For the colonial economy, Indigenous Australian resistance presented a threat to the viability of frontier squatting, where attacks by Indigenous warriors against invading squatters and their livestock greatly affected the early pastoral economy of the region (Reynolds,1993:43). Prospectors and the mining operations of the goldfields were similarly affected when horses and livestock (bullocks, packhorses, etc.) were frequently targeted and killed by Indigenous warriors if left unguarded at mining camps or camping reserves (Reynolds:1993:42). The guerrilla resistance of Indigenous Australians was of such great concern to colonial settlers that in 1857 the *North Australian* newspaper wrote that unless pastoralists were provided security then a fine grazing district (central Queensland) would have to be vacated and returned to the Indigenous population. The newspaper further clarified that if such an act were to occur it would discourage Anglo/European migration and retard the flow of capital

in the region (Reynolds, 1993:55). This is an important point as it illustrates the boom phase of the progress industry's focus on growth, investment and expansion into the landscape and further accords with assertions made by Belich where he describes war as an ally of the progress industry (1996:349).

A particularly poignant first-hand account of these sorts of violent events of Indigenous displacement is provided by James Morrill in *James Morrill Captive of Empire* published by Bruce Breslin. James Morrill was a sailor aboard the *Peruvian* who was shipwrecked off the coast of Townsville with several other members of the ship. The survivors encountered Indigenous Australians who took them in and provided care. Despite the kindness and support offered by the Indigenous Australians, all survivors of the *Peruvian* succumbed to exposure and passed away, with the exception of James Morrill (Breslin, 2017:96). Morrill lived among the Indigenous community for seventeen years in which time he learned of hostile actions by colonial (white/European) settlers. One of these accounts describes an Indigenous tribe lamenting the death of their elder when a white settler arrived and fired upon the grieving tribe, having mistaken their aggrieved demeanour as intimidating. This colonial settler was later killed for this hostile action by the Indigenous tribe, which in turn led to reprisal massacres perpetrated against other Indigenous groups by white settlers (Breslin, 2017:98). It is relevant to note that white/European violence towards Indigenous Australians was widespread in north Queensland and was underreported. There has been limited justification for these violent actions and white/European settlers who willingly engaged in violence were rarely punished if they were deemed at fault (Breslin, 2017:3).

Further to these violent encounters, colonial pastoralists, and their flocks of sheep actively displaced Indigenous Australian populations during the nineteenth century. It is relevant to note that Reynolds (2013:52) argues this conflict was driven by the needs of domesticated livestock who require access to increasing amounts of land for grazing. Reynolds (2013:52) further asserts that it was the unofficial policy of Australian state governments to actively displace Indigenous peoples from their traditional lands through coercion and violence. These lands were then sold or leased to colonial settlers for economic practices such as mining, agriculture, or pastoralism (Reynolds 1993:32). Goldrushes featured prominently during the frontier wars of Australia, New Zealand, and the western United States as the large influx of prospectors who invaded foreign territories in search of wealth encouraged

the establishment of frontier towns to service the resource economy of the goldfields. From the observations made by Belich, Cozzens and Reynolds, it is clear that conflict was a core component of the progress industry's boom phase. This colonial expansion can be understood as a deliberate pattern of violent invasion, rather than peaceful settlement. The justification made by white/European colonial authorities of Australia, New Zealand, and the United States for this repeated behaviour was the assertion that the lands they invaded were not being adequately utilised by the First Nation inhabitants (Peach, 1983:52). Specifically, the lack of many First Nations people engaging in agricultural practices (as recognised by Europeans in Australia and the United States) was a key point in the colonial assertion that these lands were 'vacant' and both the landscape and First Nations peoples themselves warranted improvement by a colonial power (Peach, 1983:53). The colonial/European government invasion and interference therefore represents 'white man's burden' which is described in the poem by Kipling (1940:321) as the duty of white Europeans to manage the affairs of non-white people who Europeans held to be less developed in comparison to themselves. Although this is a significant topic for further research, it is not the focus of this project. However it is relevant to note that this racist white/European sentiment that was expressed toward non-European peoples was also applied towards animals, where wild animals were viewed as needing to be domesticated for service to their European masters (Anderson, 2004:92; Ritvo, 1989:65).

3.4 The Role of the Horse in Frontier Warfare

Belich, Cozzens and Reynolds argue that horses would prove a vital resource during the frontier wars of Australia and the western United States, although it is relevant to note that these authors were unable to specifically identify what made the horse so important to frontier warfare. The role of the horse in frontier conflict will now be examined, principally on the frontier of the American West before a brief comparison with north Queensland. North Queensland's frontier war will be discussed again, however, in the discussion chapter of the thesis. It is important to note that during the frontier conflicts of the western United States, the First Nations people who inhabited these lands (specifically the Southwest and Great Plains) had contact with horses prior to the arrival of colonial settlers. The horses they encountered were the descendants of animals from earlier Spanish invaders of adjacent regions who had escaped and then proliferated where there was an abundance of suitable

grazing habitat available to them. As a result the First Nations people of North America encountered horses by as early as 1630, before the start of the period of explosive westward expansion (March, 2014:22). When colonial explorers encountered members of the Crow and Blackfoot people in 1742 they observed that these First Nations people not only possessed horses, but had developed excellent horsemanship skills. This indicates that Crow and Blackfoot people had integrated these animals into their society as a resource for a considerable time in order to develop the skillset required to manage horses (Francis, 1938:112; Mitchell, 2015:93).

During the frontier conflict between invading colonial settlers and the First Nations tribes in the mid-nineteenth century it was the tribes of the Great Plains who used the horse as a platform for mobile warfare. By comparison, the United States military was emerging from a lengthy civil war structured around the use of infantry and artillery in warfare, which had resulted the U.S cavalry core being severely reduced (and poorly equipped) due to the high cost of upkeep (Cozzens, 2017:192). This would prove to be a critical mistake as in the case of the Fettermen Fight of December 21, 1866 when a detachment of 80 U.S troopers (49 infantry, 27 cavalry and 4 scouts) were massacred by a force of mounted First Nations warriors from the Cheyennes, Arapahos and Oglalas tribes. The defeat came as a shock to U.S military Generals who believed they were an almost invincible force. In particular, the commander of the slain U.S forces William J. Fetterman (after whom the massacre is named) boasted in correspondence some days earlier (before his demise) that he could ride through the whole Sioux nation given the superiority (firepower) of his forces. United States military officers who attended the aftermath of the one-sided battle observed that the deceased U.S troopers had between five to seven arrows in their bodies, with each man having been scalped and the scalps themselves left by their corpses (a sign of insult by First Nations warriors to indicate their opponent's scalp was not worthy as a trophy). In addition to this, it was deemed the slow-firing and inaccurate muzzle loaded muskets U.S troopers were issued with were of little use against mounted opponents who had the advantage of increased mobility from horseback (Cozzens, 2017:37). The importance of **mobility** in frontier warfare is a key factor which Cozzens has overlooked. Cozzens (2017:57) contends the Fettermen Massacre was a failure of the type of firearm the

United States infantry were issued with, a slow firing musket which would not sustain a level of fire that a well-trained First Nation warrior could with a bow and arrow. While this is a valid assertion, it is also relevant to note that subsequent weaponry, such as the more reliable breach loading Springfield rifles and repeating carbines, failed to address the superior mobility of First Nations warriors armed with traditional weapons which included tomahawks, spears, and the bow (Cozzens, 2017:57). First Nations warriors themselves would also later come to incorporate firearms alongside their traditional weapons in combat, thus leveling the battlefield in terms of the weaponry being used to engage each other (Cozzens, 2017:57). In particular, Cozzens (2017:19) attributes the famous riding skill of First Nations warriors (where boys learn to ride at age seven) and their superior number of available horses as the reason for their success in warfare against the United States military (and colonial militias). In this regard, Cozzens overlooks the key benefit of horses in warfare, chiefly, the mobility they provide.

The tactical advantage of horses in frontier combat has been further investigated in GIS-based studies by archaeologist Jun Ueno Sunseri, who contends that First Nation people's settlement patterns in Arizona were affected by regular mounted raiders. Sunseri (2015:74) argues that the mounted raiders could appear with such little warning and withdraw with equal speed, that lowland settlements were either abandoned or relocated to areas of higher elevation atop canyons whereby occupants could identify approaching mounted threats from afar. In this way the human relationship with the landscape was completely transformed by the incorporation of horses where their mobility was what made them effective tools of warfare. By the time conflict erupted between the United States and the numerous First Nations tribes of the Great Plains, mounted warfare and raiding tactics had long been incorporated into the fighting doctrine of First Nations tribes (Cozzens, 2017:11; Mitchell, 2015:120). In comparison, the United States military was reduced in its ability to engage in mobile warfare due to the bulk of their forces consisting of foot infantry. Much of the mobile horse drawn artillery which had proved highly effective in the preceding Civil War had also been reduced due to a shortage of suitable animals. It is relevant to note here that during the first two years of the American Civil War, that both the Confederate and Union forces used the mobility of their artillery horses to out-manoeuvre and control the

battlefield. The high attrition rate of these horses from casualties led to a lack of suitable replacements, and thus smaller breeds were used where mobility was sacrificed. This continued into the post-Civil War period of the U.S military, and as such the superior firepower that cannons, and artillery afforded U.S forces were relegated to static defensible positions that were less suited to the mobility necessitated by frontier warfare (Jones, 2010:375).

The focus on static infantry warfare (largely to deter aggression) led to a reduced and often poorly supplied U.S cavalry cohort. To further compound this issue, each cavalrymen had one horse, whereas First Nations warriors maintained herds of ponies, so a rider could replace his mount at a moment's notice in battle (Cozzens, 2017:28). During skirmishes First Nations warriors would often attempt to wound, kill, capture, or scare a cavalryman's horse to force him to dismount and place him at a disadvantage (reduced mobility). Paradoxically, U.S cavalry tactics of the time dictated that troopers operate in units of four men, whereby when combat was initiated all four troopers' dismount, with three soldiers engaged in combat while a fourth held the reins of all four riders' horses. This military tactic not only immediately reduced the effective firepower of a cavalry unit by twenty-five percent whenever combat was initiated, but also served to neutralise any benefit of mobile warfare (Cozzens, 2017:113). Furthermore, astute First Nations warriors soon learned to feign an attack to force the cavalrymen to dismount, then targeted and harassed the troopers responsible for the care of the cavalry horses as they were vulnerable to attack (Cozzens, 2017:114).

Horsepower and mobile warfare tactics such as these would prove superior to firepower and field artillery as evidenced in the case of Colonel Mackenzie's ill-fated 1870 campaign in Texas, where he marched his forces (eight infantry cohorts and two cavalry cohorts) through the landscape in an attempt to engage in an open pitched battle. The mounted raiders of the numerous tribes of the area (including Apache and Comanche) denied Mackenzie of his initiative, and instead chose to remain at a distance outside of rifle and artillery range. Colonel Mackenzie's infantry were often fatigued at the end of an arduous day's march from their failed attempts to initiate combat with the more mobile combatants of the First Nation mounted warriors. As a result, many troopers straggled behind the military column, exhausted from these failed attempts to engage their enemy. These soldiers were

subsequently surrounded by mounted First Nations warriors with ease and swiftly massacred before the bulk of the U.S military column could respond. When Colonel Mackenzie ordered his cavalry to pursue these mounted attackers (out of frustration) the First Nation warriors feigned a retreat and rode until the cavalry horses (with heavier saddles and tack) tired. The First Nations mounts did not tire as easily and due to maintaining nearby pony herds, warriors could swap out fatigued animals with fresh replacements. When the First Nation warriors had successfully fatigued the horses of the U.S cavalry and led them away from the safety (and firepower) of their military column, they were then surrounded by the larger more mobile mounted force of First Nations riders and annihilated without possibility of retreat (Cozzens, 2017:187).

Such examples reveal that despite the First Nations tribes of the Great Plains possessing few firearms and limited to no ability to repair or maintain such equipment, their access to horses and superior use of mobile warfare made them unrivalled in guerrilla fighting on the landscape (Cozzens, 2017:53; Mitchell, 2015:163). The military failings by the larger and better equipped United States military serve to underline the utmost importance of horse's mobility in frontier conflict. The valuable role of these animals were acknowledged by both combatants in this conflict as Colonel Phillips St. George Cooke writes:

'The efficiency of the cavalry depends almost entirely upon the 'condition of the horses,' which alone makes them able to get over long distances in short spaces of time. The horses must, therefore, be nursed with great care, in order that they may endure the utmost fatigue when emergencies demand it'

(Cooke cited in Cozzens, 2017:95).

Horses and the mobility they provided First Nation combatants proved to be of such great value during the frontier wars of the western United States that often after a peace signing, U.S soldiers would destroy entire herds of captured ponies (owned by First Nations tribes) to ensure they could not be used in warfare. Paradoxically, firearms were often provided to First Nation warriors as compensation for the loss of their pony herds, thus highlighting that horsepower was of greater military importance than firepower in frontier conflict (Cozzens 2017:103), see Figure 3.4.



Figure 3.4: The destruction of a pony herd reduced the effectiveness of First Nations warriors. Securing the herd was a mission for the cavalry or friendly Indian scouts. (*The Fight for the Pony Herd* by Nelson A. Miles, 1896 Chicago: Werner Publishing Company)

While not an area of research focus for this thesis, it is important to acknowledge that much of the literature has developed a popular narrative where the frontier war of the western United States is viewed as a conflict exclusively between the invading colonial settlers and U.S forces against numerous First Nations tribes and peoples. However, U.S forces incorporated First Nations warriors (often as scouts and raiders) into their armies and military strategy of the time (Cozzens 2017:47). Many First Nations tribes chose to align themselves with the U.S forces as a means of engaging in conflict with other First Nations groups, where they could expand their territory having displaced a long-term ancestral rival. However, U.S armies that incorporated First Nations scouts and raiders were always comprised of a largely white/colonial military infantry force which meant the added mobility afforded by these allied First Nations mounted warriors was wasted (Cozzens 2017:47; Mitchell, 2015:190).

Horses were similarly integral to frontier conflict in Australia as they were in the United States, however in stark contrast between these two frontiers was the access for both combatants to horses, as colonial settlers in Australia maintained a monopoly on these animals. Reynolds (2013:88) notes that the rifles and horses the colonial combatants had

access to in this conflict afforded them an invulnerability which resulted in a disparity between the casualties between the two sides, see Figure 3.5.



Figure 3.5: The Waterloo Creek massacre, 1838, depicts mounted troopers using the advantage of horses to attack Indigenous Australian settlements. (Mundy, Godfrey Charles. 1850 *Encounter. Mounted police and blacks*: <http://nla.gov.au/nla.obj-138147309>)

However, it is important to note that Indigenous Australian warriors proved entirely capable of success in frontier conflict without access to firearms, due to their hunting skills and physical conditioning (Reynolds, 2013:70), see Figure 3.6.

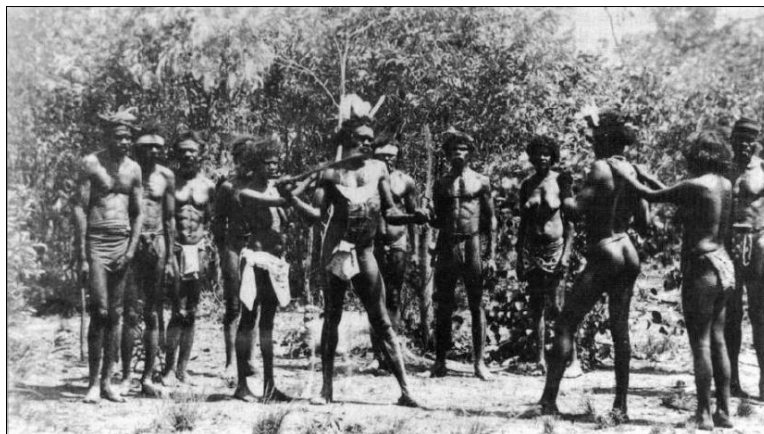


Figure 3.6: Indigenous Australians at Alice River in north Queensland 187x. The unknown author of this photograph noted the 'impressive physique and conditioning' of Indigenous Australian warriors. (Townsville City Library: 13159)

While

Indigenous

Australian warriors were denied access to horses, they were still able to launch surprise

guerrilla attacks against their colonial (largely white European) adversaries due to their knowledge of the terrain. This afforded them the means with which to raid pastoral stations, mining camps and other colonial sites and retreat into the bush to avoid retaliation, despite a lack of access to horses as a means of mobility. Further to this, the accuracy of Indigenous warriors with hunting spears meant these raids could be conducted in a far more covert manner than what firearms would have allowed (Reynolds, 1993:12). However, these advantages were dependent upon the terrain in which the conflict was fought, where in open country the rifles and horses of the colonial combatants proved so effective it forced Indigenous Australians relocate to less suitable hunting grounds with poor access to water (Reynolds, 2013:51). We can observe some overlap here with the introduction of horses in North America and their adoption by First Nations tribes in warfare similarly resulted in changes to settlement to avoid raids.

Historical archaeological studies into Queensland's frontier conflict highlight the importance of horses and their mobility they provided in warfare and serve to further inform the historical literature. Archaeological research conducted by Barker et al. (2020:28) indicates the paramilitary organisation known as the Native Mounted Police (NMP) issued troopers with two horses in order to increase their mobility and allow for them to traverse extensive distances with ease, swapping horses as required. In addition to horses extending the distance NMP troopers were able to cover, they provided the added tactical advantage of surprise as their speed afforded them the ability to ambush Indigenous guerrilla fighters, while also denying them the ability to retreat to safety (Barker et al. 2020:29). In this manner, we can observe the colonial combatants in the conflict of the Australian frontier adopting mobile warfare tactics that were similarly in use by First Nations warriors in the frontier conflict of the United States. We can also observe the effect that mounted raiding had on Indigenous groups where (as both in the Americas and in Australia) patterns of settlement changed in order to reduce the effectiveness of mounted attacks. Furthermore, the NMP consisted of exclusively white/European officers who oversaw a detachment of Indigenous Australian troopers who were used in the frontier conflict against other Indigenous Australians. The reasons for Indigenous Australians joining the NMP to participate in violence against other First Nations peoples varies greatly between individuals. There are accounts where white/colonial NMP officers kidnapped the wives and

children of Indigenous Australian warriors in an effort to coerce these men to fight for the NMP. In addition to this, some Indigenous men chose to willingly join the NMP as a means to engage in conflict with ancestral rivals or acquire a higher social status among their community (Barker et al. 2020:7). From this we can observe a similarity between the frontier wars of the western United States and Australia, whereby First Nations warriors were frequently engaged in conflict against other First Nations groups, alongside colonial forces.

Despite the many similarities between the frontier wars of Australia and the western United States the key differentiation between these two conflicts is the access to and the use of horses in warfare by Indigenous combatants. In the Australian frontier wars, First Nations warriors did not possess access to horses as a resource, unless in the employ of a colonial military force such as the NMP. It is relevant to note that the frontier wars of New Zealand were not explored in this section due to the more limited application of horses in that conflict. This is attributed to the terrain and landscape of New Zealand which consists of dense forests, steep valleys, and mountain passages, all of which negate the effective mobility of mounted combatants. While this section has largely focussed on the conflict in North America, the frontier war of north Queensland will be examined further in the discussion chapter.

The frontier wars of Australia, New Zealand and the western United States when viewed through the lens of the progress industry represents the boom phase, in which territorial expansion is a vital component. As explored above, the mobility afforded to combatants who incorporated mounted warfare into their tactics and strategies provided them with a competitive edge over their adversary. The two case studies of the western United States and that of north Queensland provides insight into how a smaller armed force could effectively defeat a larger opponent, with horsepower rather than firepower at the core of their military practice. The frontier violence waged on the backs of horses provided the means for colonial expansion and territorial gains. This led to the acquisition and settlement of new territories which included both the highly lucrative goldfields as well as the ever increasing amounts of pastoral lands. As a result, these actions opened up the interiors of Australia, New Zealand, and the western United States for colonial economic development (Belich, 2009:23).

3.5 The Progress Industry Economy

The previous section on the progress industry has informed the thesis as to the relationship between colonial economic practices and conquest for the desired outcome of growth. This section will now examine how economic development was achieved on the colonial frontier with a greater focus on New Zealand, as the frontier of north Queensland will be examined in greater detail later in this chapter. In both Australia and New Zealand, the colonial economies were encouraged to grow at exponential rates, and to do so the progress industry was vital (Belich, 1996:374). In Australia, public spending on infrastructure was approximately seven times that spent in an average developed economy. Those employed in the progress industry in construction and forestry, consumed great quantities of meat, bread, liquor, and leather, as did urban populations and farmers in the process of establishing themselves. The latter also required breeding animals and seed in great quantity, which Belich (2010:61) labels a 'stocking market.' Horses in particular created a sub-economy with their high demand for oats as their nutritional demands were greater than those of sheep or cattle (Belich, 2010:61). The progress industry as a result was a series of economic activities that not only opened up landscapes for settlement but created an economy of its own based on the huge demand for resources to power itself. In this aspect we can observe that the progress industry did more than facilitate the growth of an early colonial economy, to a greater extent it **was** the colonial economy (Belich, 1996:374). Thus, the progress industry created a self-driving and self-servicing domestic market for feeding its crews and provisioning its horses and bullocks, these animals in turn aided in the creation of roads, railways, and hauled timber. They carted goods and people to the ships and trains and pulled and carried them along the roads. In Britain, paradoxically, the introduction of rail led to an increased demand for horses and bullocks as more people and goods moved around, it was horse transport which carried them to and from the railway stations (Belich, 1996:354), see Figure 3.7 (overpage).



Figure 3.7: Horse and bullock teams hauling wool bales in Charleville, 1900. Carrier teams were vital in the transportation of goods between the ports and railways of settlements. (State Library of Queensland: IE402848)

The progress industry in New Zealand led to a dramatic increase in the number of working animals where there was one horse for every three people, a ratio higher than in Britain (Belich, 1996:354). The increase in horses was possible, largely because of the mild winter weather of the country which made for easily available grazing pastures that in turn made it cheaper to keep and feed the animals. To feed such a large population of working animals the production of oats for fodder increased. In this manner oats were more a power source for the progress industry than cereal, functionally akin to coal production. So great was the demand for oats that during the wheat export boom of the 1870s and 1880s the output of oats remained higher (Belich, 1996:355). The large population of working animals such as horses and bullocks would contribute to the colonial economy in more ways than the transportation of both people and material. These animals sustained a wide range of additional economic activities which serviced their operational needs, such as blacksmiths, farriers, wheelwrights, coachbuilders, saddlers, stockbreeders, bullockies, liveries and producers of fodder (Belich, 1996:355; Mincham, 2011:85). As a result the horse is at its zenith in use and population during the nineteenth century where its visibility in both the city and countryside contributed to an increase in cross-species interaction. Mincham (2011:85) provides additional insight when she writes that it was not uncommon for coach

passengers to disembark on steep uphill journeys in order to lighten the load for the horses which pulled the wagon, and on occasion, help by pushing the wagon themselves. This reveals the important interactive aspect of human-equine relations as coach passengers were active participants in travel. This highlights the importance of horses as exceeding that of a simple mindless tool to be dominated and instead reveals these humans had to actively negotiate with their animal counterparts on a daily basis in order to complete a day's work (Mincham, 2011:85). Mincham (2011:85) also argues that aesthetics played a role in the selection of horses for wagons as coach teams preferred to use horses with matching coats. A wagon lead by four chestnut horses was more desirable for advertising and securing paying customers than a rabble of greys, blacks, and bays (Mincham, 2011:85). Further to this, teamsters and carriers would often spend an equal time grooming and caring for their horses as they would their wagons to present a more professional appearance to prospective customers.

The valuable contribution of horses to human society is largely overlooked throughout much of the literature on colonial economies, however, Alfred W. Crosby is one such scholar whose foundational work *The Columbian Exchange*, addresses this shortcoming. Crosby (1975:85) argues none of the achievements colonial settlers made in the New World (specifically the Americas) would have been possible without horses. While few people have prospered financially raising horses for their meat and hide, millions have benefited from the domestication of these animals which allowed riders to herd other grazing animals and in turn to sell their meat and hide for profit (Crosby, 1975:85). The importance of horses, other domesticated livestock, and these animal histories will now be examined further in the next section.

3.6 The Importance of Domesticated Animals to Society

European settlers to the Americas, Australia, and New Zealand brought with them domesticated livestock from their home continent with plans for an economy founded on pastoralism. While non-Indigenous colonisation depended on other species, their presence was not explored in detail by historians until late in the twentieth century (Crosby, 1975:85). Horses were of great importance to colonial economies as they provided much more than the raw labour workforce behind roads, rail, and the transportation of material goods.

Horses enabled the herding of livestock such as sheep and cattle over vast distances. This particular economic activity would succeed the initial conquest phase of the progress industry and its goldrushes to produce a livestock economy for the colonial settlers in the latter period of export rescue. Despite the difficulties of domesticated animals in providing financially viable economies to colonial settlers upon their arrival, these animals served the purpose of enabling growth. In this sense (as a means of production in Marxist terms), horses were the most valuable domesticated animal as they could cart goods, pull wagons, carry soldiers, and allowed for ranchers to drive herds of cattle or flocks of sheep where it would have otherwise been impossible (Crosby, 1975:85). The horse was a central figure in the non-Indigenous colonisation and conquest of foreign lands where this creature enabled many additional industries and advances that without such an animal, the European settlement of the Americas (first by the Spanish followed by the British) would have been doomed to fail (Crosby, 1975:86). The rancher on horseback driving a herd of cattle was able to provide meat for consumption, hides and leather for clothing and trappings. Additionally, livestock which had been boiled down into tallow allowed for cheap and readily available candles which were put to use in the gold mines of Australia, New Zealand, and the United States (Crosby, 1975:88). As such, we can observe that the horse is a means to an end, it is a living resource that enables the many successes of colonial undertakings from conquest, construction, transportation, and the pastoral economies to take place (Crosby, 1975:85). Virginia DeJohn Anderson has researched and built upon the foundations established by Crosby and the introduction of domesticated animals into North America in her book titled, *Creatures of Empire*, in which she also examines the relationship between humans and domesticated animals. A key point that Anderson (2004:4) establishes is that introduced animals such as sheep, cattle, and horses played a central role in colonising, even terraforming the alien landscapes in which they have were introduced by colonial settlers. Through competition with local fauna, clearing forests, and converting native grasses into meats through their consumption by introduced livestock, the colonial settlers were essentially colonising the eastern regions of North America through their use of introduced and domesticated animals (Anderson, 2004:4). This lead to the disruption of the lives of native peoples as the environmental outcomes of this early pastoral economy were erosion, altered microclimates, and competition among native wildlife for resources (Anderson, 2004:5). In addition to this, as we can observe in earlier sections this led to conflict and

violence between colonial settlers, their livestock, and First Nations people whose traditional practices and subsistence strategies were often placed under pressure by the introduction of domesticated livestock (Anderson, 2004:18).

However, archaeologist Brandi Bethke (2017:799) argues the Native American Blackfoot tribe in particular incorporated pastoralist practices with horses into their hunter-gatherer lifestyle long before the arrival of colonial settlers in the nineteenth century. Many First Nations tribes came to view horses as a valuable resource which was quickly incorporated into their way of life, including their subsistence strategies where they incorporated horses through hunting while mounted (Bethke, 2017:798; Mitchell, 2015:97). Horses played an additional role in First Nations society through their use in warfare by raiding nearby neighbours as well as transportation, ritual and even a form of social status as warriors and chiefs who maintained large pony herds were elevated in social rank among their tribe (Bethke, 2017:801; Mitchell, 2015:234). This sheds further light on how livestock (in particular horses) were not always entirely disruptive to First Nations people or their traditional practices.

It is important in this regard to further explore the history behind the relationships between humans (specifically Europeans) and their livestock, whereby domestic animal management practices during the eighteenth and nineteenth centuries extended to incorporate European racist dogma principally centred around control (Anderson, 2004:88). European colonial settlers possessed longstanding beliefs based on animal husbandry in which they viewed not all creatures as equal, and selective breeding need occur to produce superior animals. Livestock husbandry was more than a way to make a living, it reinforced a set of behaviours European settlers regarded as indicative of a civilised existence. Specifically the absence of animal husbandry being adopted by the First Nations people of America and Australia contributed to the European belief that these cultures were less civilised and developed than Europeans (Anderson, 2004:89). To provide one such example, cultural value was placed on well-bred and elite creatures within European society such as domesticated cattle who were bred to be aesthetically pleasing in order to showcase the intelligence and manipulative skill of their owner (Ritvo, 1989:63). European settlers felt a moral urge to turn a savage beast into a civilised animal through their selective breeding and applied these cultural assertions toward the alien environment and Native peoples of the new world

where it was viewed that livestock would colonise and civilise the untamed lands of North America (Anderson, 2004:54). It is relevant to note that nineteenth century European's asserted that civilisation ends, and the 'frontier' begins where the herds of livestock stop, beyond which is untamed and unconquered land (Crosby, 1975:111).

From assertions such as these we can observe that the (predominantly white/European) colonial settlers demonstrated a proclivity towards attempting to control the landscape. This European focus on control also extended to livestock where pigs for example were fitted with nose rings to discourage rooting (digging into the ground) with their noses. Nose rings were also fitted to control bulls and wean young cattle through the prevention of suckling (Anderson, 2004:13). We can also observe from the European colonial interactions with First Nations groups the Western desire to control, tame and subjugate 'lesser' beings into service whereby Native American tribes who surrendered were sent to reservations to take up farming, and later deemed 'savages' for failure to do so (Cozzens 2017:197). This Western way of thinking is further identifiable in north Queensland where European settlers (particularly pastoralists) reasoned that Indigenous Australians were 'primitive' in nature as they did not cultivate crops nor herd livestock. Assertions such as these were used during the nineteenth century to justify European expansion and colonisation of the Australian continent, where it was regarded as otherwise uninhabited, despite the presence of First Nations peoples (Reynolds, 2013:111). The views held by (predominately) European colonial settlers therefore reveal the lack of agency they afforded those who weren't European (Indigenous Peoples) and also viewed livestock as untamed beasts. These hypocritical and racist beliefs (held by Europeans) were used to justify the otherwise illegal actions of the colonial government which deemed both Indigenous peoples and animals as untamed subjects, who needed to be conquered and put to use for the betterment of the empire.

Having examined the origins of early colonial economies, conquest, and economic development in this chapter it is now important to explore the history of the research area of the Hervey Range Roadway and the many features of the progress industry in the region of north Queensland. This will provide the required knowledge with which to contextualise the research approach to this thesis project. This is important because it is an examination of the first step in the colonial process of the progress industry in north Queensland.

3.7 The Road from Townsville to Dalrymple

The study area for this research project is centred around nineteenth century archaeological sites (hotels, camping grounds and blacksmiths) along the old Hervey Range Roadway. This roadway and the sites associated with them were of critical importance to the development of the township as this was the main highway from Cleveland Bay (Townsville) to Dalrymple, the interior stations and the later discovered goldfields. Along this roadway at approximately thirteen kilometre intervals were gazetted campsites which allowed travellers and their livestock to rest after a day's travel. With a guaranteed movement of traffic along this main road, hotels (bush inns) and blacksmiths were often established nearby the camping grounds. These hotels were licensed establishments where travellers could get a drink as they made the journey either to Townsville or the goldfields (Gibson-Wilde and Gibson-Wilde, 1988:19). Of importance to this research, however, are the blacksmiths that often accompanied these hotels or were situated nearby and provided their services to the domesticated livestock (specifically horses). These sites were necessary due to the vast amounts of animal traffic (bullocks, mules, and horses) which travelled along Hervey Range Road, (including as a stock route) from 1864 to 1970. Blacksmith sites in particular are relevant for their contribution to the progress industry as these businesses serviced wagons, coaches and the working animals which provided the power for these vehicles to transport goods, materials, and passengers across the landscape. There were numerous blacksmiths, hotels, stock yards, and camping grounds along Hervey Range Road, however, five sites which operated from 1866 until the early twentieth century, are of the most interest with regards to Townsville's settlement and subsequent development, see Figure 3.8 (overpage).

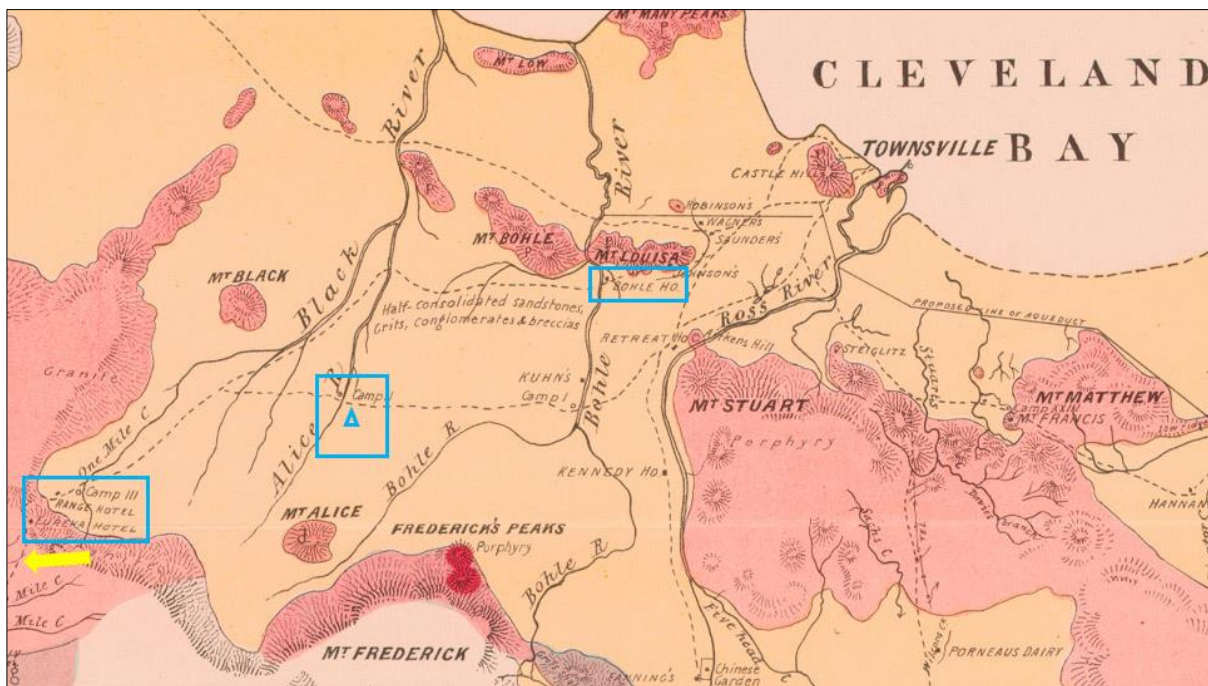


Figure 3.8: An 1878 map of Townsville with roads, camping grounds, hotels, and other indicators of the progress industry visible. Bohle, Range and Eureka hotels indicated by blue rectangles, although the Alice Hotel is absent from this map its location is indicated by a blue triangle below Camp II. The yellow arrow indicates the road to Dotswood station and Dalrymple. (Jack, Robert L. 1878, *Geological sketch map of the district between Charters Towers Goldfield & the coast*: <http://nla.gov.au/nla.obj-232289083>)

The following summary reviews what is known, or surmised based on analysis of historical records and documents that have been examined by historians and archaeologists.

The **Bohle Hotel** was one of the earlier hotels first established in 1865 on the upper Bohle River crossing along the original roadway to Townsville which had been constructed by J.M Black in 1864. This hotel was the first stop from Townsville on the northern road to Dalrymple to service the early travellers. It consisted of two sitting rooms, six bedrooms and operated between 1866 and 1878. After flood events at the Bohle River washed the crossing away (see Figure 3.9, overpage), the physical hotel is believed to have been moved several times to service the new direction of traffic. However, the hotel is largely absent in the Cleveland Bay Express Hotel Directory for much of its time of operation. This is possibly because traffic often used the newly built Hervey Range Road (to the south) from 1866 onward or it could be the establishment was not legally licensed (Gibson-Wilde and Gibson-Wilde, 1988:117). *This hotel is no longer standing.*



Figure 3.9: The Bohle River shortly after a flood event in the 1890s. The Bohle River flooding would prove to be a regular occurrence during Townsville's early settlement, and continues to this day. (Townsville City Library: 0011454)

The **Alice Hotel** was built in 1867 by Thomas McCarey by the eastern bank of the Alice River on selection 220, some 13km West of Townsville on Hervey Range Road. The hardwood timber building featured two sitting rooms, four bedrooms and had an adjacent paddock for the agistment of livestock, advertised as '*good grazing*', see Figure 3.10. In addition to this, Thomas McCarey also established Townsville's first dairy, offering '*milk and butter supplied every morning.*' see Figure 3.11.



Figure 3.10: Good grazing paddocks advertised at the Alice Hotel, (Cleveland Bay Express and Cape River Mining News May 15, 1869)

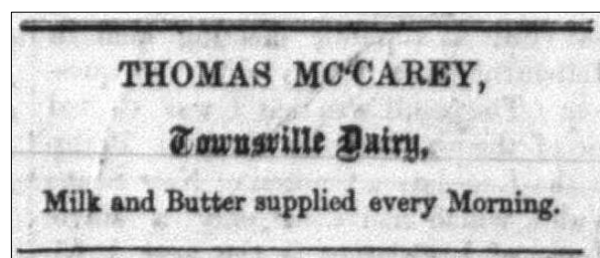


Figure 3.11: Thomas McCarey (owner of the Alice Hotel), advertising Townsville's first dairy. (Cleveland Bay Express and Cape River Mining News September 29, 1866)

The Alice Hotel took over the role as the first stop on the road to Dalrymple as traffic now favoured the newly built Hervey Range Road and not the original northern road which was prone to flooding (Gibson-Wilde and Gibson-Wilde, 1988:119). The hotel also provided change horses for Cobb and Co. coaches, as well as fresh horses for travellers who desired more expedient travel without rest. The hotel was sketched in 1868 by Lucy Gray who visited the establishment on her journey to Hughenden, see Figure 3.12. *This hotel is no longer standing.*

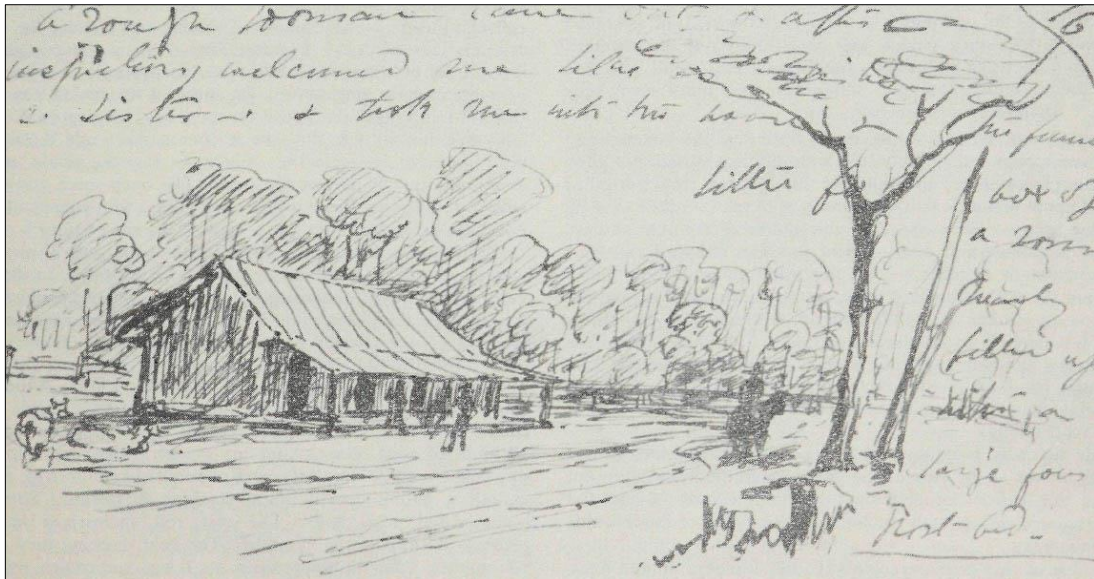


Figure 3.12: A sketch of the 'Alice Hotel' by Lucy Gray during her visit in 1868. Note the traveller on horseback along the roadway as well as the post and rail fence (secure fencing) in the background with what appears to be a cow in the left foreground. (Lucy Gray, 1868)

The **Range Hotel**, (originally the Royal Oak Hotel) was built by James Mead in 1866 at the foot of Hervey Range, further west of Townsville along Hervey Range Road. The hotel featured two sitting rooms and six bedrooms. A small hamlet which included a blacksmith would later also come to operate alongside the hotel and serviced the carrier teams on their way to and from the interior goldfields until its closure in 1884 (Gibson-Wilde and Gibson-Wilde, 1988:119). A sketch of the Range Hotel was featured in the Sydney Newspaper in 1882, see Figure 3.13 (overpage). *This hotel is no longer standing.*

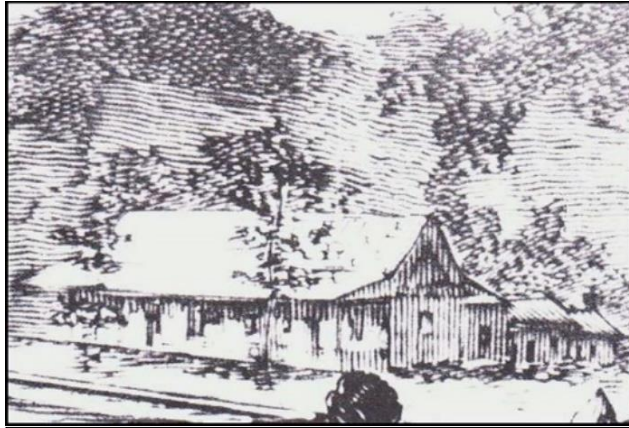


Figure 3.13: An illustration of the Range Hotel along Hervey Range Road. (Sydney News 1882)

The **Eureka Hotel**, which was situated at the top of Hervey Range, was built, and operated by Charles Saville Rowe in 1865. This prime location meant all traffic that traversed to and from Townsville along either Hervey Range Road or the earlier northern road *had* to pass by the Eureka hotel, see Figure 3.14 (overpage). The hotel was constructed from ironbark timber sourced locally and featured a corrugated iron ceiling over three sitting rooms. When the Range Hotel ceased operation in 1884, the Eureka then took the name and operated as The Range Hotel, which at times caused confusion among travellers (Gibson-Wilde and Gibson-Wilde, 1988:120). Despite the reduction in traffic along Hervey Range Road a small community lived at the top of the range in and around the location of the hotel. The hotel at one point in time featured two structures but was later reduced to just the one building, see Figure 3.15 (overpage). *This hotel is the only one of the five hotels on the Hervey Range Roadway between Townsville and Dalrymple which remains today and was added to the Queensland Heritage Register on the 21st of October 1992. It is the oldest existing wooden building to remain in north Queensland.*



Figure 3.14: A colourised illustration of a carrier team resting by the Eureka Hotel (pictured in the background) atop Hervey Range. Note the horses left to forage, most likely they were bound with hobbles to restrict their movement. (State Library of Queensland: 293223)



Figure 3.15: The Eureka Hotel circa 1930, known from during this time as the Hervey Range Hotel, it is the oldest surviving wooden structure in north Queensland. (Queensland State Library: 42096).

The **Dotswood Hotel** was the next bush inn on the road to Dalrymple, some seventeen miles west of Townsville just outside Dotswood Station; not the township of Dotswood which was further south on a separate roadway. It was constructed in 1867 by John Chisholm of rough-hewn logs, a bark roof, and roughly divided partitions. The hotel was situated on the northern outskirts of Dotswood Station on the boundary between country and town drink prices, and so was reputed to charge more (country prices) for alcohol (Gibson-Wilde and

Gibson-Wilde, 1988:117). In 1875 the hotel's name was changed to 'The Plumtree Hotel' by then owner Henry Gibson. The hotel would change ownership two more times, firstly to Henry Earp in 1881 and Alexander McCrea in 1884. The hotel ceased operation in 1885, presumably due to the reduction in traffic along the road. *This hotel is no longer standing.*

Following the demise of the **Bohle Hotel**, when travelling from Townsville westward along Hervey Range Road to Dalrymple, travellers would first encounter the **Alice Hotel** followed by the **Range Hotel** and finally the **Eureka Hotel**. Beyond Hervey Range the road continues, but is not designated Hervey Range Road, however, it remains the Road to Dalrymple. The only other hotel along this passage was the **Dotswood Hotel**, which was situated somewhere on the fringe of Dotswood Station, additionally there were two gazetted camp sites on the road between the Eureka Hotel and Dotswood Station, these are camp IV and camp X, see Figure 3.16.

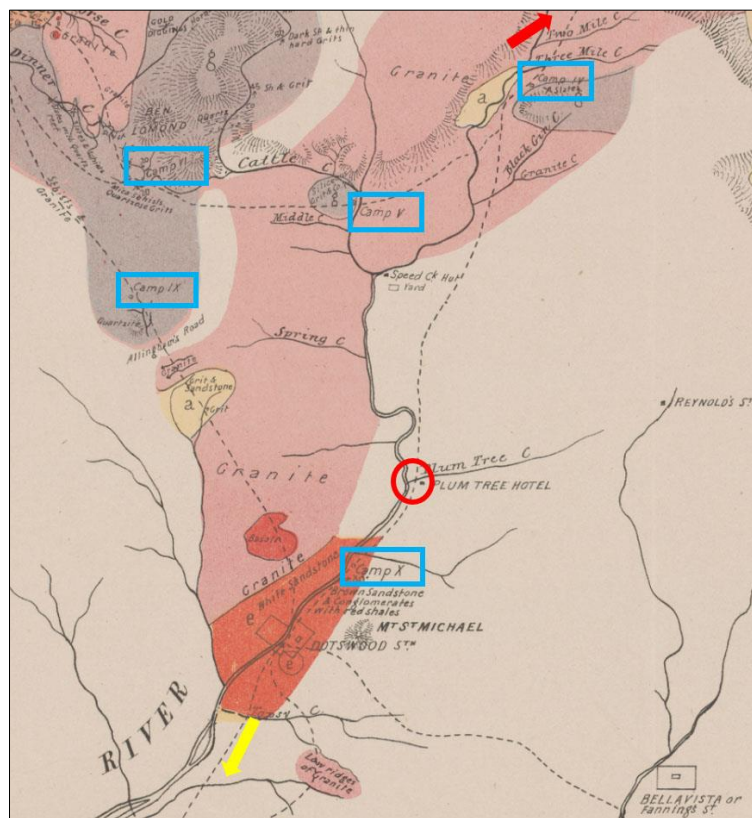


Figure 3.16: Camps IV, V, VI, IX, and X on the road to Dotswood Station indicated by blue rectangles. The Dotswood Hotel (also known as the Plum Tree Hotel) indicated by a red circle. Yellow arrow indicates passage to Dalrymple, Green arrow indicates passage to Townsville. (Jack, Robert L. 1878, *Geological sketch map of the district between Charters Towers Goldfield & the coast*: <http://nla.gov.au/nla.obj-232289083>)

From Dotswood Station to Dalrymple there are no known hotels, however camp XI was located between Dotswood Station, and Dalrymple and two locations are marked as camp XII on the Jack map, both of which were on the left bank of the Burdekin River, see Figure 3.17. Two hotels were located in the township of Dalrymple, The Great Northern (operated by W.M Mark) and the Gate (operated by J. Langton). In addition there was a blacksmith, saddlers' shop, storage facilities and a Queensland Native Mounted Police camp (Willmett 1876, 1883).

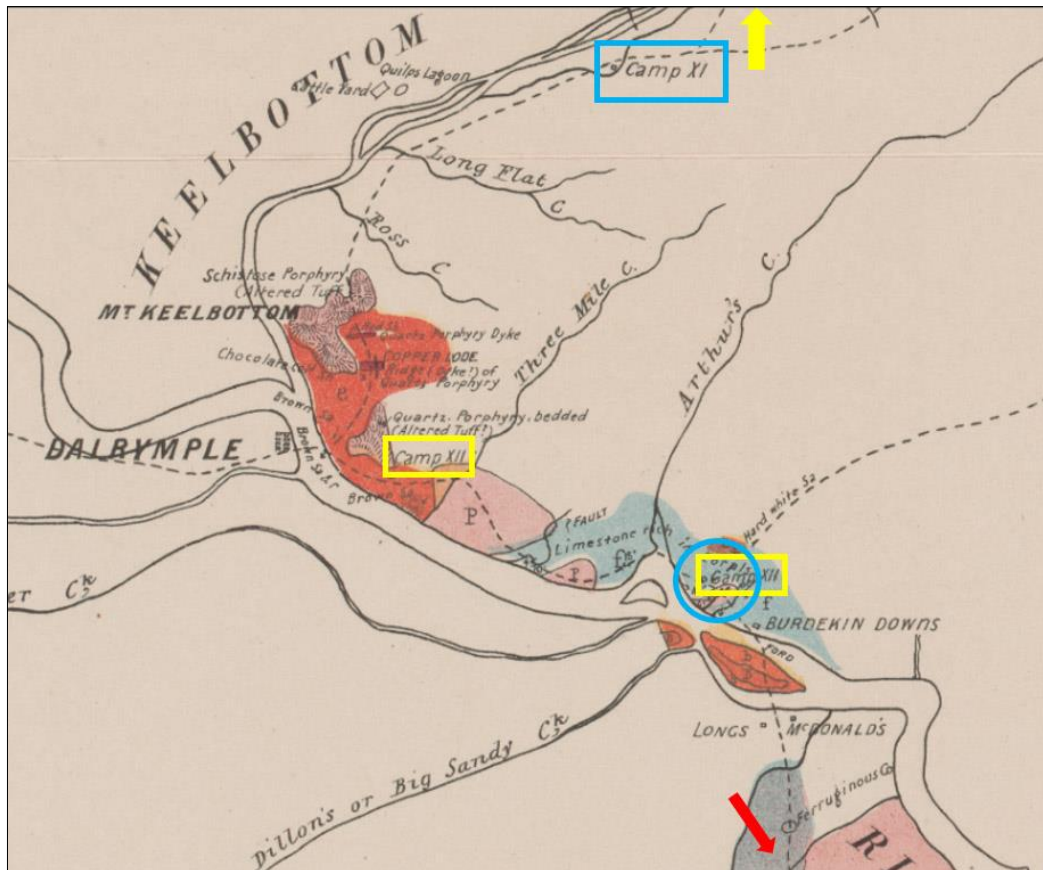


Figure 3.17: Camp XI the road to Dalrymple indicated by a blue rectangle. Camp XII appears labelled in two locations, identified by yellow rectangles. This is perhaps due to confusion with the Native Mounted Police Camp at Dalrymple, indicated by the blue circle. Yellow arrow indicates passage to Dotswood Station, Red arrow indicates passage to Charters Towers. (Jack, Robert L. 1878, *Geological sketch map of the district between Charters Towers Goldfield & the coast*: <http://nla.gov.au/nla.obj-232289083>)

The hotels along Hervey Range Road are of great significance to the social history of Townsville and the greater region of north Queensland. Townsville was connected to the pastoral and mining wealth of the interior through Hervey Range Road. These hotels provided food, accommodation, beverages, and a place to rest the horses of travellers from both directions. While we do not have photographs or sketches of the interior of the hotels

along Hervey Range Road, we can look to the drawing of a Queensland 'bush tavern' as an accurate facsimile, see Figure 3.18.

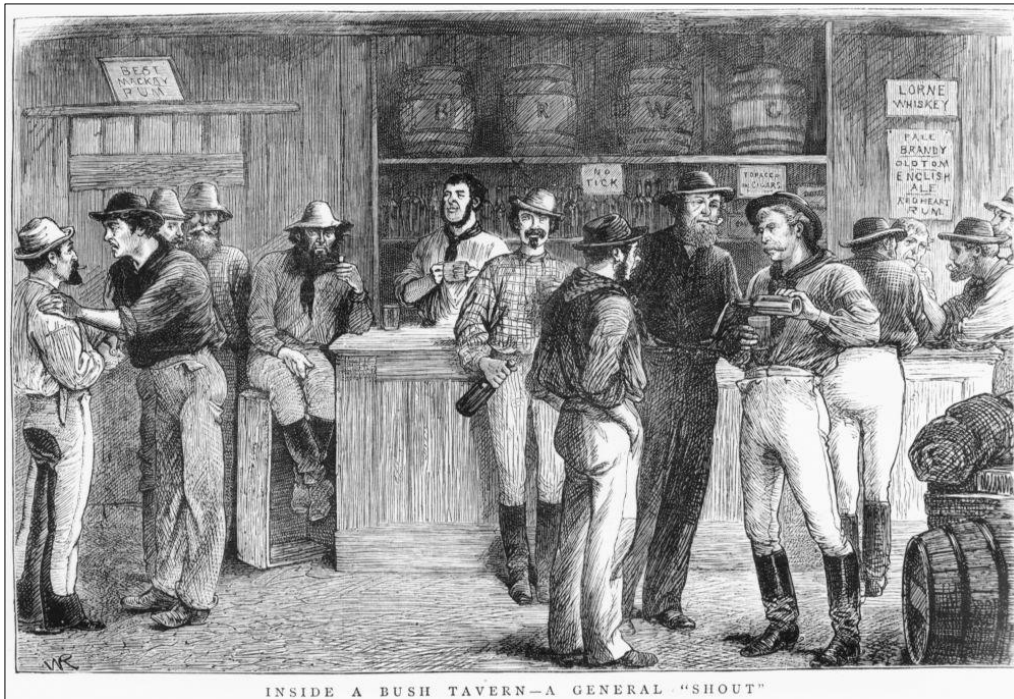


Figure 3.18: The operations and atmosphere of a bush tavern (hotel) as by Hulton, 1878. Note the similarity of the glass bottles to those found during excavations at the Range Hotel in Figure 3.19 below. (Hulton Archive: 1053507364)



Figure 3.19: Champagne beer bottle recovered from the Range Gazetted Camping Ground excavations 2012. (Image: Author, 2022)

Early pioneer accounts such as that from Lucy Gray in 1868 reveal the importance of these hotels and the role they played in facilitating the free movement of settlers and resources in the region, this account will be examined in greater detail in the discussion chapter. While the human social history of the area has been well researched by Marianne Clarkson in her 2015 PhD thesis, the importance of domesticated animals, specifically horses in developing frontier societies and economies has largely been overlooked. This is especially the case in Australia in which the goldrushes have received the attention of historians and archaeologists alike, who have intrinsically linked mineral wealth with economic development (Belich, 2010:49).

The information presented in this chapter has revealed a knowledge gap created through a bias towards the goldfields and the goldrushes as the measurement of success among frontier economies. Through the lens of animal history we are able to not only add to our understanding of frontier economies but how the agency of domesticated animals in turn affected the pattern of non-Indigenous settlement in the region. The hotels, blacksmiths and camping sites demonstrate the evolution and pattern of north Queensland's history from pastoral to mineral wealth and subsequently back to pastoralism. The creative and technical achievements of early colonial occupation are also demonstrated through the building techniques required to erect these structures and refurbish them over time. As such, the hotel sites (while only one hotel remains intact) are important to not only the social history of the region, but also its early pioneering identity (Queensland Heritage Register). The hotels along with other structures (no longer present) reveal how the landscape in and around Townsville was shaped by colonial settlers and their economic endeavours. Horses and other livestock were integral to this history, although their contribution and importance has often been overlooked.

3.8 Previous Archaeological Fieldwork at the Range Gazetted Camping Ground

The Range Gazetted Camping Ground, including the nearby burial/cemetery site has been the focus of several archaeological investigations which initially began in 2000 when Elizabeth Hatte was tasked with assessing the area for Optus who wished to run fibre optic cable through the area. This was followed by later heritage assessment work in 2008, conducted by James Cook University and overseen by Dr Shelley Greer at the behest of the

Thuringowa City Council. This was due to recent council amalgamations where Thuringowa City was to be annexed into Townsville City. This heritage assessment resulted in the area being granted state heritage protection on the 6th of March 2009. Marianne Clarkson of James Cook University would build upon this heritage assessment with additional fieldwork throughout 2009, 2011 and 2012 which formed the focus of her doctoral research.

Clarkson's fieldwork is noted as having identified the possible location of the blacksmith site as well as potential locations for the Range Hotel and a livery/stable at the Range Hamlet.

The location of most interest to this thesis is the location for a possible stable/livery at the site, which was identified by Clarkson in 2009 as a stone floor formation, however it was inconclusive whether this signified the presence of a stable or the Range Hotel. However, despite these earlier and in-depth archaeological examinations, much of the site remains unknown or inadequately mapped due to the difficulties of identifying the exact location of specific structures or features. Subsequent investigations were carried out as JCU honours field schools, as was the original work from 2008.

3.9 Chapter Discussion and Summary

The literature examined in this chapter has provided insight into the important role of horses and other domesticated livestock in the settlement, conquest, and economic development of colonial economies. In part, this is a counterpoint to the lack of agency that has been afforded to animals is prevalent among many scholars such as Belich, Brands and Cozzens who have instead viewed horses and livestock as both a background and tool of colonial expansion. Despite Cozzens identifying and echoing the themes of horsepower being more important than firepower in frontier wars, he did not focus on the animals themselves or provide any further insight into animal history. It is also relevant to note that in the numerous works of Belich, he similarly does not dedicate any extensive focus to horses, despite their importance to the progress industry. Both the works of Cozzens and Belich therefore centre largely on the human and economic implications of colonial settlement, where horses (while important) remain subjects of colonial control. By contrast, Crosby who similarly examined the colonial economies of the Americas, but several decades prior to Belich and Cozzens, places greater emphasis on the roles of domesticated animals, and identifies horses in particular for their benefits to empire building and conquest.

Further to this, the literature reveals the (largely) European held views of foreign landscapes (and peoples) needing to be tamed. These traditionally Western views are observable by the manner in which the colonial settlers responded to the difficulties of the landscape and their encounters with the First Nations peoples they encountered. The work of DeJohn Anderson reflects the European indifference to First Nations groups and their land use (or perceived lack thereof), although she also describes the colonial agricultural activities and their livestock as purely disruptive forces. This is at odds with Bethke and Mitchell who identified that horses in particular enabled First Nations societies to access greater resources than would have otherwise been possible. Ultimately, these works reveal the European undertaking of colonising the frontiers of Australia, New Zealand and the western United States can be viewed as a capitalist enterprise where the flora and fauna were incorporated into the operations of the empire. Indigenous peoples who existed within these landscapes were similarly incorporated into the operations of the colonial authority, and thus denied any sense of agency.

Through cross-examination the works of the aforementioned authors have revealed gaps in the knowledge of colonial economies, and further highlighted the biased narrative of not only the goldrushes, but human history taking centre stage over that of animal history. Therefore, the research in this thesis will build upon the ideas already established and extend this knowledge through incorporating the model of the progress industry and the animal turn. This creates an opportunity to examine the existing interpretation of frontier histories in a different way through the recognition of animals and their agency in influencing human histories. In particular, a flashpoint for frontier wars was often the invasion of roaming domesticated livestock and the need for pastoralists to acquire new territories to stock their herds which led to the disruption First Nations' groups subsistence strategies. To this end we can also observe the relationship between the progress industry and animal agency, as the stocking requirement of domesticated animals and their foraging nature subsequently led to the colonial invasion of new territories by both animals and humans. In this regard, it is clear that domesticated animals were not merely passive victims or a background in history, they were participating agents, and the examination of their agency and history can better inform us of our own.

It is also relevant to note that this thesis represents a continuation of archaeological research into the Range Gazetted camping ground, and builds upon Marianne Clarkson's 2015 PhD thesis where she viewed the landscape through the lens of colonial women. I feel it should be noted that Clarkson references Indigenous Australians twice and Aboriginals 14 times within her PhD thesis. The cited reason given is a lack of written and archaeological information regarding their presence in the area of the Range Hamlet. This is perhaps largely due to the earlier displacement of the Bindal people from this area during the frontier conflict. This thesis therefore has endeavoured to rectify shortcomings such as this through the acknowledgement of frontier violence which occurred in the background of the establishment of the Range hamlet which contributed to Indigenous displacement. Further analysis of Indigenous land use and connection to the area has not been explored during this thesis given the displacement of Indigenous peoples by both colonial forces prior to federation and government agents after Australia's federation. While Indigenous land use at the Range Gazetted Camping Ground is not an area of research for this thesis, it can be suggested that future research into this area could involve interviews with current traditional owners from the Bindal community.

The following chapter will examine the two core research approaches for this thesis, (archaeological excavations/surveys and archival research) and how these will enable this project to supplement and cross-examine our understanding of colonial economies and frontier settlement. These approaches will afford the means with which to examine and understand the relationship between the progress industry, agency, and address the animal turn.

Chapter 4

-Methodology-



"It is much easier to ride a horse in the direction it is going."

(Abraham Lincoln, cited in Donald, 1996:111)

4.0 Project Methodology

There are two core research approaches in this thesis: archival research involves the thorough examination of historical records and animal studies to examine livestock agency, and archaeological research includes remote sensing, field surveys, archaeological excavations, and subsequent artefact analysis. The research plan for this project was of an adaptable nature given the impacts of Covid-19, where earlier planned fieldwork was reduced both in personnel size and scope. As a result, the excavation and survey areas were narrowed down to the site of the earlier assumed blacksmith forge and the previously partially excavated rubbish pit. Probability sampling was adopted given the constraints of time, access, and ground visibility at the sites. This allowed for repeated visits to survey/excavation sites under different natural conditions which provided an additional depth of understanding about the landscape and further afforded the research opportunities to reassess the interpretation of the site (Bradley, 2003:154).

4.1 Archaeological Surveys/Excavations

The archaeological research for this project includes two field surveys (where topographic mapping occurred), two separate archaeological excavations, map analysis (with a landscape archaeology approach, and artefact analysis. The first field surveys for the research project took place at the assumed site of the Bohle Hotel before a second (and more thorough) survey took place at the assumed site of the Range Blacksmith, in the Range Gazetted Camping Ground as identified by Clarkson in 2009. The reason for the survey of the Range Blacksmith site is its association with Townsville's first roadway, early progress industry and association with domesticated livestock (horseshoes, wagon repairs, etc.). Earlier surveys at the Alice, Bohle and Range hotel sites have observed evidence of the presence of past structures (hotels, blacksmiths, and outbuildings) as well as provided evidence of occupation and settlement in the form of bottle dumps and horseshoes (England, 2019:13). Surveying methods included ground truthing (a foot survey and observation of the terrain and features of the area), topographical mapping through the use of a total station (with a topographical map to be produced in Surfer) and drone reconnaissance/photography of the site. Judgement sampling was used based on the knowledge of previous excavations in the area from Clarkson. Further to this the survey

followed along Page Road, which is believed to follow the approximate direction of the original Hervey Range Road. The initial survey of the Range Hotel hamlet took place on November 17 of 2020 to inform the project as to the most suitable location for excavation work, which followed in August and October, 2021. The Range Hotel hamlet site has been chosen due to previous archaeological fieldwork being conducted in the area by Marion Clarkson for her doctoral thesis. This work did not excavate all areas due to time and budget constraints and as such, this project will add to already published work on this archaeological site. Another benefit of the Range hamlet site is the location is situated on land owned by the Townsville City Council (TCC) and this project builds upon the strong relationship between James Cook University and the TCC heritage officers, securing access and permits to survey and excavate at the site. The two separate excavations occurred at the site of an earlier identified (and partially excavated) rubbish pit in close proximity to the assumed blacksmith site. Excavation methods included test pits, trenches, cross-sections, and site mapping (including transects) in accordance with standard archaeological practices (Burke et al, 2017:342). All soil removed during excavation was sorted with a 10mm sieve, this mesh size was chosen given the large amount of broken glass material that was expected to be recovered at the site. As this fieldwork intended to continue from earlier excavations by Clarkson, the test pits employed were designed to locate the previously identified rubbish pit by Clarkson, and not necessarily identify new areas for excavation. Given the presence of the blacksmith and the high volume of animal traffic, archaeological excavations at the Range Gazetted Camping Ground produced physical remains which will add to our understanding of how domesticated animals affected the pattern of non-Indigenous settlement. Artefacts which were both observed and recovered during excavations assisted in addressing the research questions. Analysis of these artefacts provides further information on the physical health and operational requirements of domesticated livestock engaged in the progress industry. It is acknowledged however that there is a potential for interference with the site(s) from natural forces such as erosion, taphonomic processes as well as human forces such as bottle collectors or off-road enthusiasts. These were considered when analysing and interpreting the information gathered from surveys and excavation. In addition, archaeological factors such as sampling strategy, observer variation and surface visibility were considered when interpreting the

survey/excavation sites in order to achieve the most reliable understanding of the archaeological evidence (Fanning and Simon, 2002:13).

4.2 Archival Research

The archival research for the thesis involved the examination of numerous primary and secondary resources. This provided a general background of the area; identifying key individuals, events, businesses, properties, and dates; and allowing the development of a model of expansion in the area. Close examination of newspapers including the *Cleveland Bay Express*, (available on microfilm 1866 – 1870), the *Townsville Times*, *North Queensland Advertiser*, and the *Townsville Herald* (available on microfilm) provided valuable information. Including notifications of publican licenses, the names and locations of hotels, commercial developments, mining camps, social events, advertisements for significant items, indications of stocking rates, and reports on north Queensland's development. Other sources of historical information include marriage, birth and death certificates, cemetery records (births, deaths, and marriages may not be effectively recorded), land title ownership, cattle brands, licenses related to the cutting and sale of timber, land surveys, historical maps, cadastral maps, letters, and diaries. Such sources are held in a number of repositories, including the Townsville City Library, National Library of Australia, Eddie Koiki Mabo Library, Queensland State Archives, Queensland State Library, Department of Natural Resources Mines and Energy, Spatial Information Services North, John Oxley Library, and Trove. While some have been digitised many are still accessible in physical form. Visual and diagrammatic resources such as maps, diagrams of census divisions and road surveys provided further insight into the development of north Queensland's progress industry as well as indicated how settlement patterns were affected by the requirements of domesticated livestock. Suitable animal studies with a focus on the agency of living animals through human exchange, interplay, and animal domestication were sourced online and in book form as recommended by Reid (2019:126) to address the agency of horses and other domesticated species. The agency of livestock was also garnered from written accounts of individuals who lived in north Queensland during the nineteenth century. One such example is the diary of Lucy Gray who travelled from Townsville to Hughenden along the road to Dalrymple and visited many of the potential survey sites for the thesis along the way. Archival research was undertaken because of the availability of research material and the

proven application of the techniques in historical archaeology in north Queensland (Clarkson, 2015:50). Reid (2019:124) argues for the relevance of this approach as the importance of livestock to human society and relationships does not begin and end with the initial process of domestication, nor lie in the economic potential of an animal's carcass weight as is the focus of traditional zooarchaeological methods. The method of examining human interaction with living animals through written accounts will complement existing lines of enquiry brought forth by more traditional means of zooarchaeological investigation such as faunal analysis (Reid, 2019:125). This approach develops a more rounded and nuanced picture than would be provided by other archaeological or archival research alone.

4.3 Methodology Summary

The two core research approaches of archaeological field work and archival research will address the thesis research questions while adding to work already completed by Marianne Clarkson in 2015 and James Cook University in 2011 at the Range and Bohle sites. In particular, the focus on the agency of living animals will add a new perspective when interpreting the collected data and allow for a more holistic understanding of the settlement and economic development of Townsville and north Queensland. This research approach will not only address a knowledge gap but will serve as a case study to test both the model of the progress industry and the animal turn approach.

Chapter 5

-Results-



"A horse gallops with his lungs, perseveres with his heart and wins with his character."

(Frederico Tesio, cited in Pickerall, 1999:3)

5.0 Introduction

This chapter will provide an overview of the results for the archaeological fieldwork and archival research undertaken in this thesis. Firstly, the results of the archaeological fieldwork (surveys and excavations) will be examined. This will be followed by the archival research, which will include the examination of photographs of the landscape as well as an analysis of historical maps of the research area with a landscape archaeology approach.

5.1 Site Survey

On November 17, 2020, a topographical survey took place at the Range Gazetted Camping Ground, at the site of the assumed blacksmith forge that had been identified by Marianne Clarkson in 2009. The November 2020 survey was conducted as a preliminary assessment of the site in order to determine if there were any indicators the presence of structures in the landscape or additional rubbish pits that could be of interest to the research. To this end, ground truthing was conducted as part of the survey in order to identify terrain that might indicate the presence of a structure, i.e. a relatively flat and square area. A small amount of broken glass material was observed at the base of a dead tree which consisted of several broken and weathered shards. The dense scrub of the area made this task difficult, however it was observed that the terrain north of the assumed blacksmith forge appeared relatively flat in its composition, see Figures 5.1 and 5.2 (overpage).



Figure 5.1: Aerial imagery of the survey site with the flat area opposite the forge location (yellow line) and direction north (arrow). (Image: Author 2020)



Figure 5.2: Aerial imagery of the survey site with the flat area opposite the forge location indicated by the yellow dotted line and the potential sunken track of the old Hervey Range Road indicated by the orange dotted line. (Image: Author 2020)

Ground truthing (foot survey) along the graded roadway proved far more successful in identifying archaeological material and a number of broken glass shards from nineteenth century bottles were observed as well as a small amount of ceramic material. The partial remains of a horseshoe was also observed as a surface find on the graded roadway, although it was degraded to the degree where identification of its century of manufacture is difficult to ascertain, see Figure 5.3 (overpage).



Figure 5.3: Horseshoe identified on Page Road, approx. 40m north-east of the assumed blacksmith forge. The shoe appears to belong to a saddle horse (from its size), although is too corroded to determine the century of manufacture. The slight indentation (indicated by the yellow line and arrow) could indicate this is a 'rim shoe.' (Image: Author, 2020)

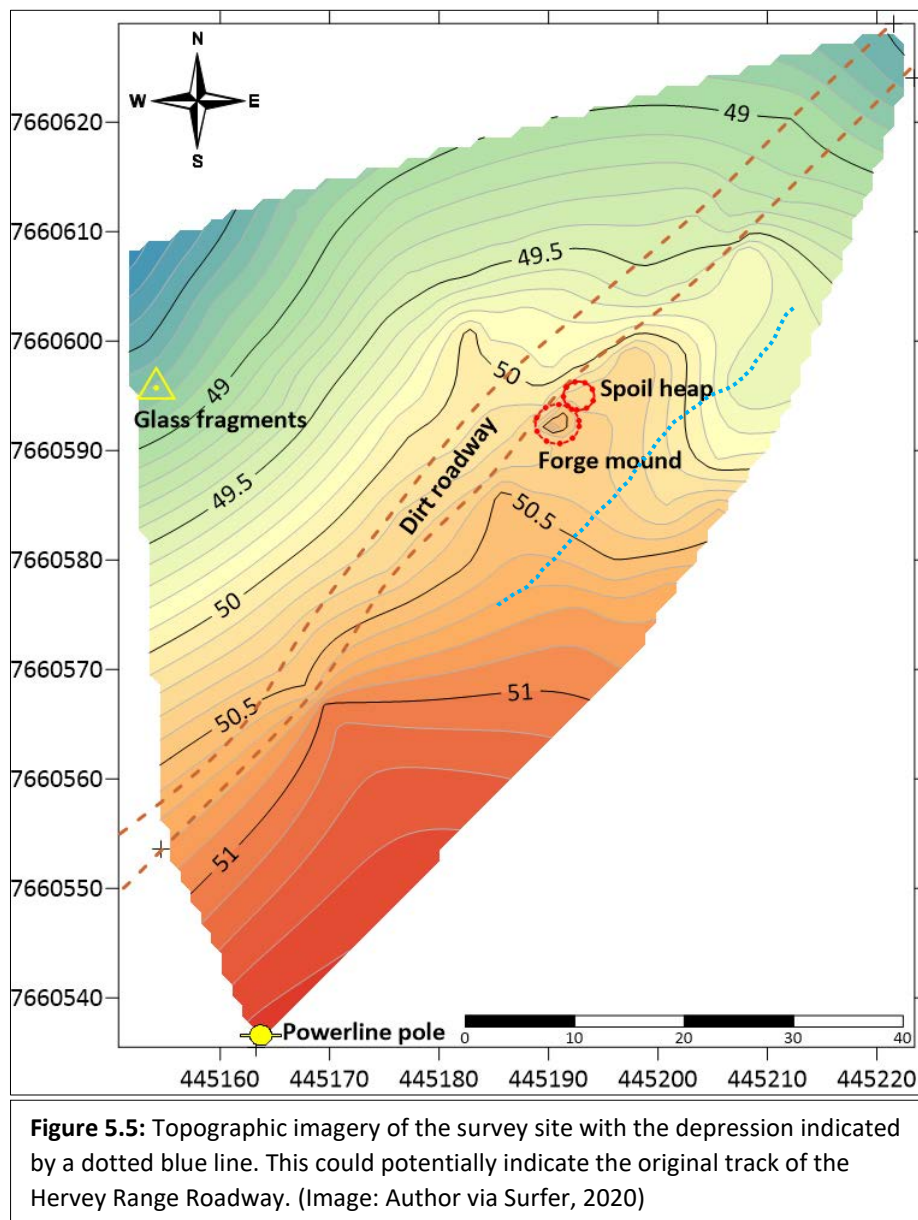
This find will be examined further in the discussion chapter. The foot survey then extended to the area south of the forge in a parallel with the graded roadway. A dip in the terrain was observable, and could possibly indicate the presence an earlier version of the Hervey Range Roadway track. It is relevant to note that Clarkson's earlier identification of the potential blacksmith site did not guarantee its protection, as it was observed during the November visit that the rural fire brigade had graded the roadway in close proximity to the feature, see Figure 5.4.



Figure 5.4: November 2020, aerial view of the assumed forge site with the graded roadway. The disturbed rocks indicated by yellow arrows. (Image: Author, 2020)

The Townsville City Council Heritage office was notified of this risk through a field report in December 2020. It is worth noting that grading in the area had been previously ruled out by Optus in Elizabeth Hatte’s 2000 report due to the risk of interference with the archaeological integrity of the site. However the rural fire brigade graded the area in 2012 and 2013 to establish firebreaks and also provide easier access.

A topographical map of the area either side of the blacksmith forge and graded roadway was produced during the November visit by means of a total station survey. Analysis of the topographical data indicates that the (roughly) observable flat area opposite the forge area is difficult to identify. However, the depression south of the roadway is somewhat observable from the topographical data, see Figure 5.5.



The November 2020 survey indicates the difficulty in identifying archaeological features within the landscape as both the topographical data collected as well as the foot surveys were unable to clearly identify the presence of additional rubbish pits or further potential structures (in addition to the assumed forge). It was therefore decided that the previously semi-excavated rubbish pit from Marianne Clarkson’s 2012 fieldwork would be the focus of future archaeological fieldwork at the site.

5.2 August 2021 Excavations.

The area south of the assumed blacksmith forge was the focus of two separate archaeological excavations, the first took place between August 23-27, 2021 with the second excavation occurring between October 13-15, 2021. Upon arrival at the site in August it was apparent that recent grading to the roadway (most likely from the Rural Fire Brigade) had unearthed and dislodged several stones associated with the assumed blacksmith forge, see Figure 5.6.



Figure 5.6: The edge of the graded roadway infringing on the blacksmith stone arrangement. The yellow arrow indicates the very close disturbance of the site with several stones becoming loose. The blue arrow indicates the direction of the roadway. (Image: Author, 2021).

There was some initial difficulty in locating the previously identified rubbish pit from Clarkson's earlier excavations due to inconsistencies in the provided maps. It was decided that a series of test trenches in the area south of the assumed forge would therefore serve both the purpose of locating the previous rubbish pit, as well as examining the area for potentially additional rubbish pits, see Figures 5.7 and 5.8 (overpage).



Figure 5.7: Photograph of trenches H51 through to H40. A series of test trenches and cross sections that were excavated both to locate the previously identified rubbish pit and also to ascertain the presence of additional rubbish pits. However, no material however was found beneath a depth of 5cm. (Image: Author, 2021).

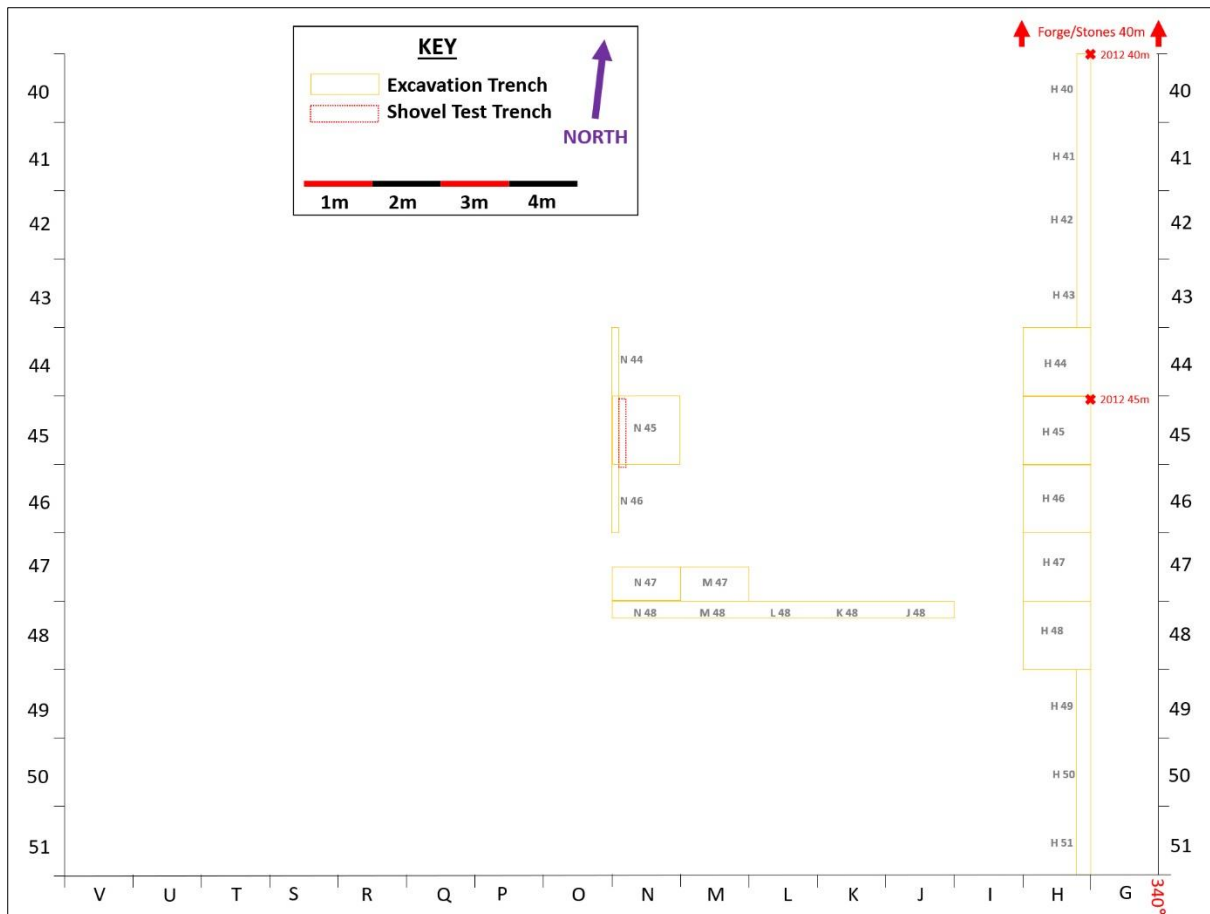


Figure 5.8: The August excavation map illustrates the large area examined which featured a number of shallow trenches due to no artefacts being recovered at depths over 5cm. (Image: Author, 2021).

The excavation of cross-sections and trenches proved to be an informative exercise as a large amount of surface scatters of glass material was detected across a wide area, although subsequent excavation revealed none of this material was found below a depth of 5cm, see Table 5.1 (overpage). The material recovered during the August excavation was therefore washed down from a higher elevation before being deposited. This may indicate the presence of additional rubbish pits or material closer to the assumed forge area. Further to this, a metal loop from a horse hobble was identified, see Figure 5.9 (overpage). However, the August fieldwork did not involve the excavation of the 2009 rubbish pit, this would take place during the October archaeological fieldwork.

5.3 October 2021 Excavations.

Between October 13-15, 2021, fieldwork recommenced at the site where the previously identified and partially excavated rubbish pit by Clarkson was re-excavated for further analysis. These excavations took place in a smaller area (4mx4m) compared to that of the August fieldwork, see Figure 5.10.

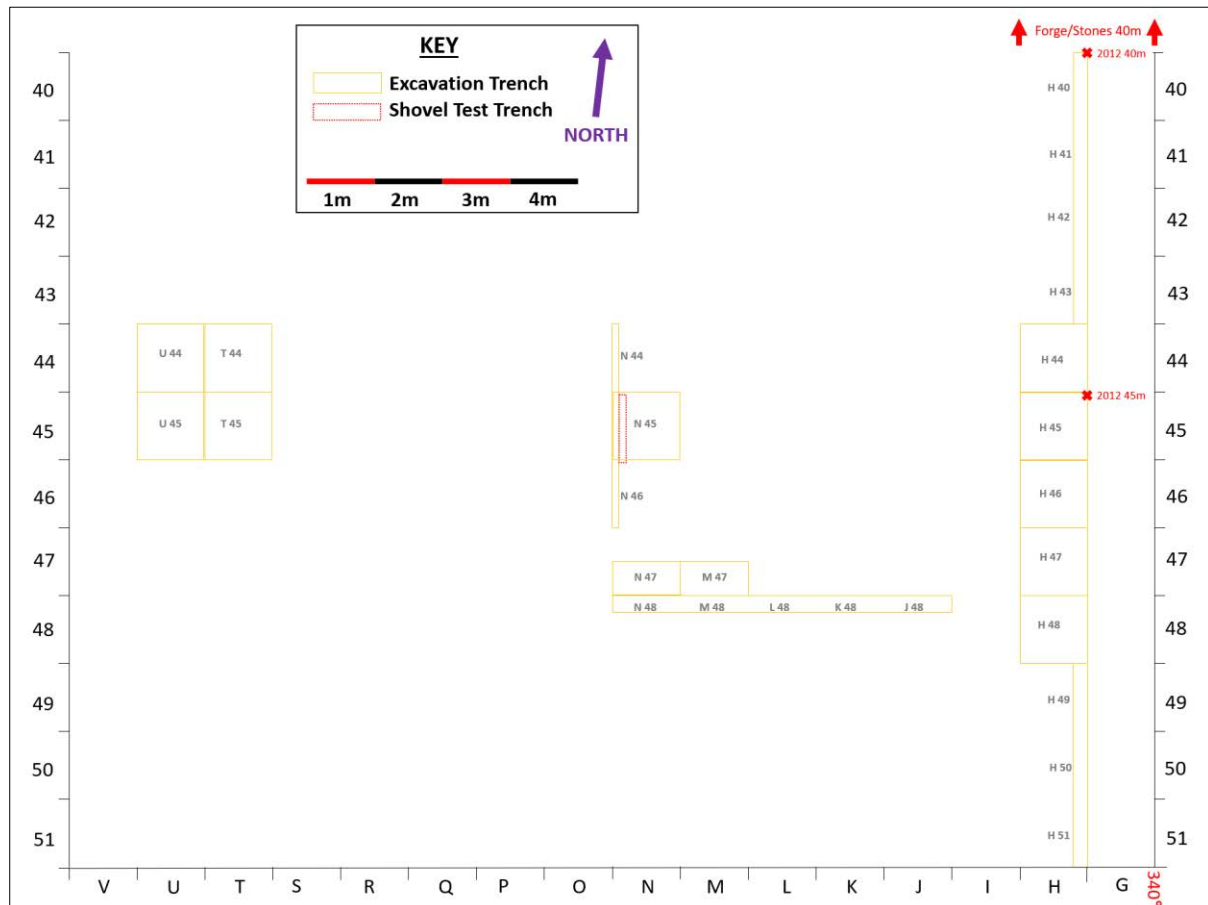


Figure 5.10: The August/October excavation indicates the smaller October excavation area (U44, T44, U45 and T45) compared to that of August. Despite this, far more material was recovered during the October excavation of the rubbish pit. (Image: Author, 2021).

Of most significance however is the greater volumes of archaeological material were recovered during this excavation than that of the August fieldwork. Further to this, these glass scatters contained more sizeable pieces of intact glass which presented greater amounts of diagnostic material. In addition to these discoveries, the excavation area indicated evidence of burned refuse in the form of ash and charcoal deposits, see Figure 5.11 (overpage). Excavation of trenches U45 and T45 revealed the red clay which indicates the edge of the rubbish pit, see Figure 5.12 (overpage). Due to the high volume of material recovered from the initial layers of the October excavation, as well as the limited time for

fieldwork, it was decided that further excavation would involve only square T45 where a sizeable deposit of material was located, labelled T45-1A, see Figures 5.13 and 5.14.

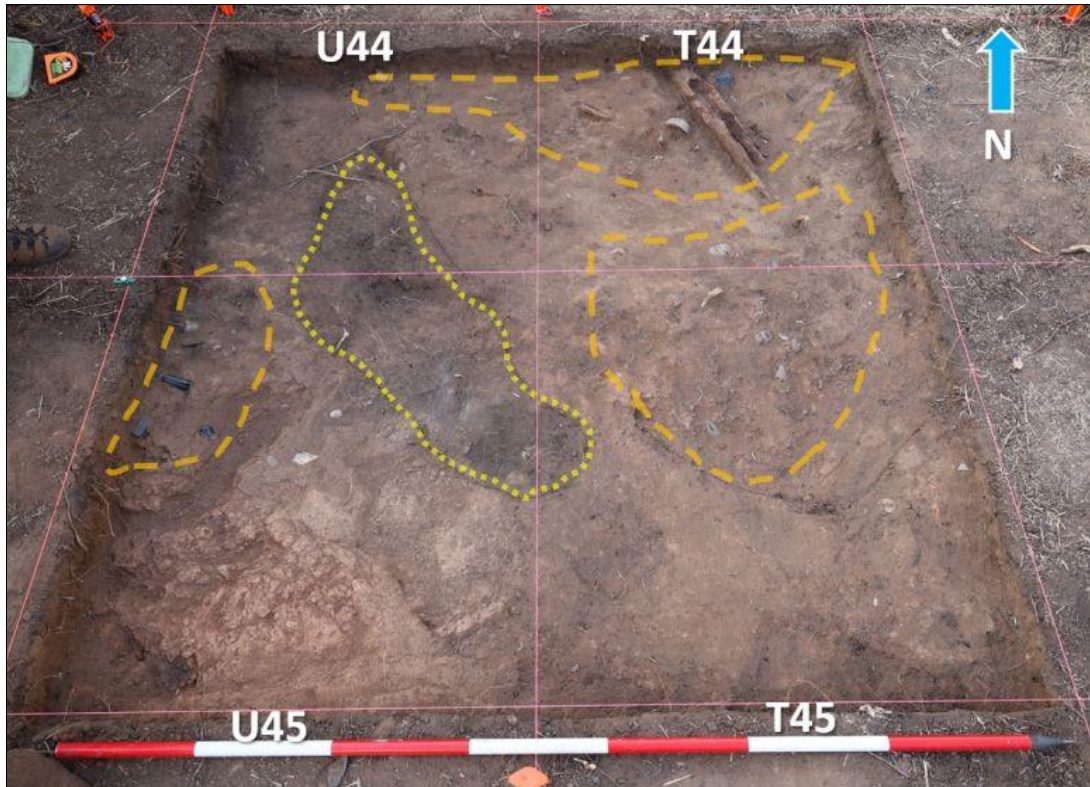


Figure 5.11: The October excavation area with orange lines indicating glass bottle deposits which included numerous diagnostic pieces. The yellow line indicates an area of burned charcoal and age, indicated of burnt refuse. (Author, 2021).

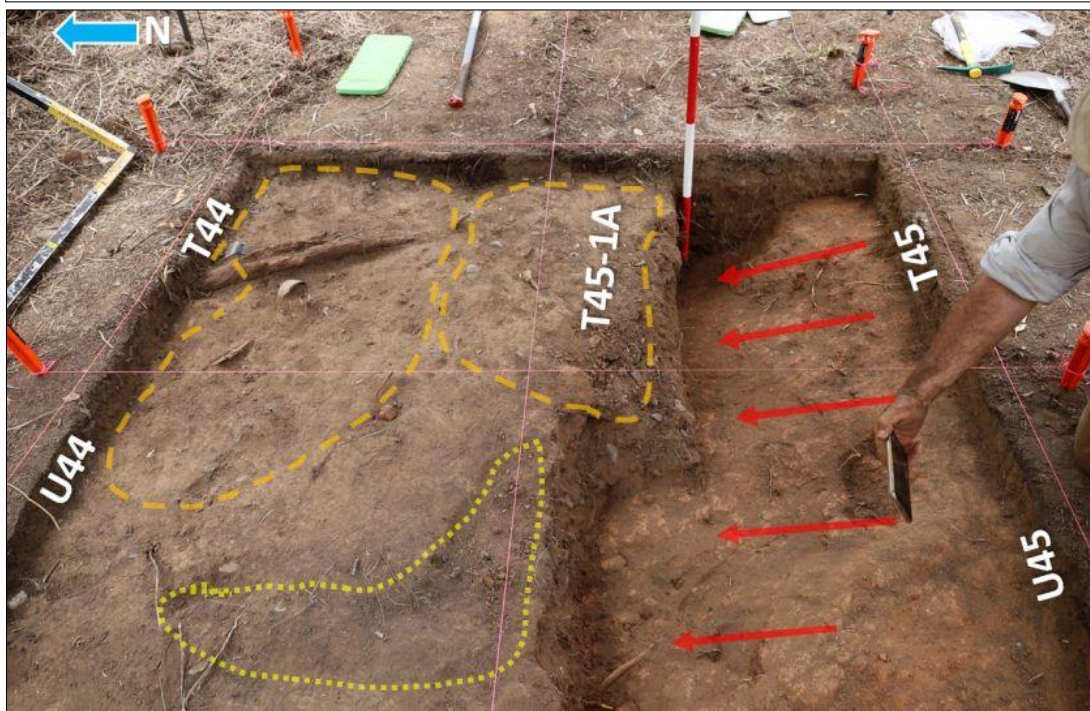


Figure 5.12: Excavations into sections U45 and T45 revealed red clay that marks the edge of the rubbish pit, indicated here by the red arrows. (Image: Author, 2021).

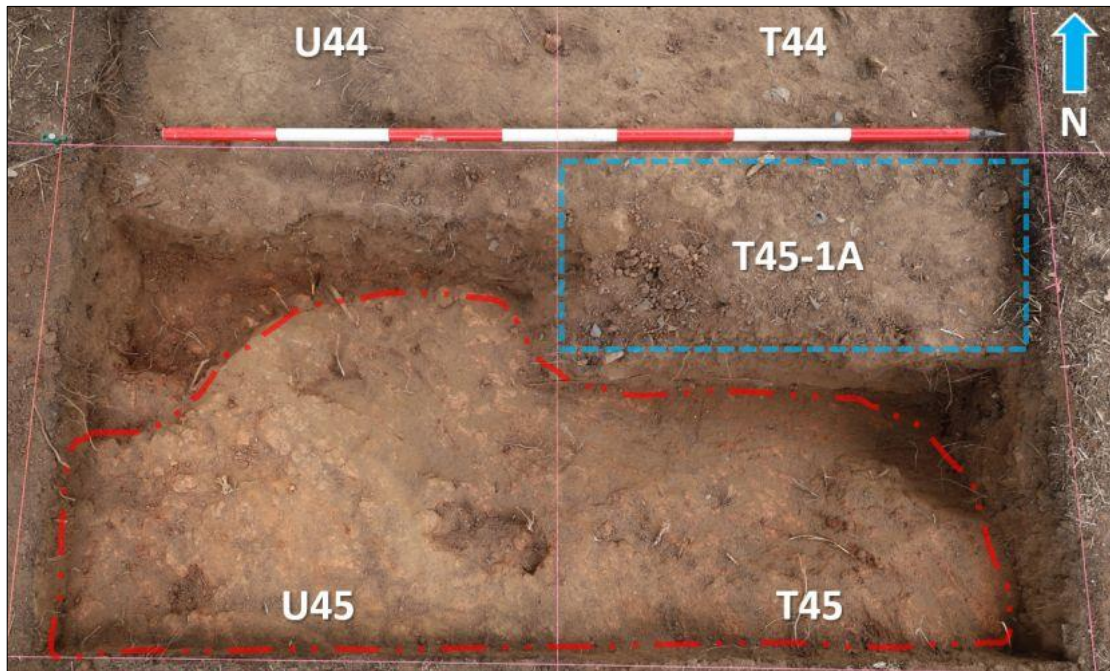


Figure 5.13: Square T45 which slopes into the rubbish pit, indicated by section T45-1A. This section was partially excavated (and backfilled) by Clarkson in 2012. (Image: Author, 2021).



Figure 5.14: A cross section examination of T45-1A which illustrates the large volume of archaeological material. The majority of these materials were glass, however small amounts of both ceramic and metal were recovered. A plastic bag left from Clarkson's 2012 partial excavation can also be observed, bottom right (Image: Author, 2021).

North/South and East/West section drawings provide further details on the makeup of the rubbish pit, see Figures 5.15. and 5.16 (overpage). Of particular note is the red clay which denotes the edge of the rubbish pit, as well as the glass layer which is spread across both an

area of loose dark fill with charcoal and that of ashy burnt clay. The number of artefacts and from the October excavation and their weight are presented in Table 5.2.

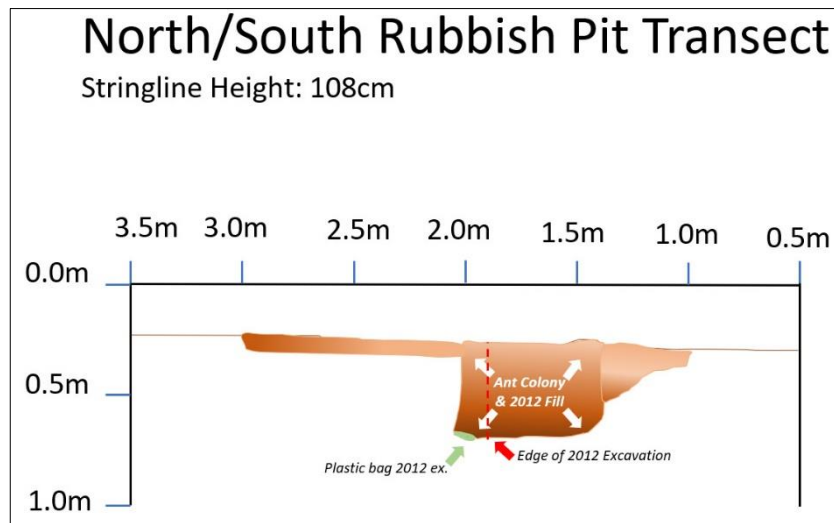


Figure 5.15: The North/South cross section of the rubbish pit excavation. A change in the soil indicated the edge of the 2012 excavation which previously uncovered the rubbish pit. (Image: Author, 2021).

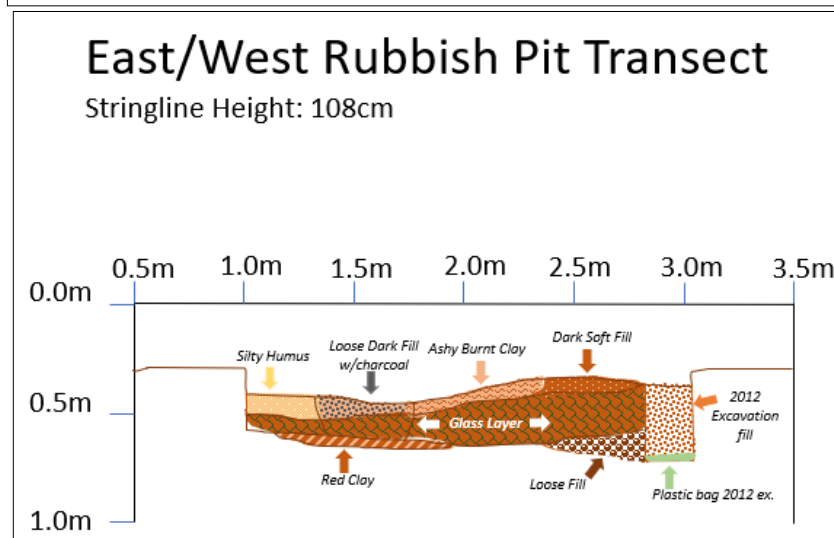


Figure 5.16: The East/West cross section of the rubbish pit excavation. Red clay suggests the bottom of the rubbish pit, however only one small section was excavated, significant archaeological material remains in situ. The loose charcoal fill and burnt clay in the top layers suggests the burning of rubbish by those who used the pit in the nineteenth century as well as fires in the area since that time. The bulk of the archaeological material recovered was glass, although some ceramic and metal objects were observed (Image: Author, 2021).

The scatters of glass, ceramics, metallic remains, and assumed blacksmith's forge (currently beneath a dirt mound) are the most tangible archaeological evidence at the site. Numerous glass scatters have been observed which indicates both the long-term use of the site and the potential disturbance of recent bottle collectors. Previous excavations have shown that subsurface features, including rubbish pits, are present in the area. The excavated material revealed a large amount of glass artefacts with smaller volumes of both ceramic and metal objects. These artefacts are more likely associated with a hotel or domestic residence than a blacksmith. The majority of these archaeological finds were recovered from the rubbish pit excavation in October, 2021.

Table 5.2 (overpage) details that of that in the August excavation a total of 1,999 artefacts were recovered with glass accounting for 71.1% (1,422) of these finds. 57.1% of the total artefacts recovered were glass associated with the consumption and serving of alcoholic beverages with a further 14% (280) associated with the use of condiments and sauces. In addition to this, glass shards accounted for 91.3% (2,829g) of the total 3,096 grams of weight from these recovered artefacts. Bottles associated with the use of alcohol again made up the majority of the weight of these finds with 70.2% (2,173g) while non-alcoholic bottles comprised of 21.2% (656g) of the total weight of the artefacts recovered. As this area was identified as being the possible site of the blacksmith it is therefore interesting to note that only 0.4% (8) of the finds were metal and accounted for merely 2.3% (73g) of the total weight of artefacts.

This trend would continue in the October excavation where the rubbish pit was located and excavated with 72.3% (6,755) of the artefacts being identified as alcohol bottles and 25% (2,334) of the finds identified as sauce or condiment bottles. Shards from alcohol bottles accounted for 77.3% (48,194g) of the total weight of artefacts recovered compared to 19.3% (12,051g) of non-alcoholic bottles. Most relevant to the thesis however is that for a rubbish pit that was previously identified as belonging to a blacksmith, only 0.76% (71) of the finds were metal artefacts which accounted for 0.61% (372g) of the total weight of the recovered artefacts. Given this result and the lack of horse paraphernalia recovered, it is highly improbable that this rubbish pit is associated with a blacksmith and is more likely to be associated with the Range Hotel or a domestic residence.

5.4 Special Finds.

As indicated earlier in this chapter, the majority of archaeological material recovered was highly fragmented pieces of glass with little diagnostic or analytical value. However, a number of artefacts (special finds) were recovered where further analysis was possible. These items are listed in the above excavation tables 5.1 and 5.2, with image and analysis provided below.



Figure 5.17: Special Find **A1B**. (Image: Author, 2022).

Special find **A1B**, a small broken metal loop that did not appear to be hand worked. It could potentially be from a horse hobble, see Figure 5.17 (above).



Figure 5.18: Special Find **A1C**. (Image: Author, 2022)

Special find **A1C** was the base of an amber coloured bottle with a flat indentation, rippling and serial. It is interesting to note that this style of glass bottle is from the late nineteenth century, when the blacksmith would not have been present at the Range Camping Ground, see Figure 5.18 (above).

Special find **A1D** was a piece of ceramic material, most likely from a plate given how flat its surface was. It featured an applied blue floral motif that is similar to ceramic material recovered from earlier excavations at the site from Clarkson in 2008 and 2009, see Figure 5.19.



Figure 5.19: Special Find **A1D**, decorated ceramic material, possibly from a plate. (Image: Author, 2022).

Special find **8A** is a small unbroken metal loop of the same diameter and thickness as special find A1B. It is possible these items were connected and may be from a horse hobble, see Figure 5.20.



Figure 5.20: Special Find **8A**, a more intact version of a metal loop than Special find A1B. (Image: Author, 2022).

Special find **B2** is the top of a lead headed nail. It is possible that this was used on a corrugated iron or tin roof, given that it would have also been waterproof, see Figure. 5.21.



Figure 5.21: Special Find **B2**, a lead headed nail. (Image: Author, 2022).

Special find **9A**, a small button that has proven difficult to photograph given the size of the artefact and it's worn dark surface, see Figure 5.22. However it appears to be similar in design when compared to a Royal Navy uniform button circa 1843-1891. This would be consistent with the time period when the Range Camping Ground and Range Hotel was active, see Figure 5.23 (overpage).



Figure 5.22: Special Find **9A**, a small worn button, possibly from a Royal Navy uniform 1843-1891. (Image: Author, 2022).



Figure 5.23: An original Royal Navy uniform button 1843-1891 which is similar in design to that of Special Find 9A. (Image: Pond, 2018).

Special find **B1**, a small metal washer, that does not appear to be hand forged and was most likely sourced off site, see Figure 5.24.



Figure 5.24: Special Find **B1**, a small metal washer (Image: Author, 2022).

Special find **B3**, a small brass hollow rivet, typically associated with leather goods, possibly a saddle or leather satchel, see Figure 5.25.



Figure 5.25: Special Find **B3**, a small brass rivet, potentially from a leather saddle or satchel. (Image: Author, 2022).

Special find **B4**, the remains of a glass badge/seal bearing the markings 'AH.' Such badges were common on black glass bottles during the mid and late nineteenth century, see Figure 5.26.



Figure 5.26: Special Find **B4**, a glass badge from a black bottle that reads 'AH'. (Image: Author, 2022).

5.5 Archival Research Horseshoes

As indicated earlier in the methodology chapter of the thesis, archival research was undertaken to address the thesis research questions. One such example of this is the examination of horseshoes in the area and what they might tell us about the animal population who passed through this site. To elaborate further on this, horseshoes can tell us a great deal about the type of animals that travelled along this roadway. For example, smaller shoes from that of a pony would indicate a single rider, potentially travelling a short distance (Star Diggings or travel to and from the hotels). Shoes from a horse (not a pony) could indicate either a packhorse or a stockhorse which would be indicative of pastoralist activity. Much larger draught horseshoes would indicate the presence of either carrier teams with drays (transporting goods and material) or a stagecoach (transporting passengers). In addition, mule and oxen shoes would indicate animals used primarily for the transportation of goods and materials (not passengers). To investigate this further, it is worth briefly detailing why horses were shod, the technological advances and advantages of horseshoes, and what this research hoped to gain through the examination of deposits of discarded horseshoes.

Firstly, horses are large and heavy animals in comparison to the size of their feet, so their hooves are adapted to absorb the concussion that arises from every step they take. Each horse breed has slightly different feet, such as Thoroughbreds who possess thin soles on their hooves, which result in them being more prone to bruising (Pickerall, 1999:46). This is relevant as Thoroughbreds were amongst the most common saddle horses in Australia during the nineteenth century (Binney, 2005:23; Forbes, 2014:116). Another common horse breed in Australia during this time was the Clydesdale, a draught horse, which are a breed of horse with exceptionally large feet, which therefore are prone to excessive concussion when in contact with the ground (Kennedy 1992:61; Pickerall 1999:46). It is important to understand that the condition of a horse's hoof plays a vital role in their health and ability to provide labour. As such humans were forced to respond to the needs of these animals in order to better utilize them as a resource, this meant horseshoes were required (Kelenka, 2014:38; Pickerall 1999:46).

From the fourteenth century onwards metal horseshoes became more widely available and would undergo several adaptations such as the wavy-rimmed horseshoe, the guildhall and dove shoe and the keyhole and tongue shoes. The most important and relevant technological innovation for the research thesis however is the introduction of the toe-clip and rim horseshoes which appear during the nineteenth century and were widely used during this period in Australia. Toe-clip and rim shoes, often featured fullering along the outer edge of the shoe as a means of added traction, but with the addition of a clip at the top of the shoe that would attach to the hoof for extra adherence, see Figure 5.27. This not only affixed the horseshoe to the hoof for greater stability, but also further reduced the possibility of the shoe being thrown during use (Sparkes 1975:21).

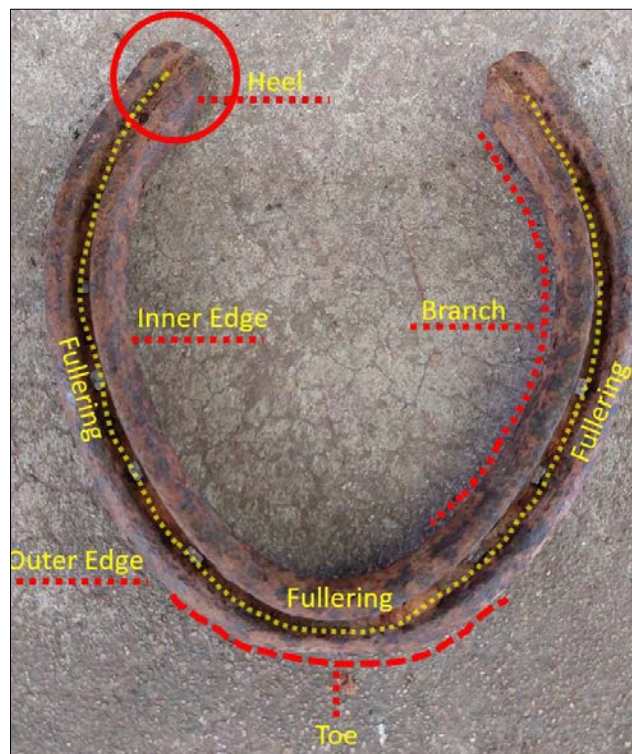


Figure 5.27: Diagram of a rim horseshoe. Note the fullering (trench) indicated by the yellow line running along the outer rim of the shoe (thus the name, 'rim shoe') which provided additional traction for horses. (Image: Author, 2022).

Toe-clip and rim shoes would have been the most common horseshoes manufactured and applied in Australia during the nineteenth century and are near identical to standard horseshoes in use today (although iron/steel quality may differ in modern shoes), see Figure 5.28 (overpage). Ivan G. Sparkes who has written extensively on English horseshoes,

identified characteristics that distinguish toe-clip and rim shoes in both draught shoes and riding shoes, see Table 5.3.



Figure 5.28: A modern horse shod with a toe-clip horseshoe. The toe-clip is indicated by the red arrow and provided extra adhesion to the horse's hoof, thus making it less likely for the animal to lose the shoe during use.

Table 5.3: Nineteenth Century English Horseshoe Characteristics

Draught shoe	Riding shoe
A continuation of the tongue-type shoe in appearance although taking on a rounder shape while remaining flat and broad.	A continuation of the dove shoe made from a narrow band of iron.
Toe-clips introduced in 1825-30 used for heavier shoes during 1880-1930. Side-clips present during 1840s.	Front toe-clips featured on front shoes with side-clips regularly featured on hind shoes.
Draught are shoes frequently un-fullered.	If fullering is present all round it is most likely factory made. If fullered along the length of the nail holes than is most likely hand-made.
Up to 18-20 nail holes in the shoe (but not all in use) with No. 12 nails (3 inches long)	5-8 nail holes with No. 6 nails.
Tongue type shoes changed to rim-type between 1890 and 1930 where the bar and toe-clip shoe was common.	Remains most common horseshoe type throughout early-mid twentieth century.

Table 5.3: Toe-clip and rim shoe characteristics as identified by Sparkes, 1975.

The next notable technological adaptation came in 1817 when American E. Maynard patented horseshoe calks, which function much the same as cleats for contemporary athletic footwear. Their chief function was to provide added traction (specifically for steep

inclines) on paved and cobbled road surfaces that were more common in American metropolitan cities than that of Britain (McShane and Tarr, 2007:32). Shoes became a necessity for working horses during the nineteenth century, both in cities and on the frontier as advancements in wagon and coach technologies increased the tonnage of material and number of passengers that were transported (Sparkes, 1975:34). While there were relatively few patents for horseshoes and machinery to produce them prior to the 1850s in America, the 1860s saw a boom in patents for detachable calks and the machinery to both produce and sharpen them. By 1874 in America there were hundreds of patents for horseshoes, nails and the equipment required to manufacture and fit them (Mc Shane and Tarr, 2007:32). This not only greatly increased the availability of horseshoes, but also the capability of a wider variety of horse breeds to fulfil roles in haulage and transportation which they were otherwise ill suited for. American Historian Spencer Jones (2010:375) argues the impetus for this in America was largely driven by the logistical requirements of horses during the American Civil War. Jones (2010:375) contends that field artillery horses (used by both sides) during the American Civil War highlighted the necessity of horseshoes as breeds and horses well suited for the task were all but depleted during the early years of the conflict. As a result, weaker or sickly (condemned) horses and smaller horse breeds which were (comparatively) more readily available were utilized to fulfil the role of artillery horses (Jones 2010:361). Similarly as was the case with carriages, coaches and wagons, advancements in artillery saw a dramatic increase in tonnage that had to be transported with 6-pound smoothbore gun batteries (weighing 600-800 pounds) replaced by 12-pound Napoleon gun batteries, weighing approximately 1,200 pounds. The mobility and manoeuvrability required by field artillery (often on difficult or wet terrain) necessitated that these horses be shod in order to increase their draught power to maintain their manoeuvrability and efficiency (Jones, 2010:360). As an interesting aside, Jones (2010:375) argues that the Union Army's ability to manufacture and produce greater numbers of horseshoes, and thus shoe more of their animals, was a factor in the North's eventual victory over the Southern Confederacy. Jones (2010:375) further claims the benefits of shod artillery horses (and wagon horses) were well acknowledged at the time, as deceased or sickly animals were stripped of shoes and nails which were repurposed for use on healthy animals when access to resupply was limited.

While horseshoes are a practical measure to ensure the health of the animal and improve its performance in labouring tasks, it is also relevant to this research to note that humans on occasion chose to use horseshoes manufactured out of gold as a means to express their personal wealth or social status. In 1876 in the frontier town of Smithfield in north Queensland (12 kms north-east of Cairns) William 'Bill' Smith, a pioneer who had established inroads to the Hodgkinson goldfield famously had his horse shod with golden horseshoes. This was the nineteenth century equivalent of *blinging your ride*, and was another way for Smith to flaunt his success as Edwin Crossland (Smithfield's blacksmith) used gold ingots from the Hodgkinson goldfield which Smith had discovered to fashion the footwear (Lack, 1971:233). This was not the first time that gold horseshoes were used in Australia to reflect the rider's status as in Beechworth, Victoria in 1855, Daniel Cameron, a miner who was running as a member of the legislative council similarly had his horse shod with golden horseshoes. He famously rode the animal down the main street while wearing his finest clothes prior to the elections of the Ovens electorate, which he is reported to have won. The 24 carat gold horseshoes (valued at \$250 at the time) however proved to be too soft for general use and thus were removed and sold at auction (Lack, 1971:234). Such fanciful tales serve to better inform one of the key research questions of the thesis; how can examining cultural practices associated with horses and other livestock add to the social history of north Queensland?

When examining horse equipment and tack in Australia during the nineteenth century, it must be acknowledged that a mixture of both American and English styles of horseshoes, saddles, wagons, and horse maintenance techniques were adopted and adapted for Australian conditions (McClaren, 2011:198; Forbes, 2014:202; Sparkes, 1975:18). In particular, Australian stockmen initially used park style saddles of an English origin, with short flaps and low set knee rolls, however this proved ill-suited given it did not protect the riders' legs from sweat (McClaren, 2011:179). In America, Western saddles (developed from those used by Spanish cavalry) were favoured for ranch work during the time, as their broad design afforded the rider a comfortable ride for extended periods of travel (Kennedy, 1992:182, Pickerall, 1999:86). These saddles featured a high pommel and cantle, as well as long stirrup leathers which helped to secure the rider. The advantages of Western saddles influenced Australian saddlers who developed the Australian stock saddle, although it is

unclear when this first occurred (McLaren, 2011:179). The Australian stock saddle while possessing stylistic English features in the design of the panels, fenders, and stirrups, had a much deeper seat, higher cantle and flared pommels which created a secure saddle, suitable for riding in rough conditions for extended periods (McLaren, 2011:180). This is just one brief example where Australians adopted technology from both the Americas and England to respond to their operational needs in a vastly different landscape. While we can observe details such as different saddles horses are equipped with through photographs or drawings from the nineteenth century, we cannot do so when it comes to horseshoes (as these are concealed from the observer). As such, physical horseshoes recovered from archaeological excavations can provide further information as to what types of horseshoeing techniques were adopted and adapted in north Queensland. In particular, were the horseshoes pre-fabricated and fitted at the Range blacksmith, or were the horseshoes hand forged by the blacksmith. Only one horseshoe was observed as a surface find in November 2020, with no additional horseshoes being located at the site through the subsequent surveys or excavations.

The lack of horseshoes observed and recovered from the archaeological excavations at the site of the assumed blacksmith is interesting. While this may be the result of digging in the wrong location, it is relevant to note that very little paraphernalia associated with horses or animal use was recovered or observed during the surveys and fieldwork. The significance of this, is that the archaeological record and historical records present very different data for this particular site. It is widely reported (and documented) that horses (and other livestock) travelled through this area between 1860 and 1970. Photographic evidence clearly identifies carrier teams with numerous draught horses in operation as recently as the 1930s see Figure 5.29 (overpage).



Figure 5.29: George Brabon and George Whalley horse team on Hervey Range Road 193x transporting light poles made of heavy timber. These horses would have likely been shod to make travel up and down Thornton's Gap more accessible. (Townsville City Library: 5266267)

Therefore, the lack of discarded or thrown horseshoes at the site is of interest considering the assumed blacksmith site was on a busy roadway as reported by Whippole (1923:7) in the *Townsville Daily Bulletin*. Whippole (1923:7) elaborates that carrier teams were often stacked in traffic jams for many kilometres as they made the slow ascent to cross the range which is purported to have taken an entire day. In addition to this, travellers such as Lucy Gray and Tramp wrote of the challenges of the ascent, where rocks from the creek near the Range Hotel were transported with carrier teams to use as chocks for the wagon wheels (Gray, 1868:15). It is highly likely that the carrier teams would have required shoes for their horses given the severity of the incline at Thornton's Gap, as two-thirds of horsepower are lost when hauling goods uphill without the animal being shod (Kennedy, 1992:23).

Historical documentation provides evidence of horses being shod at the blacksmith at the range hamlet to support this assertion, with the *Cleveland Bay Express* and *Cape River Mining News* in 1868-1873, advertising by then owner, Adam R. Philips promoting his trade as a general blacksmith who could also provide horseshoes and therefore shod horses see Figure 5.30 (overpage).

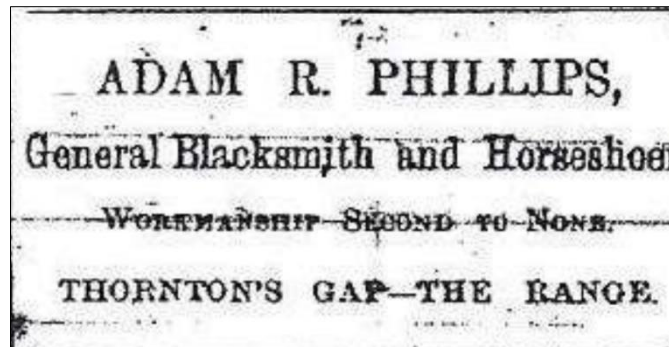


Figure 5.30: Adam R Phillips' advertisement for the blacksmith at the range (Cleveland Bay Express and Cape River Mining News 1868b)

Saddle horses traversing Thornton's Gap, however, may not have required shoes on the hard dry ground (such as that found in north Queensland) where they could operate effectively given their hooves were trimmed by contact with the ground. However, shod saddle horses would have benefited from extra purchase when traversing the area as well as added hoof protection, especially if they were used in the pastoral industry in which horses were worked for the lengthy period of eight weeks, followed by eight weeks rest. For comparison's sake, it is worth noting that the saddle horses used by stockmen in the area until 1970 were kept shod during their periods of work and on occasion worn horseshoes were repurposed (splitting them in two) for oxen shoes, as oxen came from softer terrain further west and required further protection for their hooves (Binney, 2005:89; Kennedy, 1992:93). Given the labouring role undertaken by working horses for extended periods of time (in comparison to seldom ridden leisure horses) it is likely that a significant percentage of horse traffic along Hervey Range road would have been shod. Further to this, given the written records of carrier teams frequently operating along Hervey Range Road and the widely accepted difficulty of the crossing at Thornton's Gap, we can surmise that the majority of draught horses in these teams have received shoeing or hoof maintenance prior to the difficult ascent. While the exact location of the blacksmith has yet to be identified with any degree of certainty, it is known that this business did operate at the 'foot of the Range' as evidenced through advertising in the Cleveland Bay Express of March 1868 by the original owner John McNeil (who also built the blacksmith's shop), see Figure 5.31 (overpage) (Cleveland Bay Express and Cape River Mining News 1868c; Gibson-Wilde & Gibson-Wilde 1988 p. 217).

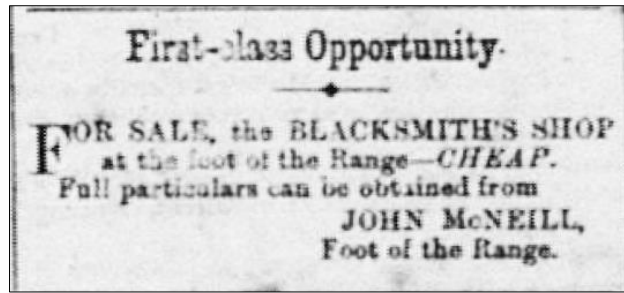


Figure 5.31: John McNeil’s advertisement for the blacksmith at the foot of the range (Cleveland Bay Express and Cape River Mining News March 1868)

While horseshoes can provide useful information about the types of animals in use along the roadway, wagon wheels also similarly provide valuable information on the types of transportation being utilized. The historical literature emphasises the importance of carrier teams with drays, but information on smaller buggies or coaches is limited. Despite this however, it is known from photographs that buggies, wagons, and carrier teams continued to travel along this roadway into the early twentieth century, and played a vital role in connecting the community atop the range to the township of Townsville see Figure 5.32.



Figure 5.32: A horse drawn buggy travelling along Hervey Range Road, near Thornton’s Gap, circa 1900. (Townsville City Library: 63763)

5.6 Archival Research Maps

Archival research for the thesis also involved the examination and analysis of historical maps in order to identify and plot the extensive network of infrastructure that was part of north Queensland's progress industry. These maps are presented below in chronological order, with observations on each map as to how it illustrates the features of north Queensland's progress industry as it develops. Further analysis of some historical maps will also occur during the following discussion chapter.

The (below) **1866** survey map has been centred on Thornton's Gap, where the Range Gazetted Camping Ground was located and where both the Range Hotel (originally Mead's Hotel) and Eureka Hotel (originally Rowe's Hotel) were located. The location of these hotels are visible along what was planned to be the Hervey Range Roadway, see Figure 5.33.

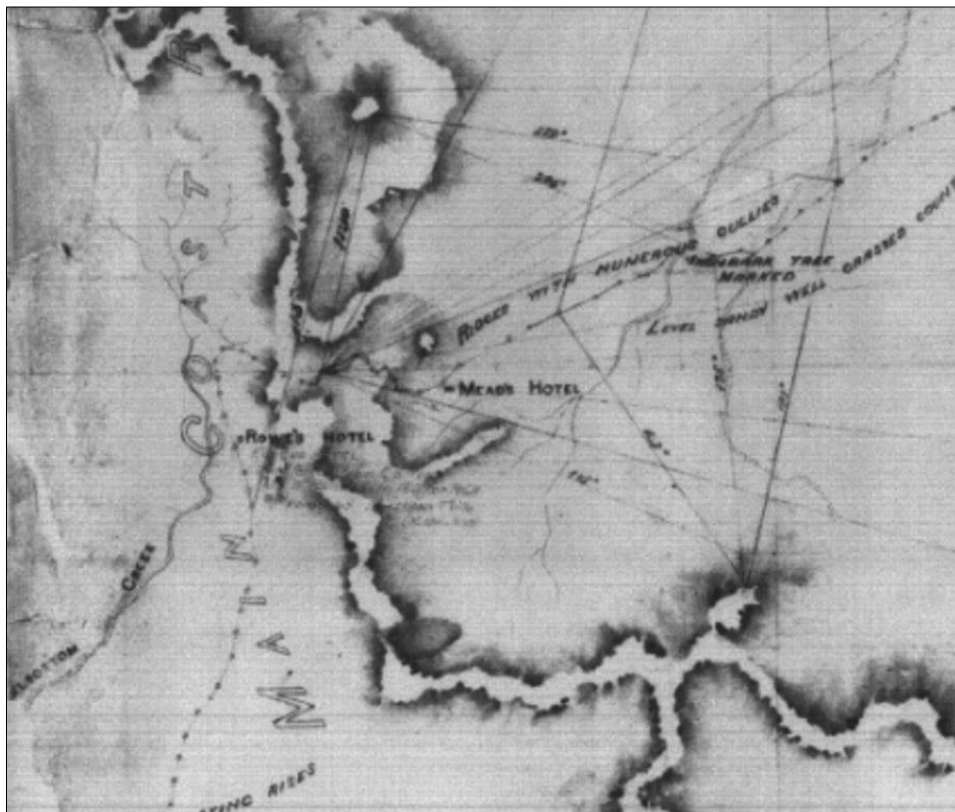


Figure 5.33: An 1866 survey map of the area west of Townsville, focused on Thornton's Gap which was the crossing over the hinterland and into the interior. This was the central roadway which linked Townsville to both the pastoral stations and the later goldfields. (State Library of Queensland: 8473221E)



Figure 5.34: The full 1866 survey map of the area west of Townsville. Notice the more direct route of the proposed new line of road from Townsville to the crossing at Thornton's Gap. This roadway would prove to be of pivotal importance to Townsville's colonial economy. (State Library of Queensland: 8473221E)

The full **1866** survey map (previous page) illustrates the proposed line of the new road to Dalrymple, which would eventually become known as the Hervey Range Roadway (and continues to this day to be known as such). This roadway presents a more direct connection between both the township of Townsville and that of Thornton's Gap which connected the colonial settlement to the interior pastoral stations and the later discovered goldfields. The public works project that led to the creation of this roadway was due to the investment in the region of the state government. Infrastructure building such as this represents a key element of north Queensland's progress industry. Not present on this map is John Melton Black's original roadway to Thornton's Gap which was established in 1864. This is potentially due to the rough nature of that roadway which was more a trail or track than a roadway, see Figure 5.34.

The **1868** district map (overpage) illustrates the roadways, telegrams, tracks, river systems and goldfields of the Kennedy district. Most notable is the red coloured roadway (Hervey Range Road) which extends from Townsville to the Cape River Goldfields. Here we can observe that this roadway was of great significance to Townsville's early economy as it represents the most direct route to access this goldfield. Of further note is some yellow/gold tint along the Star River west of Townsville, this represents the Star Diggings, a smaller (yet still profitable) alluvial goldfield. Along the aforementioned red tinted roadway there can be two 'inns' observed, the eastern inn is the Range Hotel, while the western inn is the Eureka Hotel. It is also significant to note that the township of Dalrymple represents a vital crossroad and road network hub in the region as it can be observed to link the interior pastoral stations and the goldfields to a single settlement. However, Dalrymple being a landlocked township without a port meant that the export of goods and the sourcing of supplies had to have taken place in the port of Townsville. This illustrates the close relationship between the two settlements of Dalrymple and Townsville, which were important in establishing the early colonial economy of the region. It can also be observed that on the south-east coast, Port Denison (Bowen) while featuring many roadways, did not possess the most direct (or accessible) route to the Cape River and Star River goldfields, see Figure 5.35 (overpage).

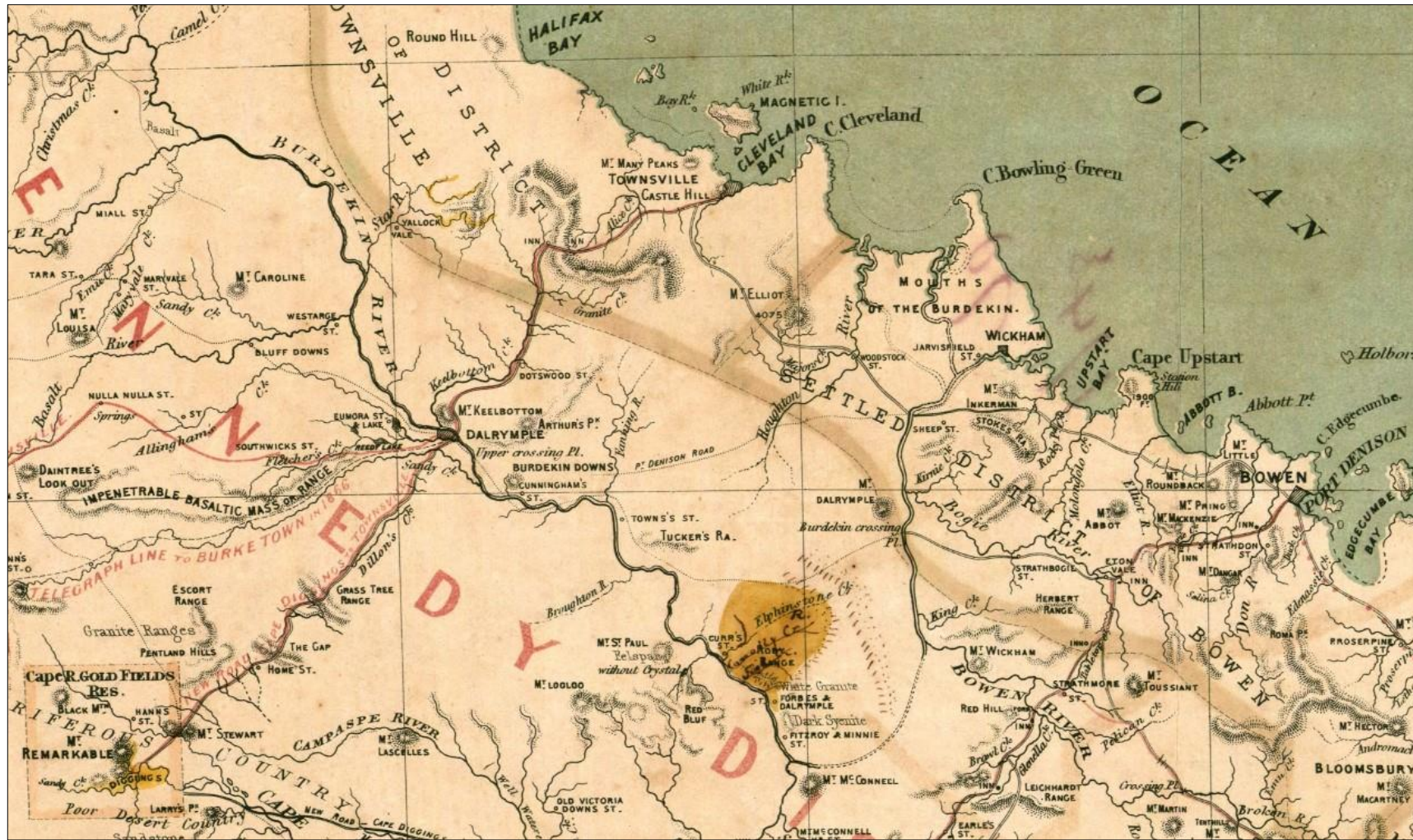


Figure 5.35: The 1868 district map of Kennedy in north Queensland illustrates the vast public infrastructure projects that formed part of the region's progress industry. (Queensland State Archive)



Figure 5.36: 1869 map of the Burke and Kennedy districts of north Queensland. Drawn and published by J. Jones. (National Library of Australia: <https://nla.gov.au/nla.obj-231532298/view>)

The **1869** Burke and Kennedy district map of north Queensland (previous page) drawn by J. Jones depicts the towns, mail routes, squatting stations, goldfields, rivers, creeks, ranges, and lines of electric telegraphs. One can further observe from this map that the township of Dalrymple remains an important hub in the region with its only accessible port remaining that of Townsville harbour. This is evidenced by the two settlements connection via the red coloured roadway (indicating this is the main road) which remains the Hervey Range Roadway. While Port Denison road does connect Dalrymple to Bowen, it is not the favoured route for traffic given the difficult river crossings, such as at the Burdekin River, see Figure 5.36 (previous page).

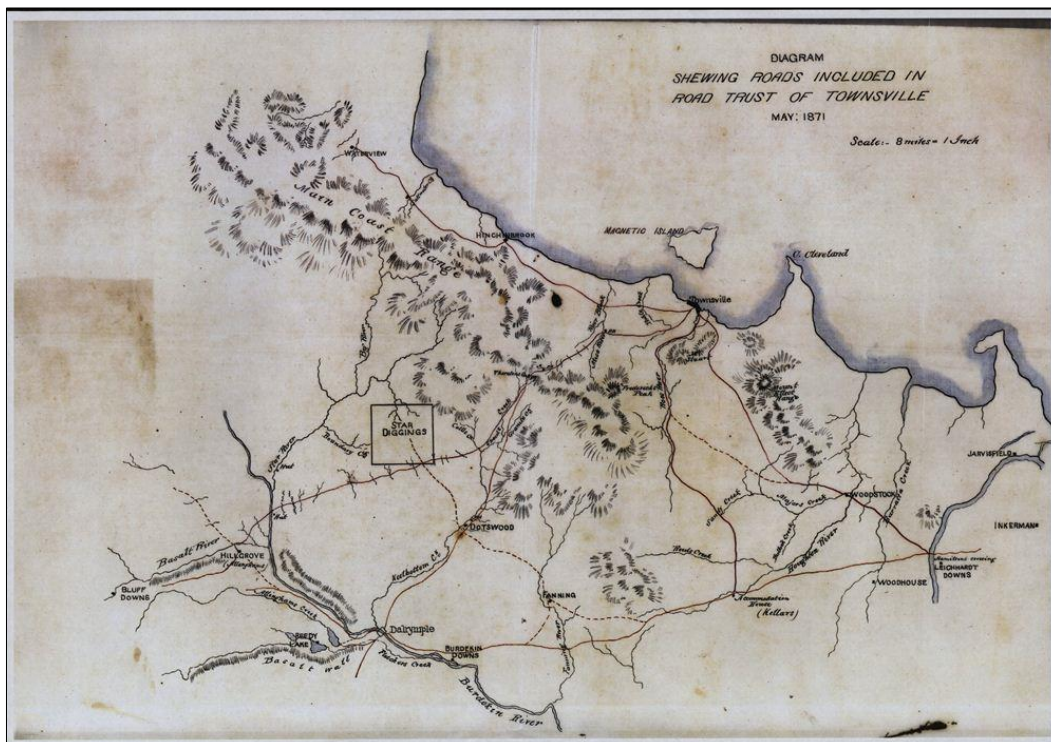


Figure 5.37: 1871 map depicting the road trust of Townsville. The Star Diggings alluvial goldfields remains a prominent feature. (Townsville City Library: 0013850)

The **1871** roads trust diagram of Townsville (above) illustrates the continued prominence of the goldfields (in this case the Star Diggings) in map making. More smaller tracks (red dotted lines) are indicated between the Dotswood and Fanning pastoral stations, indicating that the pastoral economy remained equally important, even during the goldrushes, see Figure 5.37 (above).



Figure 5.38: The 1871 Kennedy district map now features the Ravenswood goldfield south-east of Dalrymple. Townsville remains the most accessible port to this new goldfield as well as the existing Cape River goldfields. (National Library of Australia: <https://nla.gov.au/nla.obj-231412276/view>)

The **1871** Burke and Kennedy district map of north Queensland (previous page) illustrated by Thomas Ham, now depicts the recent discovery of the Ravenswood goldfield, which can be observed south-east of Dalrymple. Further to this, the main roadway to this goldfield follows from Townsville, to Dalrymple, to Ravenswood, this indicates that Townsville remained the principle point of shipping and resupply for this goldfield. The potential for wealth which these goldfields presented, led to an explosion in growth for both Townsville's population and public roadworks, see Figure 5.38 (previous page).

The **1878** geological sketch map of the district between Charters Towers goldfield and the coast by Robert Logan Jack (overpage) illustrates the importance of not only the goldfield of Charters Towers, but also that of north Queensland's progress industry as evidenced by the large number of camping grounds, inns, roadways, pastoral stations, and cattle yards. This map will be examined in greater detail in the discussion chapter, see Figure 5.39 (overpage).

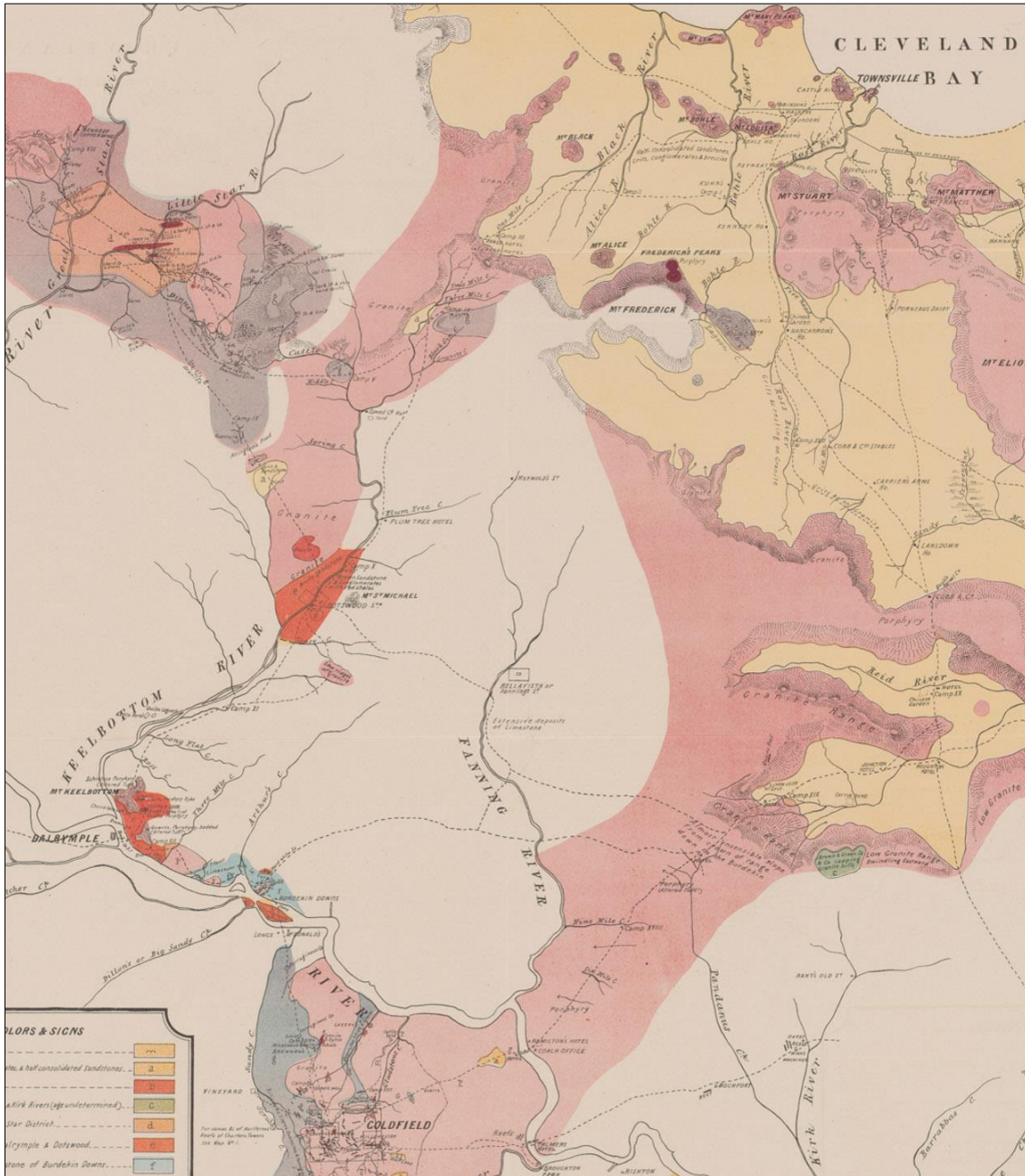


Figure 5.39: 1878 Geological sketch map of Townsville, Dalrymple, and Charters Towers. (National Library of Australia: <https://nla.gov.au/nla.obj-232289083/view>)



Figure 5.40: 1878 map of the Kennedy district with roads, goldfields, and telegraph lines. (National Library of Australia <https://nla.gov.au/nla.obj-231142242/view>)

The **1878** map of the Kennedy district (previous page) illustrates the roads, telegraph lines and infrastructure of north Queensland. Of particular note is the presence of three goldfields (Cape River, Charters Towers, and Ravenswood) in relatively close proximity to Dalrymple and the roadway which connected the township to Townsville. Townsville therefore enjoyed an abundance of gold exports due to the favourable position of its harbour in contrast to that of the Bowen, see Figure 5.40 (previous page).

The **1886** geological map of Queensland by Robert Logan Jack (following page) indicates the mineral resources of the state. Six goldfields are identifiable in the areas around both Townsville and Bowen in the north Queensland region (Star Diggings, Cape River, Charters Towers, Ravenswood, Marengo, and Normanby). Despite the majority of these goldfields having been either depleted or the easily accessible gold extracted, we can observe that mineral wealth still played a vital role in colonial exploration and map making, see Figure 5.41 (overpage).

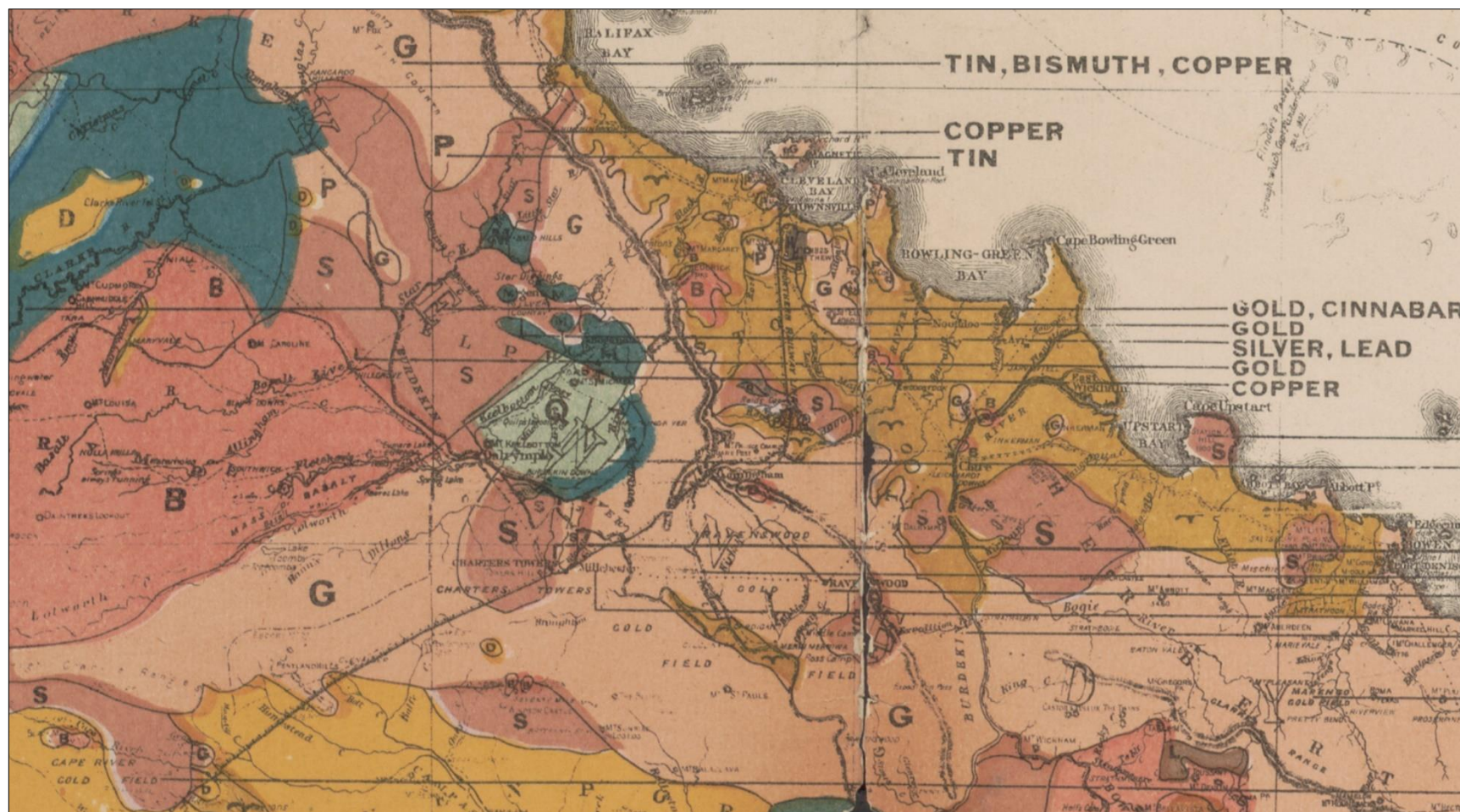


Figure 5.41: The 1886 geological map of Queensland by Robert Logan Jack depicts some six goldfields in the Kennedy district of north Queensland (Star Diggings, Cape River, Charters Towers, Ravenswood, Marengo, and Normanby). (National Library of Australia: <https://nla.gov.au/nla.obj-231819141/view>)

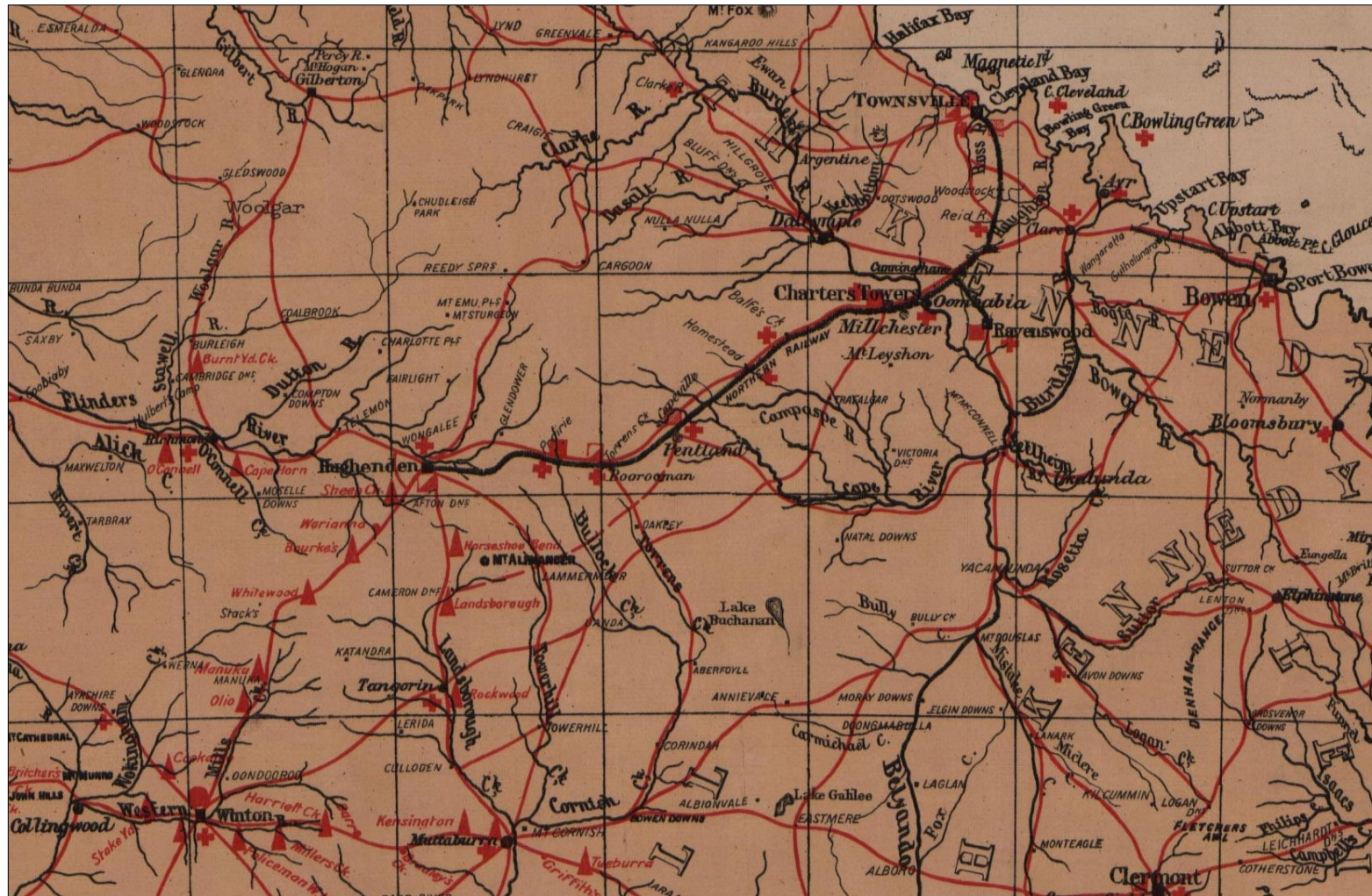


Figure 5.42: The 1892 stock route map of Queensland reveals a dramatic shift in the region's economy away from the goldfields to that of the pastoral industry. To this end, existing infrastructure was repurposed. (Queensland Archives)

The **1892** stock map of Queensland (previous page) indicates the network of stock routes, main roads, stock trucking yards for sheep and cattle, telegraph stations, artesian bores, tanks, and head stations. This represents a significant development in the colonial economy as this is the first map which illustrates the 'export rescue' phase of north Queensland's progress industry when the region's main source of economic revenue came from the pastoral sector, and not that of the goldfields. Furthermore, we can observe that the network of roads, telegraph stations and railways which were established during the preceding goldrushes have now been repurposed to support the pastoralist industry. Of particular note is the continued prominence of both the townships of Charters Towers and Dalrymple who acted as transport hubs for these stock routes, and provided a direct connection to the facilities (boiling down works, meatworks, and tannery) of Townsville, including the harbour, see Figure 5.42 (previous page).

The **1898** map of Queensland (overpage) illustrates the major road, rail, and telegraph network north Queensland. The most notable difference that can be observed from this map is the disappearance of the township of Dalrymple, which was largely abandoned after a flood destroyed the township in 1870 (Pike, 1960:33). However, despite the flood event, Dalrymple did serve as rough camping ground for several years due to the extensive road network it was connected to, namely the Hervey Range Road. By 1898, however, we can observe that Dalrymple and the Hervey Range Road are no longer illustrated as a main road, having since been relegated to a stock route. Charters Towers has now become the most important crossroad settlement of the interior with its railway link, the Great Northern Line, established in 1882 linking the settlement to Townsville and the facilities located there, see Figure 5.43 (overpage).

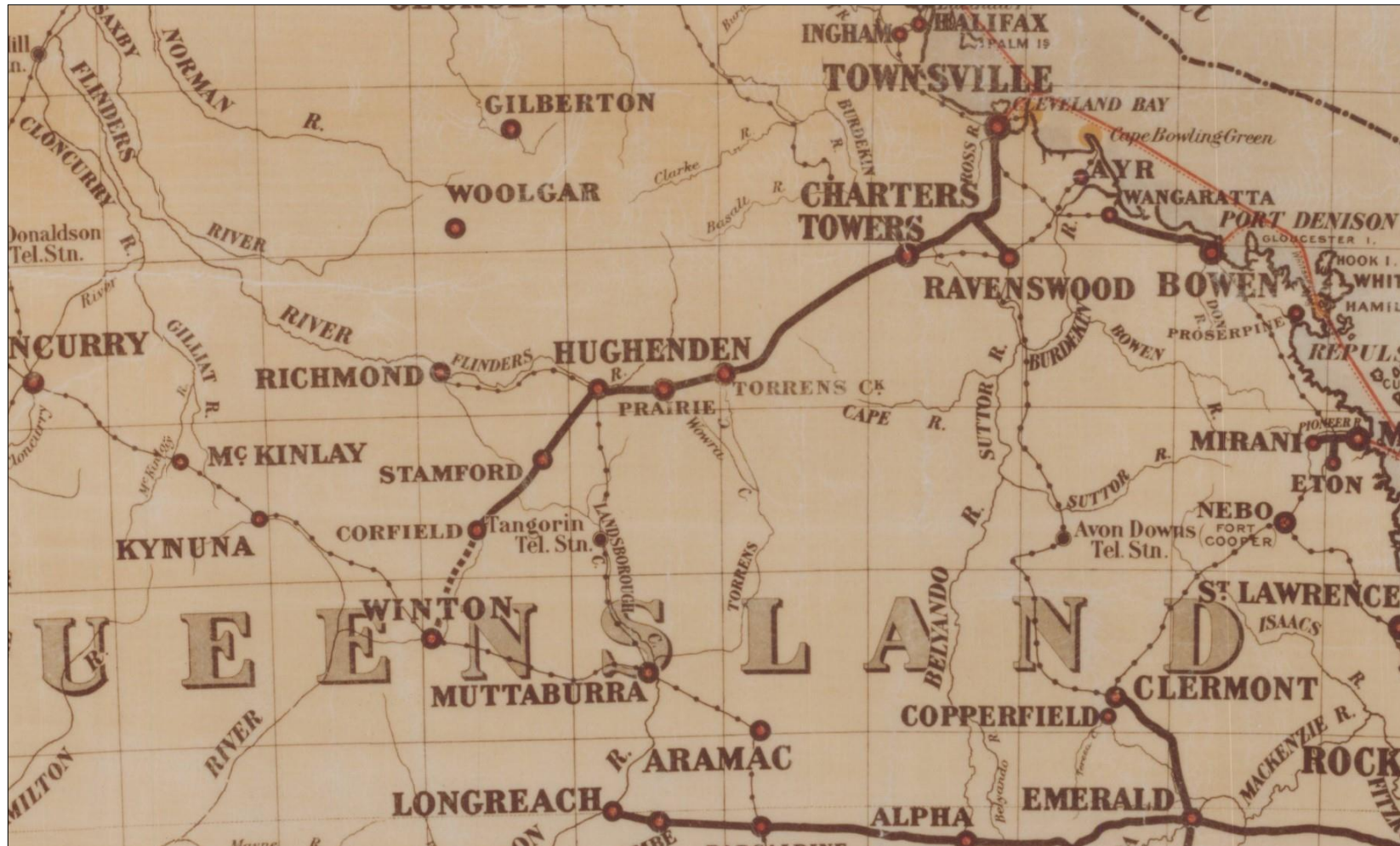


Figure 5.43: The 1898 Queensland major roadway map reveals that the township of Dalrymple and the Hervey Range Roadway are no longer considered the main roadway to the interior. Charters Towers is now the central transport hub to and from the hinterland pastoral stations. (Queensland State Archives)

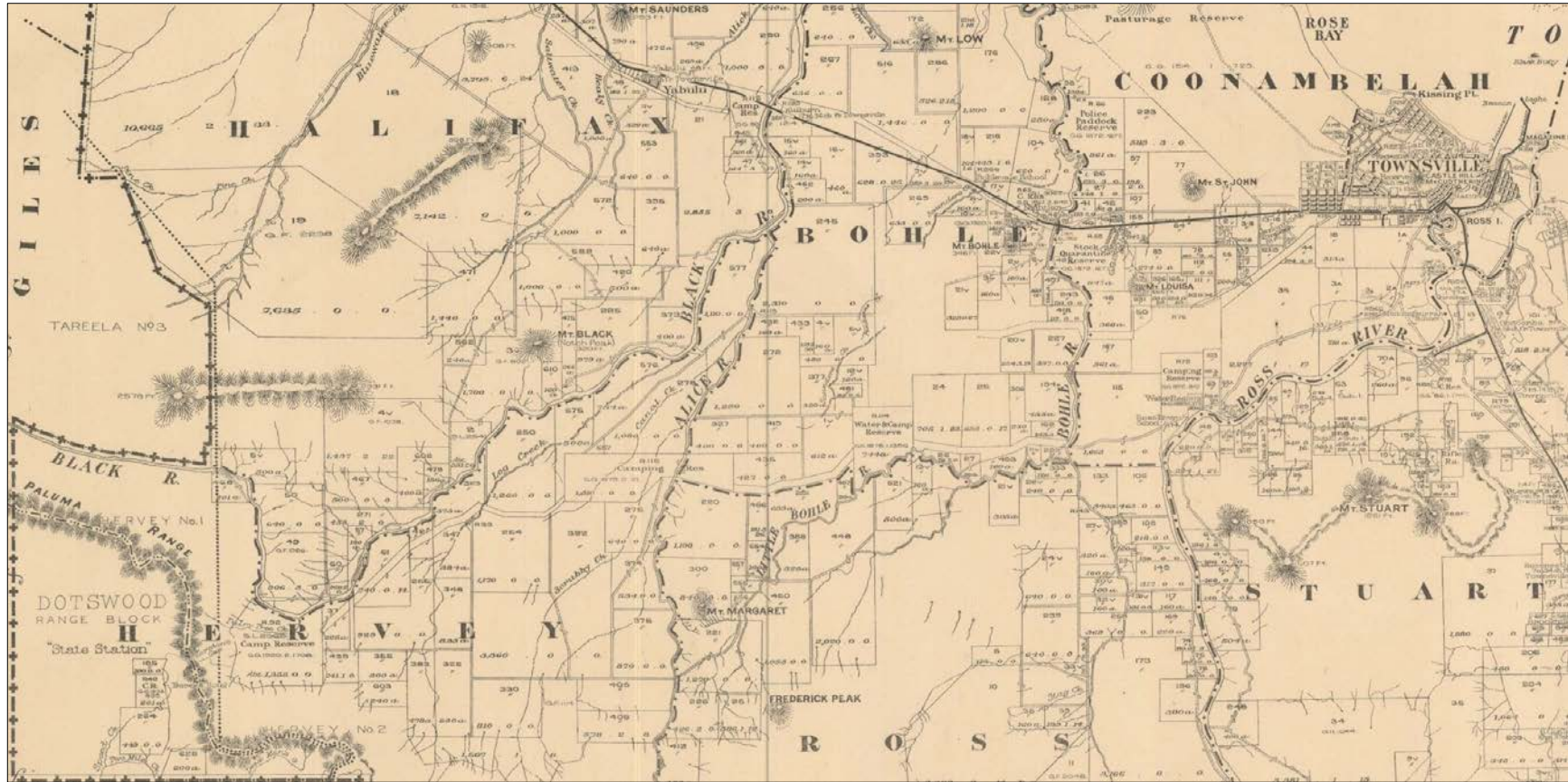


Figure 5.44: The 1922 Elphinstone county 2-mile map illustrates the Hervey Range Roadways continued use to service the pastoral economy as a stock route, as well as the continued use of the gazetted camping grounds along this roadway to the port of Townsville. (Queensland State Archives)

The **1922** Elphinstone county two mile map (previous page) provides a more in depth illustration of the Hervey Range Roadway and the numerous gazetted camping grounds situated along this route. During this time, the roadway is no longer a major thoroughfare, but continues to operate as a stock route, necessitating the continued use of the gazetted camping grounds. However, the many hotels and inns along this roadway have since closed in operation. Further to this, although the Eureka Hotel closed in operation in 1908, it was utilised by the community atop the range as a refreshment room and dance hall until purchased in 1984 and turned into a café, see Figure 5.44 (previous page).

5.7 Archival Research Photographs

While the previous historical maps provide us with an overall understanding of the landscape and how the frontier of north Queensland changed, they do not provide an accurate depiction of what the actual terrain looked like. As photography was in its infancy during the nineteenth century, photographs were rare. However, two images of the research area of the Range Gazetted Camping Ground from the early twentieth century do provide an adequate representation of what the environment would have looked like. Although it must be acknowledged that the Range Hotel and blacksmith were not in operation during this time and the hamlet had been abandoned, it did however remain a camping ground, see Figures 5.45 and 5.46 (overpage).

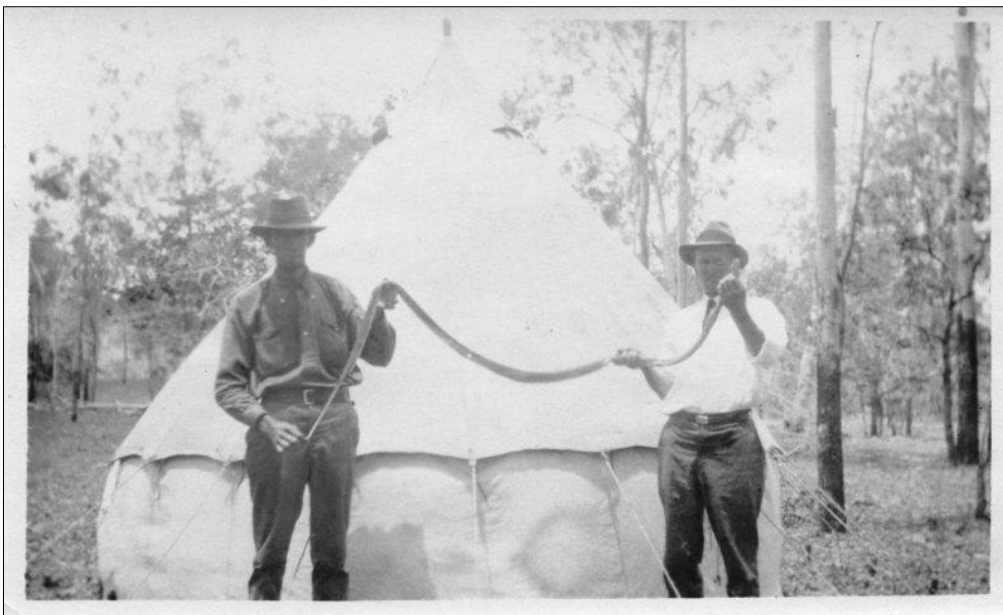


Figure 5.45: A photograph of two men holding a deceased snake at their campsite at One Mile Creek (within the range gazetted camping ground where the excavations took place). (Townsville City Library: 0011480)



Figure 5.46: A campsite at One Mile Creek (within the range gazetted camping ground). Note the relative lack of dense brush or scrubland between the trees, indicative of the camping grounds continued usage. (Townsville City Library: 0011481)

5.8 Results Summary

The archaeological fieldwork focussed on a potential blacksmith site in the Range Gazetted Camping Ground, key observations from this fieldwork are the excavation of a nearby rubbish pit which provided archaeological materials, which will be further analysed in the discussion chapter. Of particular note however is the concentration of glass artefacts as can be observed earlier in table 5.2, where the majority of this material is from light green and clear glass, typical of domestic use. The lack of metal artefacts, in particular the lack of any heavy or worked metal suggests this rubbish pit may be from a domestic residence or possibly the Range Hotel.

The archival information provided in this chapter indicates the prominence and importance of both the progress industry and domesticated livestock to north Queensland's colonial settlement and subsequent economic development. Of particular note is the Hervey Range Roadway and the numerous gazetted camping grounds, hotels, and blacksmiths along this route that both serviced the human and animal travellers, and thus enabled their transit. The materials presented in this chapter serve to underline the importance of road networks

in the region in enabling the colonial economy to tap into both the mineral resources of the goldfields as well that of the pastoralist stations. We can observe through these materials the gradual transition of the progress industry from boom to bust and export rescue with the burgeoning goldfields giving rise to road networks, townships disappearing (in the case of Dalrymple), and finally existing infrastructure being repurposed to facilitate the pastoral industry. Additional archival material such as newspaper advertisements, classifieds and photographs that were also obtained will be presented and analysed in the following chapter, discussion.

Chapter 6

-Discussion-



"The horse is an archetypal symbol which will always find ways to stir up deep and moving ancestral memories in every human being."

(Paul Mellon, cited in Longrigg, 1972:3)

6.0 Introduction

This chapter will draw together the various threads of background, fieldwork and new research presented in the earlier chapters in order to address the main research questions:

- How does the agency of horses and other livestock affect the pattern of settlement?
- How can examining the cultural practices associated with horses and other livestock add to the social history of north Queensland?
- Can these cultural practices be classified as heritage and how should they be managed?

The chapter is divided into several sections, first, **The Range Gazetted Camping Ground** will review previous fieldwork and research conducted at the study area, including the presumed sites of both the Range Hotel and blacksmith. Furthermore, this section will compare the fieldwork results against historical evidence and discuss the implications of the findings at the site. This section will inform the research questions centred on animal agency and its effect on patterns of settlement as well as how certain equine cultural practices can add to the social history of north Queensland.

Second, **The Progress Industry in North Queensland** will examine the role domesticated livestock played in facilitating settler expansion and the observable outcomes present in the study area today. This section will aid in addressing the research question of animal agency and its effect on patterns of human settlement within the scope of north Queensland.

Next, **Animal Agency, and Cross-species Relationships**, will investigate the environmental impacts of domesticated livestock on the landscape and assess the breeds of horses present in Australia during the nineteenth century, including their specific type and usage. In particular, this section will address the research question of social history through a focus on more-than-human history, which will explore interactions between settlers and horses in north Queensland.

Next, **Cultural Practices and Heritage**, will analyse contemporary issues regarding cultural practices associated with equine heritage and management. This will be followed by an assessment of potential best practice options which will directly address the research question of equine heritage management and preservation.

Finally, the **Addressing the Research Questions** section will directly address each of the research questions individually from the analyses presented in this chapter.

The discussion chapter will be followed by a conclusion, which will examine the future directions of this research in north Queensland with an emphasis on how it adds to national and international research interests and directions.

6.1 The Range Gazetted Camping Ground

The Range Gazetted Camping Ground, including the nearby burial/cemetery were the focus of several archaeological investigations between 2000 and 2008. However, despite these earlier and in-depth archaeological examinations, much of the site remains unknown or inadequately mapped due to the difficulties of identifying the exact location of specific structures or features. Despite this, the cemetery is perhaps the most well identified and (and therefore) protected area within the site, which features safety bollards to prevent unwanted access or interference from dirt bike or offroad enthusiasts who might otherwise disturb the gravesites. This is a valuable point to make, as the other structures which are historically known to be present such as the exact locations of the Range Hotel, blacksmith, stable, toll booth and residential dwellings remain unknown or are in assumed locations. The inability to determine the exact location of these structures means that their protection is difficult to guarantee. Physical evidence recovered from previous excavations will be used to question the written record, where the historical literature can be cross-examined with the archaeological material recovered. Despite extensive written accounts of carrier teams, and horse drawn traffic being present through the area, there is a distinct lack of material remains that we would associate with a blacksmith present at the 2021 rubbish pit excavation. In this instance the historical records which promote the high visibility of horses, do not accord with the archaeological record, in which it is demonstrably quite difficult to detect the presence of these animals having existed within the landscape.

This raises the question of whether the stone arrangement previously discovered by Marianne Clarkson is actually the blacksmith forge, or whether it might be a feature of another structure, such as a fireplace or cold storage room associated with the Range Hotel. The presence of agave plants between this stone arrangement and the rubbish pit may indicate the garden of the former Range Hotel or potentially another structure, possibly the

domestic residence of the blacksmith. The Range Hotel, is however, the most likely structure to be at this site given Elizabeth Hatte's cultural assessment in 2000 (on behalf of Optus) where she claimed the hotel site was adjacent to a high voltage transmission line, which was observed during the 2021 excavation in close proximity to the rubbish pit, see Figure 6.1 (overpage). Her assessment for this being the location of the Range Hotel is similarly based on the presence of agave plants and the glass/ceramic scatters present within the landscape.

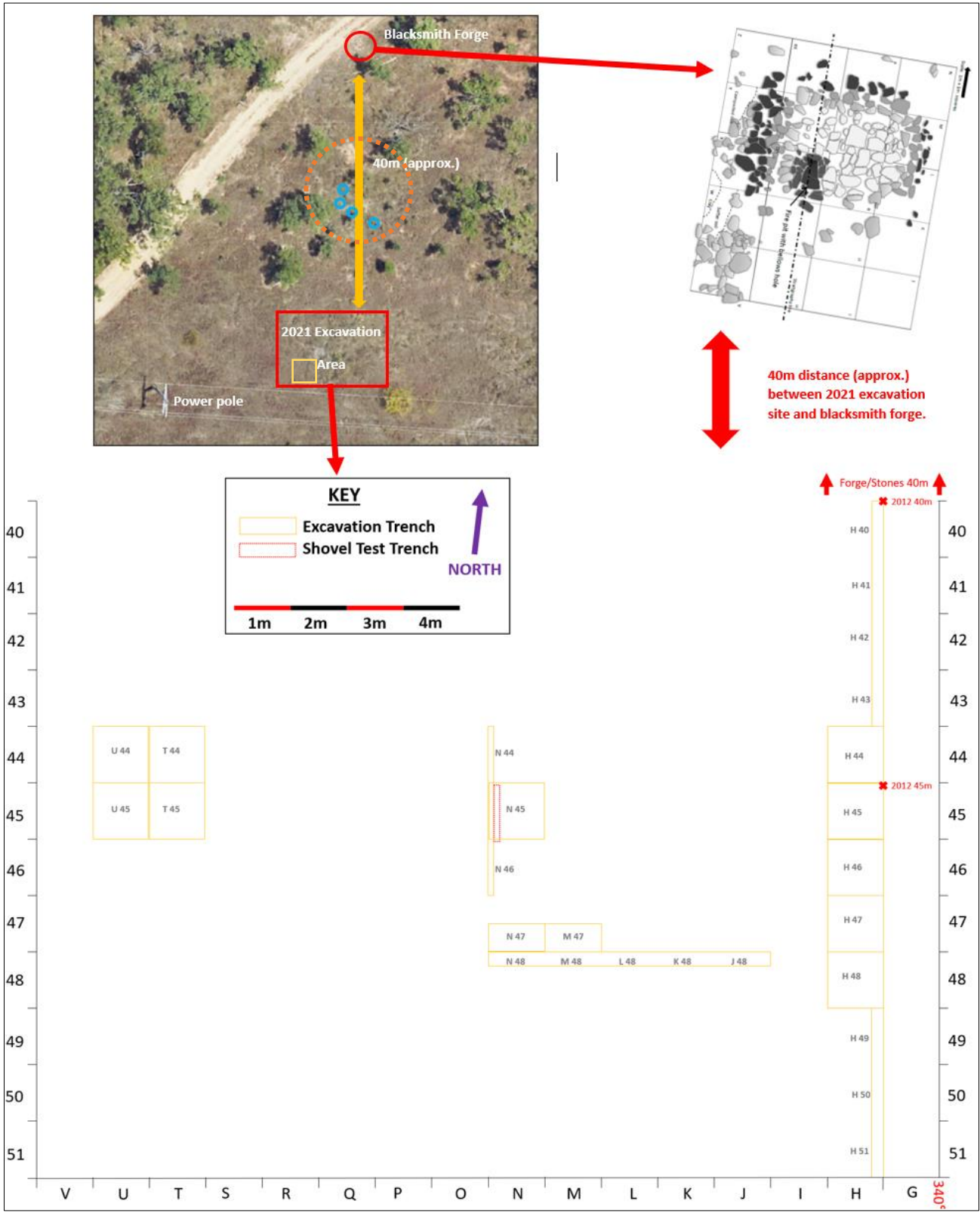


Figure 6.1: Map indicating the 2021 excavation area paired with Clarkson’s 2012 blacksmith forge diagram. The **blue circles** in the satellite image represent the location of agave plants, which were associated with the location of the Range Hotel. The **gold square** indicates the location of the rubbish pit, and the **orange circle** indicates a possible location for the Range Hotel. Note the presence of the high voltage transmission line in the bottom left, consistent with Hatte’s identification of the Range Hotel location. (Image: Google Earth/Clarkson, adapted by England)

Given the amount of domestic material found at the site and the relatively small amount of metal or worked metal artefacts, it seems likely that the rubbish pit and the stone arrangement are related to the Range Hotel. While not a central focus of this research project, identifying the exact location of the Range Hotel would add to our understanding of the site and serve to help protect the heritage of the hamlet.

However, materials associated with the blacksmith at the Range Hamlet (horseshoes, nails, worked metals) could still be present at the site but remain undiscovered due to both the extensive area the hamlet covered, and the minimal excavation work conducted thus far. Previous fieldwork by Marianne Clarkson during 2008, 2012, etc. revealed other potential rubbish pits (indicated through bottle scatters) which could be associated with the blacksmith or other domestic residences in the hamlet. Tangible evidence that indicates the presence of horses in the area has been limited, including the earlier mentioned horseshoe fragment located on the November 2020 survey in which a deteriorated wagon wheel was also observed rested against a tree on Page Road. In addition to these finds, both Clarkson's earlier excavation and the 2021 excavation uncovered several metal loops chained together. Clarkson identified these artefacts as part of a horse hobble, upon re-examination and comparison this assertion appears correct as detailed in Figure 6.2.



Figure 6.2: Diagram illustrating 2008 metal artefacts (red) and 2021 metal artefacts (blue) in comparison to horse hobbles that were used in Queensland between 1860-1970. (Image: Clarkson, adapted by England, 2022)

While it is unclear if these artefacts represent evidence of metal working at the assumed site of the Range blacksmith, they do add to our understanding of the site as a whole and provide further insight into the agency of horses as we can see that the foraging habits of these animals were controlled by their human companions. It should be noted that a horse hobble is a metal chain or leather strap which is used around the front legs of the animal in a similar fashion to a pair of handcuffs. This restricts the animal's movement to no more than a slow meandering pace, allowing the horse to forage and feed, but posing little risk the animal could bolt or travel long distances. Horse hobbles were therefore used when the rider wished to allow their animals to feed and graze with little supervision, but not wander too far that they might be unable to run off or escape (Binney, 2005:92; McLaren, 2011:160). The presence of horse hobbles at the site informs the thesis as to the measures taken by riders to control their horses at the site and further suggests that a well-fenced holding pen may not have been established during the time the horse hobbles were employed. Additionally it could potentially indicate that the volume of horses travelling through the site was so large that not all animals could be accommodated within the fenced stable area at the same time. It is also worth noting that the Hervey Range roadway was initially constructed as a stock route and operated as such until the late 1960s, and so horse hobbles would have been common in use during this entire period given the lack of fenced areas capable of securing large mobs of livestock (Griffin, 2014:16; Smith and Dalton, 1995:66).

It is interesting to note the lack of other horse paraphernalia relative to another site along the Hervey Range Roadway, that of the Alice Hotel. At the Alice Hotel, some 15km further east, large numbers of discarded horseshoes have been observed and identified by Townsville City Council heritage officers during their assessment of the area in the 1990s. This indicates that horses were being shod there and wore horseshoes as they travelled along the Hervey Range Roadway (Townsville City Council, 2000:2). This also further challenges earlier observations in the thesis where the historical and archaeological records demonstrated very different levels of visibility, with the written literature detailing a great deal of horse traffic, whereas limited physical remains were observed.

The presence of discarded horseshoes at the Alice Hotel and the absence of such material at the Range raises additional questions around the value of metal during the mid-nineteenth

century as the Range Hotel operated until 1884, whereas the Alice Hotel operated until 1903. If metals were not as readily available during the mid-nineteenth century, this might suggest that the Range blacksmith did not discard horseshoes that could have otherwise been repurposed and reused if iron was a highly sought-after material in short supply on the frontier. The blacksmith at the Alice Hotel, however, operated closer to 'civilisation' and the port of Townsville into the early twentieth century when metal may have been more readily available, and thus horseshoes were more likely to have been discarded rather than repurposed if these materials were more accessible during its operation.

The discarded horseshoes at the Alice hotel site indicates that animals traversing the Hervey Range roadway were at times shod and their worn shoes were discarded rather than repurposed. Considering the steep ascent from the Range hamlet up Thornton's Gap to the top of Hervey Range it would seem likely that horses that had been shod would be better equipped to deal with the notorious steep incline (Binney, 2005:191; Kennedy, 1992:19; Sparkes 1975:21). Given the distances and challenges faced by livestock who travelled along the Hervey Range Roadway, the large workforce of draught horses utilised by carrier teams would have most likely engaged the services of the blacksmith at the Range camping ground with some regularity, for vehicle/animal maintenance at a minimum. As discussed earlier in this chapter, it is interesting to note that despite the prevalence of these carrier teams along the Hervey Range roadway, no horseshoes were uncovered during excavation and only limited paraphernalia associated with horse upkeep (horseshoe nails, hobble chains, rivets) were identified at the Range Gazetted camping ground. While it has proven difficult to ascertain the exact location of the blacksmith at the Range Gazetted Camping Ground it is important to understand what this structure may have looked like or what its operational features were. To this effect we can look at known blacksmith structures such as those pictured in Figure 6.3 (a Townsville 1872 Blacksmith, overpage) and Figure 6.4 (a Brisbane 1888 Blacksmith, overpage) to identify key features required by these businesses to operate.

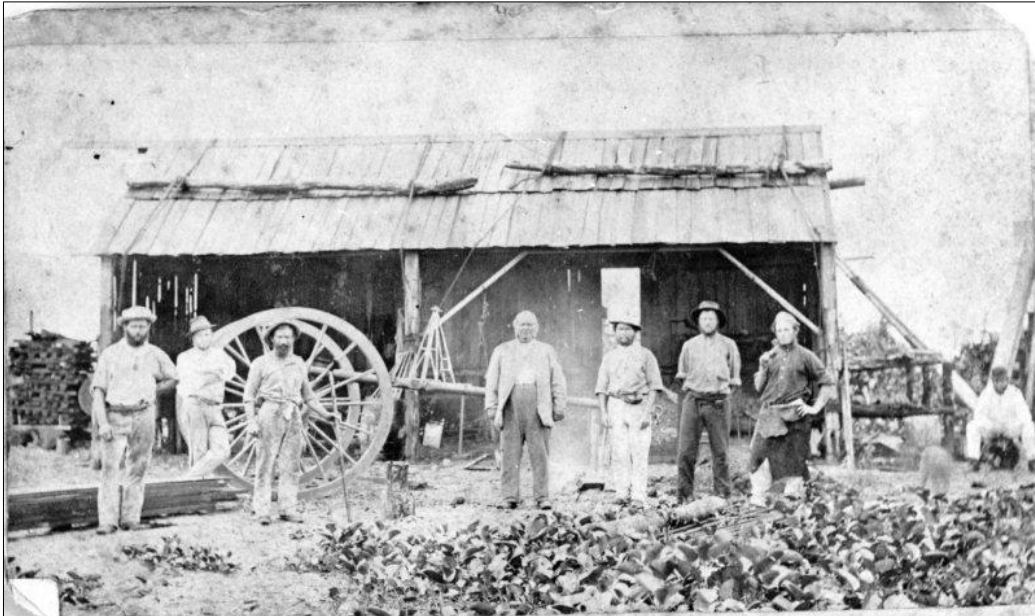


Figure 6.3: Unknown Blacksmith shop in Townsville, circa 1872. (Townsville City Library: 0011900)

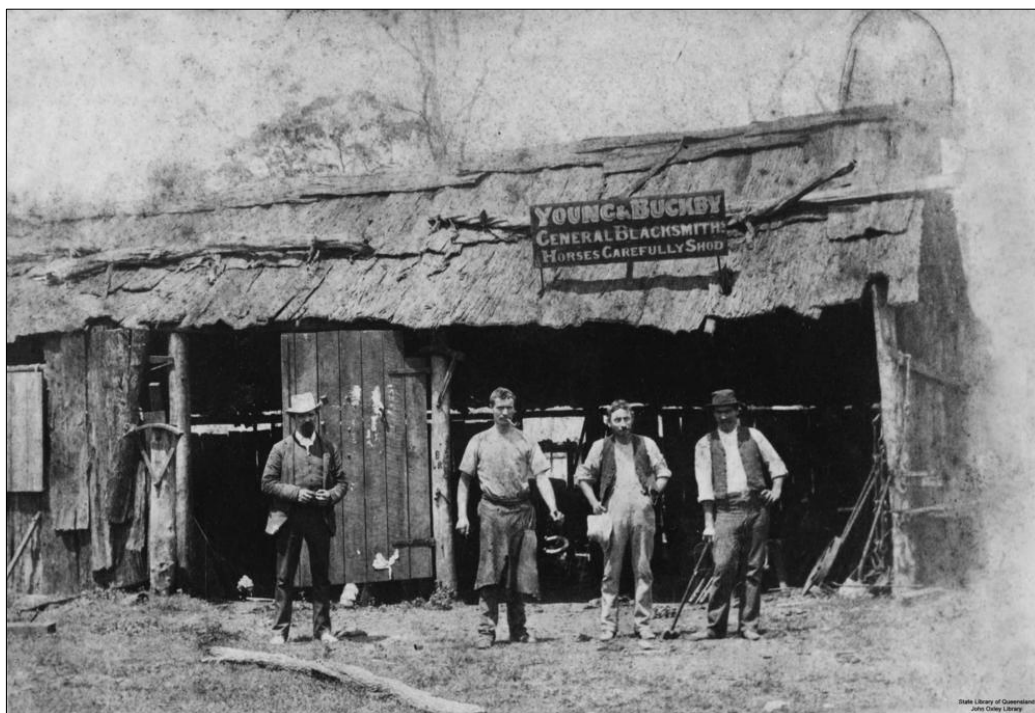


Figure 6.4: Young and Buckby Blacksmith shop on Oxley Road, Brisbane, circa 1888. Note the prominence of '*horses carefully shod*' on the shop signage. (State Library of Queensland: 26262748)

In both the above images it can be observed that the blacksmith structure itself is long, narrow and of a rectangular design. It can further be observed that three sides of the structure are walled while the fourth or front side is open to air, sunlight, and the elements. This is intentional in design as sufficient ventilation is required when blacksmithing, both to

reduce smoke in the work area, but also to allow airflow into the forge to keep the fire alight; also note the high ceiling to reduce the build-up of smoke (Andrews, 1977:18). The forge would have been located in the darkest part of the structure so that the blacksmith could adequately judge the heat of the steel (by colour), which is otherwise difficult to achieve under direct sunlight (Andrews, 1977:18).

In both images of the blacksmiths we can observe that there is no foundation for the shop floor; there are however at least six posts going into the ground as support for the structure. This is important to note as at the Range camping ground there is no obvious indication of a floor foundation around the assumed blacksmith forge, there is however indicators for the presence of postholes in discoloured soil, see Figure 6.5.



Figure 6.5: The possible location of a posthole on the graded roadway indicated by darker soil in a square pattern. This potential posthole was found parallel to the assumed blacksmith forge at the Range Gazetted Camping Ground site. (Image: Author, 2021)

When comparing the two blacksmith shops indicated in Figures 6.3 and 6.4, we can observe the Townsville blacksmith shop used a timber roof while the one situated in Brisbane used a bark roof. Both, however, have logs lashed to their roofs for added stability as the open three-walled design of these structures meant winds would cause an updraft and weaken the roofing (Andrews, 1977:19). However, it must be noted that the two blacksmiths' structures examined previously were both located in a major settlement, while the Range

blacksmith was located on a gazetted camping ground. It is therefore possible that this structure would have had limited access to cut timber or iron roofing, and therefore could have been constructed from more widely available materials such as ironbark branches, see Figure 6.6.



Figure 6.6: A bush blacksmith near Sapphire, Queensland, 1905. Note the simple design of the structure made entirely of roughly sawn ironbark branches. (State Library of Queensland: 31086)

The wooden materials of which these shops were constructed would have deteriorated over time and thus no longer be visible within the landscape after the structure had been abandoned or disused, especially if made of roughly-hewn ironbark branches. This is another reason why identifying the exact location of the blacksmith at the Range camping ground has proven problematic as physical evidence for the presence of these structures is difficult to detect or identify with any degree of certainty. This is why rubbish pits with associated materials remain possibly the best indicator of the presence of blacksmiths, hotels, and domestic residences within the physical landscape itself.

It should also be noted that blacksmiths and the need to shoe horses was an undertaking that proved very necessary up until the mid-twentieth century as motorisation of transportation remained relatively low in Australia during this time (Andrews, 1977:19). Therefore, the many tools of the blacksmith trade (most notably the anvil) were seldom discarded given their important use and considerable cost. These tools remained in use not

only in rough frontier areas, but also in larger metropolitan areas where harness and draft horses (for wagons and coaches) were still in operation and thus still required horseshoes, see Figure 6.7.



Figure 6.7: A blacksmith and apprentice working on draught horseshoes in Pyramid Hill, Victoria during the 1930s. (State Library of Victoria: 363319-E)

However, despite minimal amounts of archaeological artefacts associated with horses and the progress industry being discovered at the Range Gazetted Camping Ground, other tangible evidence to the operational requirements of horses is known to have been present, specifically stables which were a service provided by the Range Hotel, see Figure 6.8.

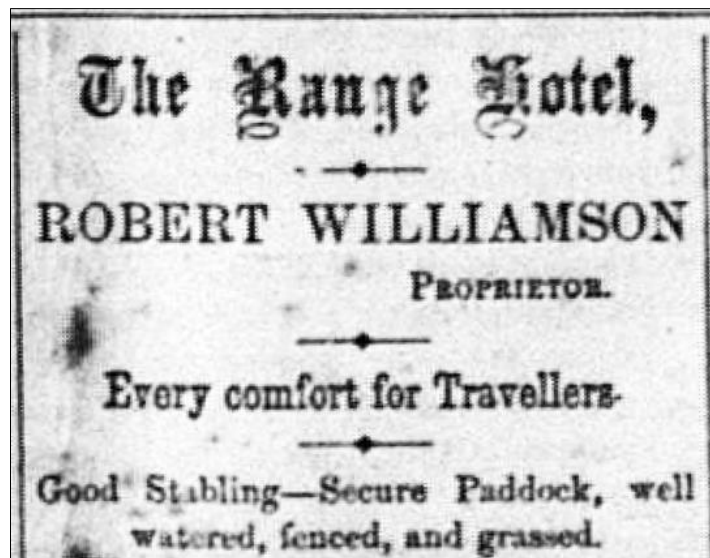


Figure 6.8: Robert Williamson's advertisement for The Range Hotel advertising good stabling, secure paddock, well-watered, fenced and grassed. (Cleveland Bay Express and Cape River Mining News 1868)

It is perhaps also relevant to note that Robert Williamson (the second proprietor of the hotel) was the second person (after John Melton Black) to take wagons through Thornton's Gap, reportedly taking two teams carrying seven tonnes in September 1866. By December of the same year there were reportedly twenty carrier teams operating along the Hervey Range roadway (Gibson-Wilde, 1984:62; Griffin, 2014:68).

Given the amount of detail provided in Robert Williamson's advertisement dedicated to the needs of livestock (stabling, secure paddock, water, fencing and grass) it is suggestive that the needs of animals were just as important, if not more important than those of human travellers.

This information is of great value when informing the thesis as how to address the first research question; how does the agency of horses and other livestock affect the pattern of settlement? In this instance, the presence of a stable at the Range Gazetted Camping Ground indicates that human beings had to respond to the operational needs of horses (and other livestock) by providing shelter, secure fencing, access to water and suitable grazing. However, it is surprising to note a lack of discussion or research into stabling during the nineteenth century frontier of north Queensland, given such structures would have been invaluable in maintaining the health and condition of the animal population, upon which the progress industry relied.

It is worth noting in this regard the role stables played and why they would have been a necessity in maintaining healthy working animals. Firstly, horses are ill suited to tropical or wet climates (such as found in parts of north Queensland) as their hooves act like a sponge, where when wet, they will swell in size, become softer, weaker and can allow cracks and infections to fester (Parsonson, 1998:121). It is therefore important for horses to have access to adequate stabling where they can rest in a dry environment conducive to the health of their hooves. A stable with a dirt floor in this respect is not ideal as the soil would retain water and lead to moisture and mud getting into the hooves. A stone floor that had been scattered with hay is preferable as this would allow for better drainage, while still providing a soft surface for the horse to stand upon. Furthermore, as horses in the stable would defecate, the stables would regularly need to be mucked out, usually once a day if the horse is permanently stabled (Parsonson, 1998:122). The use of a stone floor with hay would allow for wet or soiled material to be easily removed and replaced with a fresh dry

hay replacement, whereas a dirt floor would require the wet soil to constantly be changed for dry soil, (a significantly greater undertaking) (Parsonson, 1998:122). This indicates the importance of good dry stabling and underlines why it was important for the Range Hotel to provide such a structure and services for equine travellers.

While the location of the stables at the site is not known, Clarkson's 2012 excavations did reveal a large stone floor arrangement in close proximity to the site of the alleged blacksmith forge, see Figures 6.9 and 6.10 (overpage).

What is most interesting about the discovery of the stone flooring at the site, is that it is unlikely to be the Range Hotel, given that the Range Hotel is reported to have had a foundation made from crushed termite mounds similar to the Alice Hotel (Gibson-Wilde, 1988:117). Further excavation work and surveys undertaken by Clarkson around this stone feature also failed to identify any bottle scatters which are otherwise prevalent throughout the landscape. It is therefore likely that this stone floor could be associated with the '*good stabling*' advertised of the Range Hotel. This assertion is further strengthened by the presence of a nearby and well-watered stream approximately 40 meters north of the stone flooring. This could potentially be a water source for domesticated livestock accounting for the '*well-watered*' reference from the hotel's advertising.

It is of great interest to this research thesis that despite the presence and importance of horses and carrier teams in the historical literature, physical evidence of their use and presence remains difficult to detect or identify with any certainty at this site. This raises the issue of how archaeologists might investigate the presence of domesticated working animals within a landscape.

The Range Gazetted Camping Ground Summary

A core aim of this research project is that of heritage protection and preservation, specifically with regard to animal history and cultural practices associated with horses. To that end, previous fieldwork conducted by Clarkson and Hatte, as well as fieldwork undertaken by this research reveal the difficulty in clearly identifying and establishing the boundaries of structures and features of importance within the landscape (such as the blacksmith, stable, hotel, etc.). However, successfully doing so would more likely protect such features and add to the existing heritage status of the site. In terms of addressing heritage protection for equine history and cultural practices it is important to note the key difference between this research project and previous archaeological research in the area. Earlier research conducted by both Hatte and Clarkson has focussed on animal agency and history, and the importance of domesticated livestock to north Queensland's Progress Industry. In comparison, Clarkson's research viewed the site as a cultural landscape with a focus on the human social history of the area (in particular with a gendered approach). Clarkson's research project greatly added to the understanding and heritage protection of

the area, which was not possible by Hatte, who in comparison was engaged in a cultural assessment of the site with the ultimate aim of mitigating damage to the area when fibre optic cable was laid.

The research reported in this thesis further adds to our understanding of the site, its boundaries and the underlying importance of the structures that were present in the landscape by assessing their contribution to north Queensland's early economic development through the lens of animal history and animal agency. The close archaeological examination of this one site provides insights into the workings of the network as a whole. While there is still much to do at the site of the Range Gazetted Camping Ground, the research and results of this thesis have provided additional insight into the historical significance of the study area in relation to north Queensland's Progress Industry, which will now be examined further.

6.2 The Progress Industry in North Queensland

One of the key historical outcomes from the introduction of horses to Australia is how necessary these animals were to the 'progress industry' as previously discussed in **Chapters 2 and 3**. In terms of observable evidence of the progress industry along the route from Townsville to Dalrymple (and other road networks into the interior) historical maps are of great value in identifying and establishing sites of importance to this endeavour, see Figure 6.11 (overpage).

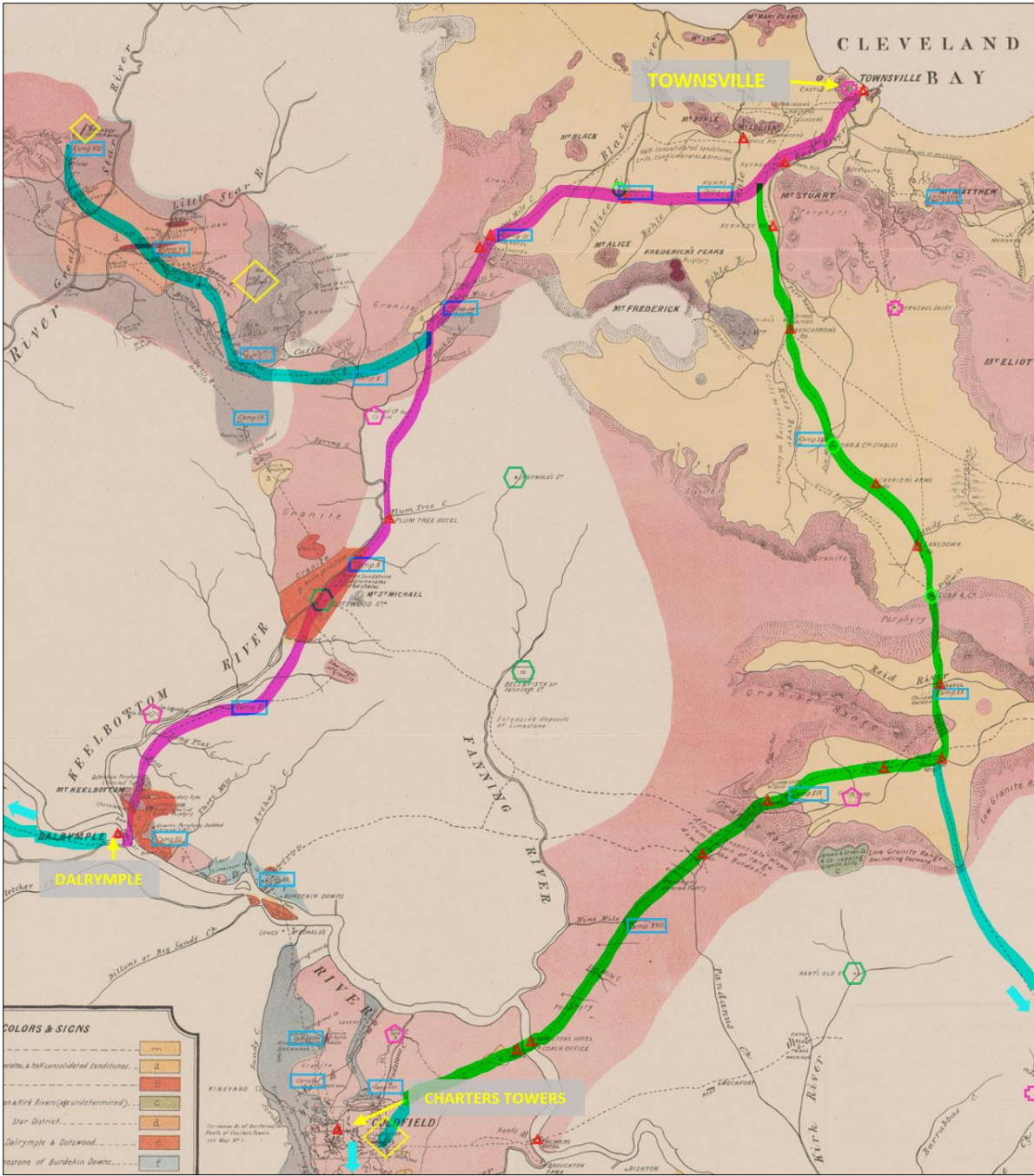


Figure 6.11: Robert Logan Jack’s 1878 Geological Map of Charters Towers & the Coast – adapted by England, 2022, to illustrate key elements of the Progress Industry.

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When we use the lens of the progress industry and animal agency to examine the 1878 geological sketch map (above) for Charters Towers and the coast by Robert Logan Jack we can identify two main road networks from Townsville servicing the progress industry and interior pastoral stations (indicated by the pink and green roadways). In particular, the

Hervey Range Road network, indicated in the pink, is a main focal point of research for this thesis. There are a number of hotels and gazetted camping grounds along this roadway which represent key locations and points of interest in Townsville's (and greater north Queensland's) progress industry. These locations are spaced approximately 13-15 kilometres apart, as that is how far livestock can travel in a day before tiring; which will be investigated later in in this chapter (Ballentine, 1976:22; Binney, 2005:28; Kennedy, 1992:118).

These gazetted camping grounds and hotels provided accommodation and a rest stop to both human and animal travellers along this roadway. Initially this was to service the interior pastoral stations (such as Woodstock) and their livestock of sheep, but would later also incorporate Dotswood Station, Dalrymple with a focus on cattle. This livestock (cattle) continued utilising this roadway until the late 1960s and early 1970s, during which time this roadway was classified as a stock route. The importance of this road network in facilitating this economic pursuit is evidenced by the presence of pastoral stations, livestock yards (cattle/sheep) and numerous gazetted camping grounds along the Hervey Range Road from Townsville to Dalrymple.

In particular, the presence of hotels, blacksmiths, and Cobb & Co. stables represent the vital physical infrastructure required by colonists to access, develop, and expand into the region. This argument is further strengthened when we examine Robert Logan Jack's geological map through the lenses of both the progress industry and animal agency. On Jack's map we can identify four pastoral stations, four livestock yards, four Cobb and Co. coach changeover stations, twenty-two hotels/bush-inns and twenty-one gazetted camping grounds.

However, much of this infrastructure is either no longer standing (hotels and stables), or has been altered, adapted, and changed over the past 150 years of European settlement and occupation (the roadway). Robert Logan Jack's 1878 geological mineral map therefore provides a snapshot of the scale and importance of Townsville's early progress industry and its significance to the success of both the colonial occupation and economy of the region.

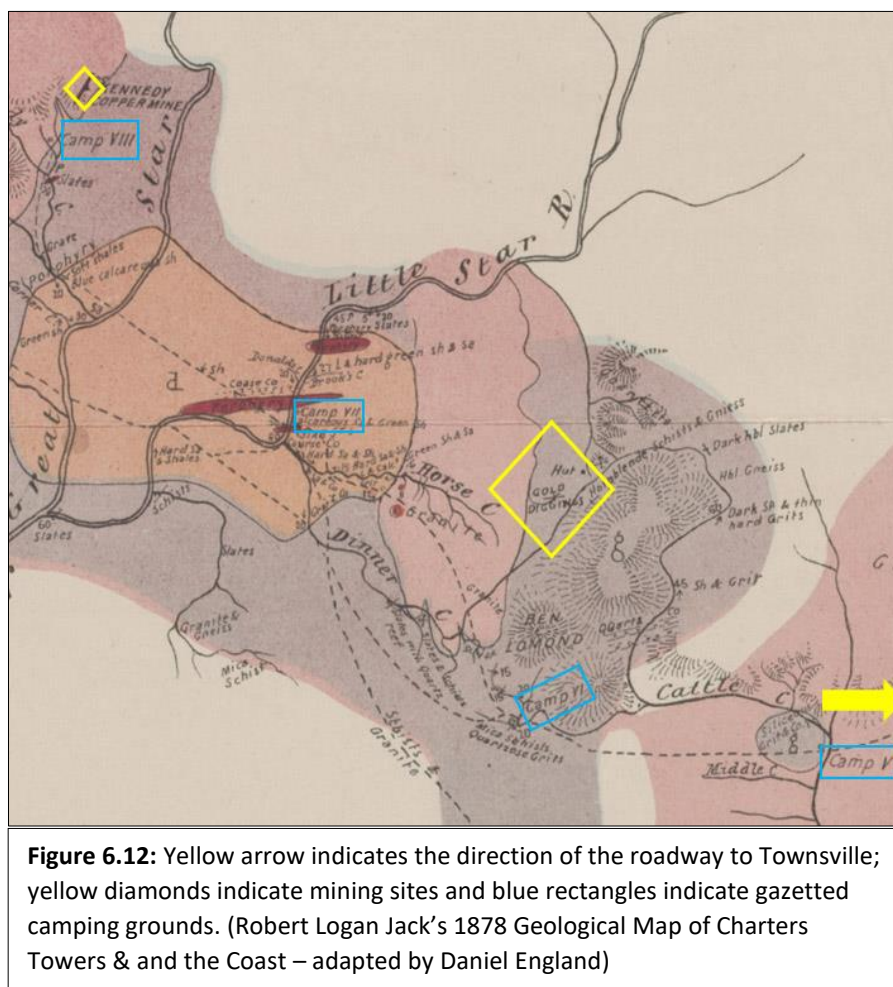
With the completion of the port in Townsville in 1864, the interior pastoralists finally had a reliable means with which to export their goods and source adequate resupply. Despite the advantages of Hervey Range Road connecting Townsville to the interior pastoral stations,

these early economic benefits were limited due to early failures of the sheep focussed pastoralist industry. Stocking sheep in the region was initially fraught with many difficulties as these animals proved entirely ill-suited for life in the tropical climate, where both the hot and wet seasons resulted in disease, loss of stock and poor financial returns on investment (Griffin, 2014:20; Parsonson, 1998:184). A boiling down works was quickly established in 1865 on the banks of Ross River in order to convert excess livestock into exportable tallow (animal fat). This would prove a grim necessity for pastoralists in later years when the international wool market became oversaturated and the price plummeted in 1869 (Griffin, 2014:161).

While domesticated livestock (sheep in this instance) proved inadequate for the early frontier economy the infrastructure that had been created by the progress industry (built with horsepower) soon became invaluable when gold was discovered at the Cape River in 1867. The rumour of the riches to be had spread through the hotels on Hervey Range Road back to Townsville. Equally important information on affairs of the state and world would also find their way to remote pastoral stations and mining camps thanks in part to the network of hotels and camping grounds where travellers socialised. As such, these sites may be viewed as some of Colonial Australia's earliest communication hubs, long before the appearance of radio, message boards and social media. In addition to the word of mouth (which was often under the influence of alcohol), the hotels on the camping grounds also offered more reliable means of communication and information as both mail and newspapers were also distributed on site, such as the Cleveland Bay Express which cost sixpence per copy in 1867 (Griffin, 2014:41; Smith and Dalton, 1995:78). An often overlooked element of this nineteenth century communication was the role of the horse who expedited the movement of humans and their distribution of information. An excellent example of how horses enabled communication across the vast distances of the nineteenth century frontier can be observed in the United States where the Pony Express (a mail service) operated between April 3, 1860 to October 26, 1861. During this time (prior the transcontinental telegraph), the Pony Express was able to deliver a telegram from the eastern coast of the United States to the western coast in an average of ten days (Smith, 1976:13). This was achieved through a series of change stations which housed fresh horses,

tack, and riders, not dissimilar from the gazetted camping grounds, their hotels and coach stables in north Queensland.

As discussed earlier in **Chapter 3**, Belich identified that the progress industry and its public works network of roadways, bridges, hotels, and camping grounds were vital to colonial economic interests when goldfields were discovered. This can be observed on Robert Logan Jack's map, with two mining locations (copper and gold) being present west of Townsville at Little Star River (1866) see Figure 6.12. Road networks and gazetted camping grounds which extended west from the Hervey Range Road network facilitated access to these resources for colonial economic benefits.



With the later discovery of gold at Charters Towers in 1871, the interior roadway network developed further with the initial Hervey Range Road network extending beyond Dalrymple to Charters Towers. A second (and more direct) road network also extended from Townsville southward to Charters Towers. This represented a major undertaking in the region's progress industry as this route included a rail line in December 1882. Six gazetted

camping grounds and eleven hotels were erected along this roadway to facilitate the transportation of mineral wealth from Charters Towers to the port of Townsville, and of supplies from the town to the goldfields. Three stockyards were present along this roadway, which indicates that pastoral economic pursuits continued alongside that of the goldfields. This would be of importance to the future economic portfolio of Townsville and the region as cattle (and their products such as tallow, hides and later meat) would come to form the major export commodity for the colonial economy after the goldrushes ceased to contribute economic benefits to the region (Gibson-Wilde, 1984:89; Griffin, 2014:56).

Crosby (1975:85), supports this assertion with a similar argument where he refers to horses as a means to an end, whereby they were a resource that enabled additional resources to be accessed and exploited both in terms of the goldfields and the pastoral industry. Specifically Crosby (1975:104) asserts that the pastoral industries of the nineteenth century would not have been possible if not for the horse, given both the size of cattle herds and the vast distances they had to travel were only made possible by replacing shepherds on foot with cowboys on horseback. Belich similarly identifies the importance of horses to the colonial economy of the progress industry as being at the forefront of expansion where they provided a source of labour and transportation, see Figure 6.13.

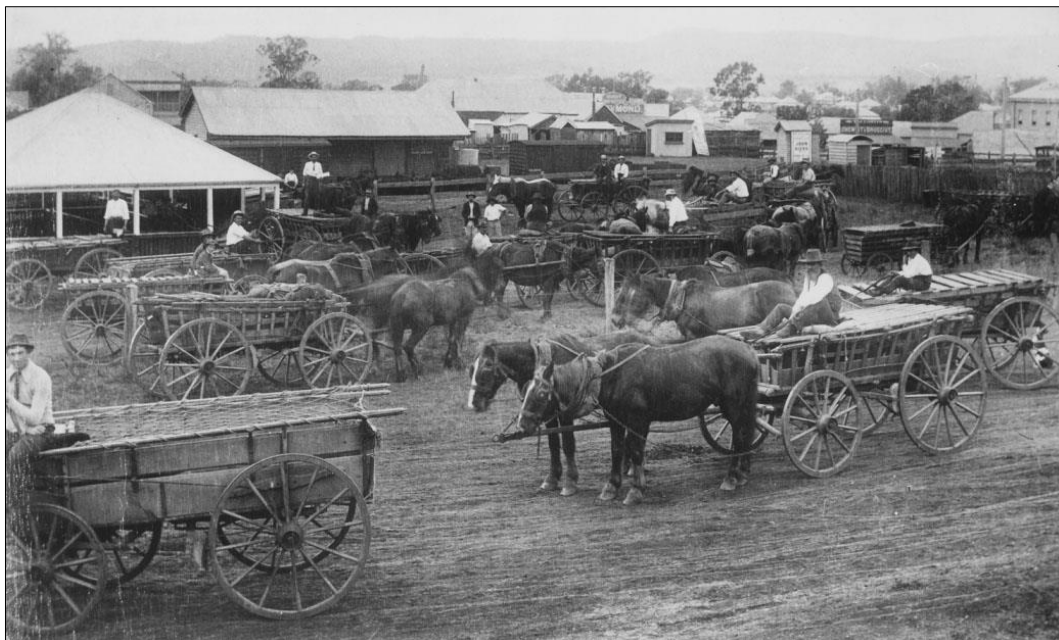


Figure 6.13: Loaded horse drawn wagons at Lowood, Queensland. Horses represented the cornerstone of the progress industry in terms of the transportation of goods, resources, and passengers. (State Library of Queensland: 5838382)

Crosby (1975:109) makes a similar claim with regards to colonial expansion as he argues that cattlemen herding their livestock were the ones pushing the frontier of European civilisation further afield. This assertion is of great relevance in informing the thesis as the research area of north Queensland was originally settled by Europeans for the express purpose of pastoralism (Gibson-Wilde 1984:9; Griffin, 2014:3). In this aspect, we can see the frontier of north Queensland is comparable to other colonial frontiers of the nineteenth century. In addition to this, horses played an important role in allowing settlers to access the mineral resources present at these sites, the goldfields themselves played an important role in growing the horse population of frontier settlements. By 1896 the population of horses had exploded, in Australia as there was one horse for every eight people. Further to this, Australia produced the largest number of thoroughbred foals, second only to the United States (Carruthers, 2007:1). Despite the small human population of Australia during this time, Cobb and Co. is famously reported to have had some 6,000 horses in harness for use every day by 1878, which to place in context was greater than the number of animals they had in service in the United States with its larger human population (Ballentine, 1976:30). Horses became one of Australia’s top exports during the latter period of the nineteenth century, and continued into the twentieth century, most notably during the first world war, see Table 6.1.

Table 6.1: Australia horse exports 1861-1931

Date	NSW	Vic	SA	Tas	WA	Qld	Total
1861-70	7139	25 639	351	4357	3101	60	40 647
1871-80	2322	26 855	378	953	5766	163	36 437
1881-90	4717	35 411	822	31	6238	301	47 565
1891-90	31 652	44 025	1668	106	922	12 189	90 562
1901-10	36 003	44 434	4222	347	633	59 187	144 826
1911-20	25 500	25 741	13 201	10	2167	62 448	129 067
1921-31	7460	12 223	4355	-	166	25 575	49 779
Total	114 793	214 328	24 997	5804	19 038	159 923	538 883

Table 6.1: Statistical Registrar and Commonwealth Year

The close relationship between horses and the goldfields is further indicated by a decrease in horse exports from the United States, South Africa, and Australia whenever a goldrush occurred due to local demand outstripping supply (Clarence-Smith, 2007:35). This serves to inform the thesis as to how goldrushes such as that which occurred at the Star River (1866) and Charters Towers (1871) may have resulted in increased animal traffic along the road networks and camping grounds of north Queensland, including that of the research area,

the Range Gazetted Camping Ground. In all three stages of the progress industry in north Queensland (boom, bust, and export rescue), domesticated livestock served to enable colonial pursuits and underpinned the economy of the frontier, both during and after the goldrushes. This is evidenced by the ever increasing number of domesticated livestock present in the Townsville district between 1866 and 1884, see Table 6.2, during which we can also observe the pastoralist economy transition away from sheep to cattle during 1870 (after the wool/mutton markets collapsed).

Table 6.2: Kennedy District livestock numbers 1866-1884

Year	Horses (No.)	Horned Cattle (No.)	Sheep (No.)	Pigs (No.)
1866	616	21,396	105,450	68
1867	585	34,048	153,031	81
1868	1,135	31,098	176,956	190
1869	528	29,249	52,793	260
1870	1,098	42,117	26,480	339
1871	1,327	47,828	3,483	374
1872	2,733	53,457	1,284	770
1873	1,027	31,607	302	497
1874	1,283	29,544	482	474
1875	2,762	32,241	1,932	518
1876	2,432	39,761	3,751	516
1877	2,657	46,418	2,108	662
1878	3,073	47,542	2,502	756
1879	3,331	56,990	6,250	818
1880	3,155	60,295	4,763	1,268
1881	3,246	71,723	7,321	995
1882	3,538	68,610	10,972	626
1883	4,659	84,390	13,972	1,763
1884	5,314	95,831	3,556	1,409

Table 6.2: District Registrar of Livestock and Commonwealth Year

The numerous goldrushes in north Queensland provided lucrative incentives for rapid settlement and economic development of the region, which we can observe in the 1886 Robert Logan Jack mineral map for Queensland, see Figure 6.14 (overpage), in which six goldfields are identifiable.

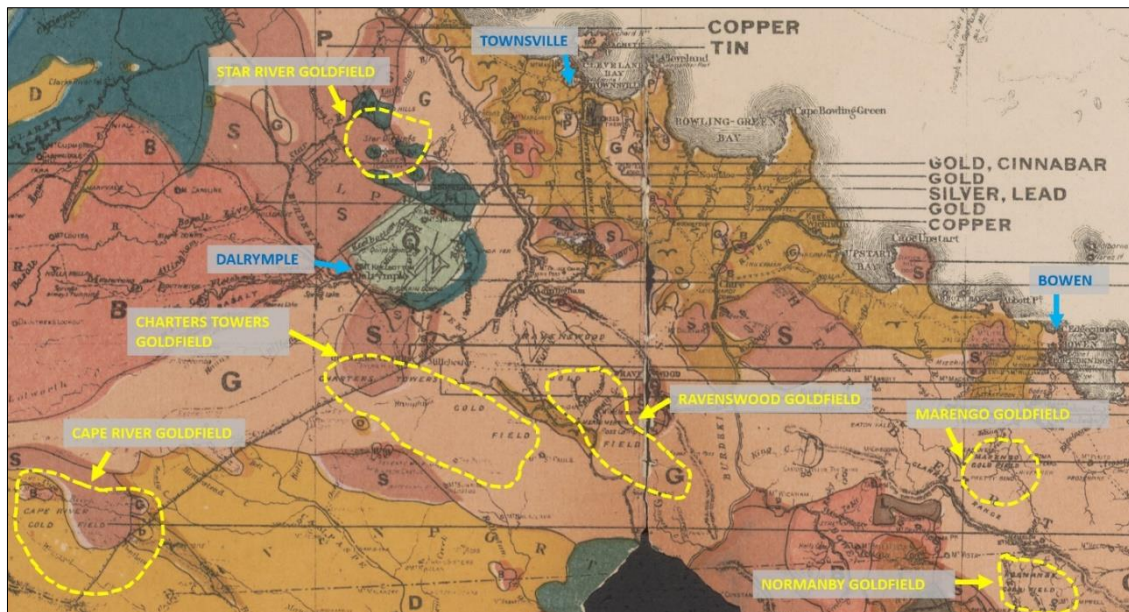


Figure 6.14: Robert Logan Jack's 1886 Queensland Mineral Map centred on the Kennedy District of north Queensland with goldfields indicated by yellow lines.(Image: National Library of Australia <https://nla.gov.au/nla.obj-231819141/view> adapted by England, 2022)

Despite the historical prominence afforded to the goldfields, Belich (2011:58) argues that they represent a short-lived (albeit highly profitable) phenomenon to the colonial economies of Australia, New Zealand, and the United States as the goldrushes themselves are limited in both time and space, whereas the pastoral industry would provide long-term financial opportunities. Belich further asserts that the pastoralist and agrarian economies that supersede the goldrushes benefited from the public works projects and infrastructure created by the mineral resource boom.

Belich (1996:371) further contends that the economic benefits that horses presented were not limited to specifically their labour as he argues the upkeep and operational requirements of these animals presented additional opportunities for service industries such as blacksmiths, saddlers, and even farmers who focussed on the production of oats to fuel the animal workforce. In addition to this, carrier and coach teams required wagons, coachbuilders and wheelwrights which presented further opportunities for economic development on the frontier.

This informs the thesis as to the importance of service industries which provided care and maintenance for horses, including the wagons and coaches they pulled. In relation to the fieldwork site of the Range Gazetted Camping Ground, this underlines the importance of the

blacksmith and stabling provided by the Range Hotel at that location. We can therefore see that the Range Gazetted Camping Ground was an important node of north Queensland's progress industry, interconnected with other camping grounds and sites which formed a network of roadways and service providers who enabled settlers to access the resources of both the goldfields and pastoralism.

Some physical evidence from the introduction of horses into north Queensland is still observable today as both the main road networks to Charters Towers remain and have been upgraded into modern roadways. The gazetted camping grounds that were located along these roadways, as well as the blacksmiths who were frequently located at these sites were done so, not out of human necessity, but out of the operational requirements of livestock. In particular the necessity to use greater numbers of horses in wagons and stagecoaches led to changes in the dimensions of roadways that featured high volumes of animal traffic. This is especially noticeable in Charters Towers where the Main Street was designed so that a team of twelve horses with a wagon would be able to turn, see Figures 6.15 and 6.16.



Figure 6.15: Charters Towers Gill Street, 1897, with horse and wagon traffic. (Image: State Library of Queensland: 7472162)

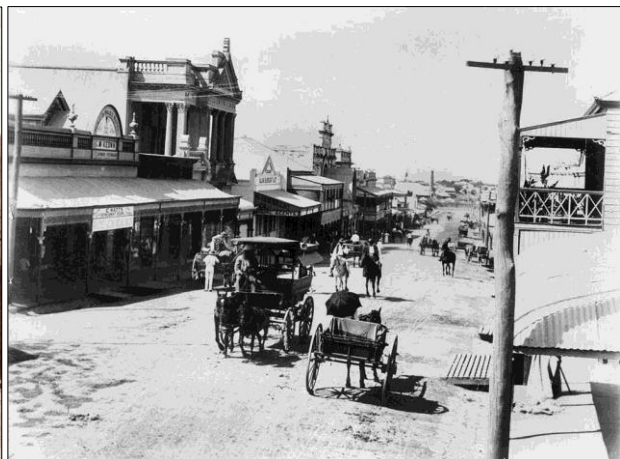


Figure 6.16: Charters Towers, Mossman Street, 1896, with horse and wagon traffic. (State Library of Queensland: 262627)

The Progress Industry in North Queensland Summary

This section has added to information on north Queensland's Progress Industry (which has previously been explored in **chapters 2 and 3**) through the analysis of historical maps, providing additional insight into the role of animal agency in influencing patterns of settlement. Furthermore, the relationship between goldfields and horses has informed the thesis as to the importance of these animals in enabling humans to access mineral

resources, and subsequently engage in the pastoral economies which followed thereafter. The observable outcomes of the progress industry such as roadways remain present and in use today across the north Queensland landscape, thus highlighting the valuable contribution of animals to human settlement. The reason for the specific placement of the infrastructure along these roadways (camping grounds, hotels, and stock yards) which serviced the needs of domesticated livestock will now be examined in further detail along with animal agency and cross-species relationships.

6.3 Animal Agency and Cross-Species Relationships

As discussed earlier, the gazetted camping grounds found not only along the Hervey Range Road, but also along the road to Charters Towers feature camping grounds, stockyards and in some locations Cobb and Co. stables, the majority of which are situated some 13-15 kilometres apart. The distance between these sites was not dictated by humans or human requirement, but by livestock as 13-15 kilometres is how far most livestock can travel in a single day before requiring rest (Ballentine, 1976:22; Binney, 2005:28; Kennedy, 1992:118). Thus, it is animal agency that determines the site of these camping grounds and what resources (stable, blacksmith, fencing, grazing, water access) are located there. Such information is valuable in providing insight into addressing the first research question; how does the agency of horses and other livestock affect the pattern of settlement?

Of similar significance however is the impact that domesticated livestock had on the physical landscape of Australia itself, as introduced European grazing animals altered the environment by their very presence. Australia as a continent had no large mammals, megafauna, or hoofed animals since the Pleistocene some 2.5 million to 12,000 years ago (Rolls, 2011:64). This is important to note as native faunal species such as soft footed kangaroos co-evolved with native grasses and did not contribute to soil erosion in the landscape (Melville, 1998:67). In contrast however, introduced European livestock such as cattle, sheep, and horses caused erosion with their hooves as they traversed the landscape foraging. In addition to this, these introduced species (sheep) would often overgraze native grasses, and crop them too close when feeding, where the grass would be exposed to harsher temperatures which impeded regrowth or in some instances the grass would perish (Melville, 1998:69). The feeding habits of introduced livestock exhausted native and

palatable grasses, which added to erosion. This in turn had a drastic negative affect on native fauna who struggled to compete with introduced livestock for subsistence resulting in a drop in the biodiversity of the landscape (Melville, 1998:69). Domesticated livestock would also encounter difficulties due to their exhaustion of native grasses which led to the decline of stocking rates on pastoral runs. In order to address the voracious appetite of livestock (often sheep), graziers resorted to draining swamps in order to stimulate the regrowth of palatable grasses for their stock. Despite this, sheep continued to crop the grasses close to the ground as they foraged, as a result these hard-cropped grasses were unable to retain water. The quality of the grasses for grazing dropped along with the water level and the continued erosion of the soil from hooves led to less water being absorbed into the soil, which resulted in increased flooding within the landscape. It is important to distinguish the role of horses here, as they do not crop grasses close as sheep do, but rather they pull and tug clumps of grass which disturbs the soil. The main cause of environmental damage from horses however is the manner in which their hooves compact and trample the soil which limits vegetation regrowth.

As a result, the Australian landscape changed irrevocably due to the grazing habits of introduced livestock from pastoralist endeavours, which included sheep, cattle, and horses. Environmental historian Stephen J. Pyne who has written extensively on European agricultural practices in Australia argues that despite European interference in Indigenous fire stick burning and landscape management practices, the environment could have tolerated these changes, but not the introduction of livestock. Pyne (1998:200), specifically notes that the introduction of hooved livestock is to blame for the deterioration of the biodiversity of the Australian landscape as native grasses could not withstand the overgrazing, nor the soil tolerate the compaction and erosion caused by the introduction of hooved animals, see Figure 6.17 (overpage). Negative environmental impacts from the introduction of European livestock also occurred outside Australia on other continents such as North America when the Spanish similarly introduced cattle, sheep, and horses (Crosby, 1975:112).



Figure 6.17: Horses in a pasture, west of Townsville, 1869. Horses, mules, sheep, and cattle represent the first hoofed animals since megafauna to graze on the Australian continent which led to erosion. (Image: Townsville City Library: 0011499)

During the nineteenth century, Australia imported and subsequently adapted a variety of horse breeds from both Britain and America. This often produced unique breeds better adapted to Australian conditions, such as the Australian Stock Horse (Binney, 2005:11; Carruthers, 2008:18; Kennedy 1992:23; McClaren, 2011:201). Despite the adverse effects of horses (and other introduced species of livestock) on the landscape, these animals were of critical importance to the settlement of Australia, New Zealand, and the United States. Both Belich and Crosby frequently refer to the importance of horses to colonial conquest and expansion, however it is interesting to note that neither differentiates between the various workhorse types or breeds. This oversight is of great importance with regard to understanding how little attention has been paid to these animals as they are unlike other livestock such as sheep or cattle, which have more limited roles, use and value within the frontier. It is therefore important for this thesis to briefly examine the three main types of workhorses, their advantages and use; these are saddle horses, harness horses, and draught horses.

Firstly Australian saddlehorses typically comprised of both Arab and English Thoroughbred lineages where the creature was heavier but not as tall as a pure Thoroughbred (Kennedy, 1992:78). Both Arab and English Thoroughbred horses are considered hotblooded, typified by their light coats, bone structure and at times fiery disposition (Pickerall, 1999:282). Furthermore, Australian saddlehorses featured prominently in early horse racing in Australia, which they excelled at, given their Thoroughbred ancestry (Binney, 2005:207; Pickerall, 1999:366). Australian saddlehorses as a result were capable of moderate speeds and high endurance without becoming exhausted given their less demanding energy output. Australian saddle horses' ruggedness (often adapted to local conditions) enabled them to carry out a range of tasks from pursuit, sharp turning, smooth carriage over ground and sure-footed jumping at speed. As such saddle horses were the favoured mounts for pastoralists who had to drive stock long distances as well as paramilitary organisations such as the Queensland Native Mounted Police, of which every trooper was issued with two horses for increased range and efficacy in pursuit (Barker et al. 2020:28). When saddlehorses become more available (cheaper) due to their increased supply in the late 1880s it was not uncommon for travellers to similarly operate with two horses, one for riding and one as a packhorse, see Figure 6.18.



Figure 6.18: Saddlehorses being used as both mounts and packhorses in the Blue Mountains on Wentworth Falls Track 1893. (State Library of New South Wales: 1557633)

Interestingly, the Australian saddlehorse would become known as a 'Waler', named after their state of origin, New South Wales. The term, like New South Wales itself before the separation of the other Australian colonies, stretched to other states and territories, and even extended to New Zealand's saddlehorses (Carruthers, 2008:16; Mincham, 2011:42). During the twentieth century the Australian saddlehorse would be shaped through selective breeding which incorporated the American quarter horse into what is now an established and unique breed, the Australian Stockhorse. This reduced the overall size of the animal from sixteen hands to fifteen hands, as well as producing what is classified as a warm-blooded horse which had a slightly heavier coat, stockier build and (slightly) more agreeable disposition (Pickerall, 1999:284). Australian Stockhorses remain in widespread use today for many pastoral and recreational activities as a general all-rounder (Binney, 2005:192; Carruthers, 2008:82; McClaren, 2011:201).

Secondly harness horses in Australia were often a mixture of Cleveland Bay's and Hackney's, both of which were warm-blooded breeds featuring a heavier conformation to provide greater strength and draught with decent speed. These horses were well suited to the task of coach and buggy transportation, able to pull a light vehicle while remaining at a fast trot. Both Cleveland Bay's and Hackney's were sometimes interbred to improve their smooth carriage. As a result harness horses were more commonly used in the transportation of passengers where both speed and (relative) comfort of travel was favoured. In addition, their more social temperament played an important role in their selection, given these animals were often required to work as part of a team rather than individually as in the case of saddle horses (Kennedy, 1992:88, Pickerall, 1999:294). After 1879, limited numbers of horses of the American Standardbred breed were incorporated after the successful creation of an American trotting register which called for horses to trot one mile in two and a half minutes, or for horses to pace one mile in two minutes and twenty-five seconds. Despite the American horse breeder's success in producing excellent trotting horses, limited numbers of these breeds made their way to Australia (Pickerall, 1999:361).

It is interesting to note that Australian harness horses were often selected from slightly smaller breeds than their American and English counterparts, largely due to the smaller coaches and buggies that were employed in Australia when compared to the heavier omnibuses found in Europe and North America see Figure 6.19 (overpage). This is because

the much larger population of American metropolitan cities necessitated bigger stagecoaches such as the omnibus, which required stronger harness horses, that were often bred with draught horse breeds (McShane and Tarr, 2007:192; Sparkes, 1975:84).



Figure 6.19: Day trippers on mid-sized horsecars pulled by harness horses, Enoggera Reservoir, Brisbane, ca. 1896. (State Library of Queensland: 3794110)

Finally draught horses consisted of a variety of larger European breeds that included Shire, Clydesdale, Suffolk Punch, and half-bred Clydesdales. Given the large stature and heavy musculature of these animals (broad thick necks were required for collars) they were well suited to apply their draught as traction (Kennedy, 1992:61). These horse breeds are classified as cold-blooded, typified by their thick coats, strong musculature, and bone structure. Of equal importance, however, is their temperament as the aforementioned breeds are known for their docile nature which is favourable for work with other horses under human direction (Pickerall, 1999:248). In a labouring role, a draught horse may work as an individual with a collar, harness, or chain where they provide torque power to various tasks such as acting as the torque power for unpowered machinery or hauling timber short distances. Draught horses were used to plough fields and at times could be paired with an ox in this endeavour, where the horse would set the pace and the ox would provide additional torque. Draught horses were more commonly used in greater numbers in carrier teams in which they transported goods and materials through the use of wagons, drays, and carriages, see Figure 6.20 (overpage), (Kennedy, 1992:62).

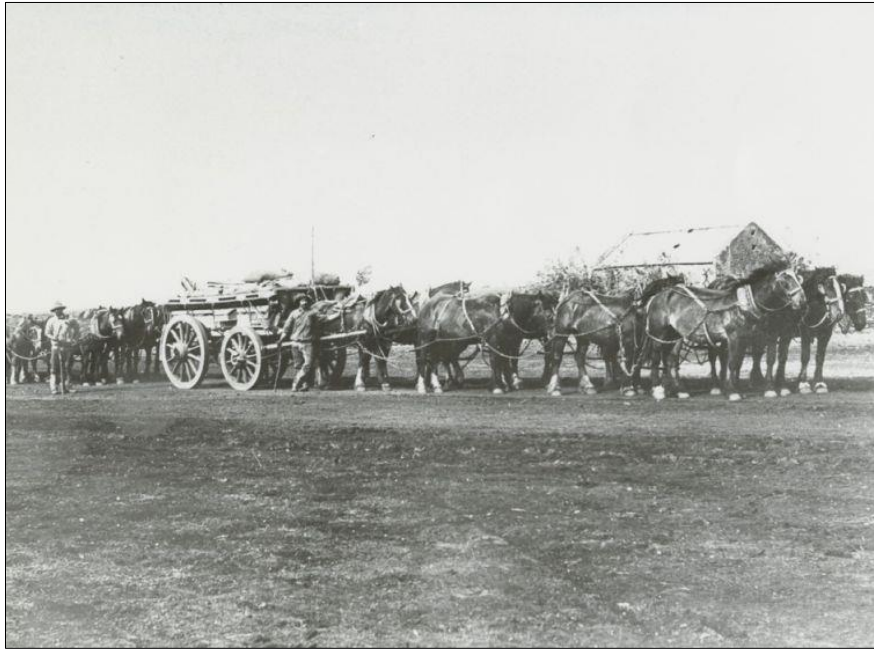


Figure 6.20: Draught horses hauling goods as a carrier team with three lead horses followed by three pairs. Lead horses were chosen for their cool headed temperaments to both set the pace and calm the other animals. (Library of South Australia: B-43572)

Feral horses, as a horse type are also worth mentioning as they are often overlooked by historians and archaeologists, this is perhaps because these animals operate outside of the regular bounds of human control where they exert greater agency than that of their domesticated relatives. Brumbies are a feral horse type unique to Australia which consists of a wide interbred mixture of different breeds, but most commonly feature Walers, Australian Stock Horses, Percheron's, Anglo-Arabs, and pony ancestry (usually Welsh mountain ponies) (Pickerall, 1999:269). These animals do not possess any uniform characteristics and can vary depending on which region in Australia they are located, with more hotblooded (thin coat) breeds being present in hotter climates (Queensland and the Northern Territory) and warm or cold-blooded breeds being more prolific in colder climates (Victoria and New South Wales) (Pickerall, 1999:289). In this sense we can observe the agency of these animals through their wild breeding and herding patterns, without any input from humans who have otherwise engaged in animal husbandry with the aim of producing new breeds or animals better adapted for specific tasks to benefit humans. Irrespective of their blood type (warm, hot, cold) the only consistent characteristic for Brumbies is their wild temperament and hardy constitution. In terms of modern Brumby populations, this is of relevance as these animals are often sought after for breaking in or taming as they frequently prove better

adapted to the environment in which they inhabited. However, in the context of nineteenth century Australia it is important to note that Brumbies occurred when domesticated horses escaped or were abandoned. However, in some instances squatters attempted to increase their stock by releasing horses into the feral population with the later aim of capturing and breaking in the offspring. This occurred during the goldrushes when there was a high demand for horses as a resource (Binney, 2005:98; Kennedy, 1992:90).

It is of interest to this thesis to note that the emergence of Brumbies during the 1850s caused concern about the 'deterioration of the horse stock' in New South Wales, where the government responded by implementing an impounding Act. This Act imposed a penalty on animal owners for allowing stallions (or bulls) to stray, and as a direct consequence the practice of gelding male stock became a norm. Further to this, stallions were close-quartered as both a means to accurately record pedigrees and avoid financial penalties should the animal escape (Carruthers, 2008:56; Kennedy, 1992:90).

In Queensland by comparison, Brumby mobs were at times rounded up for both the purpose of breaking them in to be used as stock horses, and also to ensure healthy horse stock in Australia. During this task, Indigenous Australians would frequently feature as early stockmen due to labour shortages, see Figure 6.21 (May, 1983:52).



Figure 6.21: An illustration depicting Indigenous stockmen herding wild horses (brumbies) on the Bunya Mountains in 1866, Sketched by R.W. Stuart. (National Library of Australia: IE1164704_FL1165122)

In this respect, we can see firsthand how the agency of horses caused humans to respond, both in terms of government policy and in the pattern of settlement with stabling and

fencing being employed to manage horse populations. From this we can deduce that the types and breeds of horses being utilised by colonial settlers in north Queensland would play a significant role in interpersonal relationships between humans and livestock with certain breeds and types requiring varying degrees of care and maintenance. When investigating animal agency, it is important to note that given the heavy workload of working horses it was common for them to be shod to maintain the condition of their hooves. While an individual saddle horse was often cared for by a single rider, carrier teams that consisted of multiple draught horses would typically have fewer drivers, and therefore access to blacksmiths was required to shoe these animals (Binney, 2005:111; Kennedy, 1992:67). This highlights the importance of the blacksmith that was located in the study area within the Range Gazetted Camping Ground as carrier teams with relatively few human hands compared to the number of animals they operated with, would most likely have frequently engaged the blacksmith near the Range Hotel. This can be viewed as humans responding to the agency of horses, in this case their wellbeing and operational requirements in order to perform their duties.

It is relevant to note that livestock (especially horses) played a significant role in ongoing relationships between Indigenous Australians and foreign (largely white/European) settlers. Firstly, it must be acknowledged that much of the information about these exchanges originates from white/European, colonial sources and rarely from accounts provided by Indigenous Australians. As European settlers (both miners and pastoralists) expanded into north Queensland they infringed upon territories and lands occupied by Indigenous Australians who viewed these infractions as unwelcome (Reynolds, 2013:148). Europeans were often anxious (or hostile) towards Indigenous persons they encountered, which often ended in violence; usually Europeans killing Indigenous Australians (Reynolds, 1993:6). Livestock were regularly a flashpoint between European and Indigenous Australians as wandering livestock (both escaped animals and animals left to roam freely) would interfere with food sources for Indigenous Australians which would result in the animal being speared (killed). Europeans would in turn respond through 'dispersing' (a euphemism for retaliatory killing) Indigenous mobs who were thought responsible, whether it was that mob who were responsible or not made little difference to Europeans at the time (Reynolds, 1993:7; Reynolds, 2013:138).

This turn of events saw a rapid increase in violence on the frontier between both European settlers (whom it must be acknowledged were invading) and Indigenous Australians. These violent interactions quickly escalated and are known as Australia's 'Frontier Wars' by modern historians, where north Queensland was a region of prominence for this conflict (Reynolds, 2013:8). As discussed earlier in Frontier Histories, horses played a critical role in these frontier conflicts as they represented a platform for mobile warfare which proved of greater value than firearms. As such, horses (along with other livestock) were regularly targeted (killed and speared) by Indigenous warriors during raids on pastoral stations, mining camps and outposts (Reynolds, 2013:148). Indigenous Australian resistance presented the colonial government (and its progress industry) with a challenge as economic investment in the region was at risk due to the conflict with major newspapers exhibiting the fear of progress being obstructed. In particular, in 1857 the North Australian Newspaper asserted that if security could not be provided to pastoralists in their endeavour then;

'...one of the finest grazing districts in this part of the colony will have to be vacated and left to the original inhabitants'

(North Australian Newspaper cited in Reynolds, 1993:56)

While these are important details to address and acknowledge within this thesis, the interpersonal and cross-species relationships that develop during the (relative) cessation of hostilities between Europeans and Indigenous Australians after the frontier wars (1870 onwards) are of greater value in addressing research questions concerned with human social history. North Queensland's early pastoralist industry (and the colonial economy itself) faced dire circumstances when the goldfields were largely depleted and investment in the region began to wane. The mass migration of settlers (and by extension labour) which underpinned the progress industry began to subside as it was generally viewed that the easy economic opportunities that stemmed from the goldrushes were over (Griffin, 2014:102). As a result pastoralists in turn looked to Indigenous Australians as a source of labour to staff their stations. On February 2, 1884, a correspondent in the *Queenslander* newspaper wrote.

'[there] was hardly a cattle station in the outside district [Kennedy/north Queensland] but what is not either wholly or partially worked by aboriginal slaves'

(Queenslander 2, February 1884:219, Cited in May, 1983:52)

Historian Dawn May has researched the topic of Indigenous Australian labour in the pastoralist industry in her book titled, *From Bush to Station* in which she elaborates that it is difficult to ascertain the exact numbers of Indigenous workers as they were not counted during census. Despite this, May (1983:54) estimates the Indigenous workforce on stations in 1876 at the very least included some 404 individuals and up to 1004 individuals in 1886, see Table 6.3.

Table 6.3: Kennedy District Pastoral Run Stock and Staff

Year	No. of Sheep & Cattle	Likely Labour Required	Census Figure	Probable Indigenous Australian Component	% of Total Required Workforce
1876	282,955 – Sheep 357,316 – Cattle	357 – Stockmen 142 – Shepherds 471 – Support Staff 970 – Total	566	404	41.6
1886	688,104 – Sheep 1,215,103 – Cattle	280 – Support Staff (Sheep) 1,215 – Stockmen 600 – Support Staff (Cattle) 2,095 – Total	1,091	1,004	47.92

Table 6.3: Stock and Staff on Kennedy Pastoral stations for 1876 and 1886, as calculated by Dawn May, 1983.

May (1983:54) argues the greatest advantage of Indigenous Australians to the pastoralist labour market was their availability, given the comparative scarcity of European workers. Another advantage was that given the large supply of Indigenous Australian labour, station owners could examine and select workers who demonstrated a predilection and natural talent for working with animals. May (1983:54) also asserts that station owners (and other European stockmen) recognised the benefits of employing Indigenous Australians in the pastoralist industry given their close spiritual links to country. This is evidenced (from a colonial perspective) by Cardwell Police Magistrate William Swan who wrote.

'The black man's extreme love for his own country will not suffer him to abide even the luxuriance at any distance away from there. Hence the impossibility of

concentrating tribes or of influencing them for good otherwise than by the system of administering the wants of each family or tribe in its own particular locality. It is a pleasure to have to relate of the pastoral tenants of this district that a few of these gentlemen have by partially adopting this latter system now established a modus vivendi with the blacks [Indigenous Australians] inhabiting their runs.'

(William Swan, Cited in May, 1983:54)

In addition to this, first nations stockmen in Australia proved invaluable not only for their love of country, but for their understanding of the landscape, which afforded them the knowledge required to move mobs of cattle across harsh terrain with greater ease than their colonial/European counterparts (McHugh, 2013:205). As a result many station owners would frequently have several Indigenous Australian drovers take charge of the herd during difficult sections, (such as river crossings) as first nation stockmen could identify the safest route for the mob to cross (McHugh, 2013:207).

While not a focus of this research project, it must be acknowledged that some of these Indigenous Australian stockmen and station hands operated as slave labour (during the nineteenth century) and all of them received less pay than their white/European colleagues (May, 1983:89). In the case of Indigenous stockmen in Queensland during the twentieth century (1939-1972), many were denied their wages until July 2019 when a class action resulted in the Queensland Government awarding an estimated 10,000 Indigenous workers with \$190m (shared) payout from stolen wages (Guardian, 2019). This underlines the importance of the Indigenous Australian workforce to the pastoral industry in Queensland and serves to further highlight how livestock management provide a central theme upon which First Nations and Europeans interacted with each other.

Through examining the way in which pastoralists and settlers responded to the needs and requirements of their livestock and horses, we can make broad inferences about the cross-species relationships that arose out of these interactions. To add to this, W.J. Gordon in 1893 provides some early observations of horses in an urban setting with his book, *The Horse World of London*. Gordon (1893:10) notes that horses were not only prolific to the city, but a fundamental requirement of urban society and its everyday functions. Gordon

(1893:15) contends that these animals, despite their widespread visibility within the cityscape of London were seen as a replaceable component by urban society, to be replenished or exchanged if broken or not fully operational. This observation further reinforces the idea that nineteenth century society viewed the living animal as merely a tool for human use. However, Gordon (1893:16) also argues that individuals who worked with these horses (such as blacksmiths, coach drivers, etc) on a daily basis did not fully share this view and formed a bond with their animal colleague.

“Though the horse is of course looked upon as a machine – for sentiment pays no dividend – there is a pleasant friendship between horse and man which not everyone would expect.”

(Gordon, 1893:16)

We can draw some parallel from the treatment of urban horses and apply this knowledge to that of the frontier horse. When we examine the images of the blacksmith shops previously in the discussion, the signage advertises *‘horses carefully shod’* thus indicating a degree of care may have existed (or been a necessity) between blacksmiths and the horses they shod. Although this sentiment could equally apply to the blacksmith not wishing to harm or hinder the performance of the horse as a *‘living machine.’* Furthermore, what is interesting in the earlier assertion by Gordon is that nineteenth century English society viewed the horse as a living machine, a sentiment that was shared across the Atlantic in the United States of America during this time (McShane and Tarr, 2007:112). In this respect the animal (horses) were frequently pushed to their limits by some carrier/coach operators with little respect as to the animal’s welfare, with broken or lame horses retired (to a boiling down works) and substituted with a replacement (McShane and Tarr,2007:185). We can therefore infer that many operators who worked with animals possessed a sentiment where the animal was a tool upon which their efficacy in daily operations was viewed of greater importance than their welfare. In north Queensland, this minimum input for maximum output mindset can also be observed with a carrier teamster sharing some insight into his notion of efficacy in a Six Penny Handbook.

'It is astonishing what horses will endure, when carefully managed, in the interior of Australia. I have on three several occasions seen horses travel without water to the close of the fifth day, and though, doubtless, they suffered much none were lost from this cause. The principal cause of loss is over-driving: and horses, seemingly in splendid condition, become leg weary, and knock up, when a day or two's rest might have set them up again.'

(Goyder in Penny Handbook)

From accounts such as these we can glean details into how nineteenth century societies viewed their animals, in the above instance it is not a case of wilful negligence, but rather treating the animal as a living machine that can be pushed to its limits for the benefit of the human operator. However, deliberate abuse and neglect did occur as McShane and Tarr (2007:47) reveal that during the winter months in metropolitan cities on occasion young boys would smear honey on iron lamp posts to lure horses to lick and thus get their tongues stuck. Other accounts of violence involved the tossing of firecrackers under the hooves of horses for amusement. In incidents such as these, however, it is important to note that the culprits of this violence are not directly involved in any work or operation with horses, although there were accounts of coach drivers whipping stubborn animals to death in fits of rage (McShane and Tarr, 2007:47). In America there was a decline in the public's acceptance of this level of maltreatment towards animals when in 1866 the American Society for the Prevention of Cruelty to Animals (ASPCA) was established, modelled after similar groups which had recently come to exist in London and Paris. The ASPCA's annual report in 1884 reveals that ninety percent of their prosecutions dealt with horses and emphasized their attempts to curtail cruelty towards these animals on the streets (McShane Tarr, 2007:47). Teamsters who were arrested for animal cruelty practices (heavy whipping, twisting tails or shoving a sharp stick up the animal's anus) routinely cited pressure from their firm bosses as the reasoning behind their actions. This is of interest as it reveals the impetus for these acts of cruelty may not originate from the individual who is working with the animal, but another person who has a degree of moral detachment, as well no physical proximity to the animal. In particular in 1898 New York City in the board of arbitration, a teamster accused of animal cruelty (towards his horse team) is recorded to have claimed that animal abuse was viewed as necessary by quoting his firm boss.

'God damn you, buy whips and I will buy horses. When he is dead, I will give you another one!'

(Kruse, cited in McShane and Tarr:2007:51)

Incidents such as these reflect the well-established sentiment of horses as living machines and not sentient beings. It is interesting to note that the number of animal cruelty incidents is higher in metropolitan areas than is the case for the frontier, although this is largely due to the excessive visibility of horses within the setting of a city and the larger population which were able to witness these exchanges. It can however be inferred that on the trail in frontier society that teamsters (either on a tight schedule or hot headed) did also inflict injury upon their animals.

While examining animal history can provide us with a more detailed and complete understanding of the past, it can also add to our understanding of human social history, in particular when we look at cross-species relationships that arose out of interactions between humans and horses. To this end we can look at the journals and diaries of settlers who interacted with livestock for a more holistic account of frontier history. One such written account that provides valuable insight into the cross-species relationships in the research area along Hervey Range Road is that of Lucy Gray, a settler who travelled along the roadway in 1868. Lucy Waters (maiden name) was born in Birr, Ireland on the 8th of August 1840. Classically educated and proficient in the arts, Lucy Gray moved to Australia in 1868 with her husband Charles Gray, having taken his surname. The pair were headed for the cattle station at Hughenden, which Charles owned and operated (Gray 1868:15). On her journey Lucy kept a journal in which she also included drawings she had produced, such as the sketch of the Alice Hotel. Written accounts that include drawings (such as Lucy Gray's) are a valuable resource that provide visual representations that further enable us to understand how the frontier may have appeared. This is due to photography being in its infancy during the nineteenth century and so photographs from remote areas are often rare, while sketches (which are more common) provide similar visual accounts. While there isn't specific detail as to when the Gray party left from Townsville for Hughenden, from the dates recorded we can deduce this occurred sometime in early October 1868, with several days in Townsville to arrange five saddlehorses and two pack horses for the journey (Gray

1868:15). Lucy Gray wrote about her first day passing several shacks along the roadway (Hervey Range Road) and the landscape itself featuring dense brush which she found ugly, and further elaborated that the trees along the edgeway provided scant opportunity to shade travellers (Gray 1868:15). When the Gray party arrived at the Alice Hotel by midday on their first day of travel Lucy recorded this event in detail.

'About 15 miles on our way we stopped at the "Alice Hotel" a rough wooden house with the usual wide veranda where travellers arriving deposit their baggage, saddles packs bags etc. A big rough looking woman came out and after inspecting, welcomed me like a sister and took me into the house and the funniest little box of a room nearly filled up with a large four post bed. We had ridden fast, and fifteen miles seemed a long way in the dust and heat. I was glad enough to have a rest and a bath. My hostess brought me in an immense iron tub and bucket after bucket of water. This was an expression of great hospitality, as it was all brought up a steep bank from the creek (Alice River) behind the house — I envied the others who bathed in the creek itself, a delightful shady place.'

(Gray 1868:15)

Details such as this allow us to compare a firsthand account of a bush inn and compare it against historical documentation of how these hotels operated. In the case of the Alice Hotel, this is quite significant as this site does not appear on any maps, yet we know it existed. Lucy Gray's diary therefore provides a detailed account of what the structure looked like and where it was in relation to the landscape. Moreover, Lucy Gray would also describe in detail the type of food and provisions which were offered to travellers at bush inns such as the Alice Hotel.

'When we assembled for supper we all looked better for our ablutions — I was so hungry I could have eaten sawdust — but I much preferred the fare provided — tea, good bread, fresh eggs butter cream, fried bacon & pork in various shapes — which (our hostess who waited on us herself) was very anxious that we should

eat. She had reared, tended fattened, and finally cooked it herself. Its brothers and sisters quite unconscious of its fate were grunting about outside.'

(Gray 1868:15)

This account provides additional insight into what other types of livestock were present on the Hervey Range roadway with pigs for bacon and cows for buttermilk being utilised by operators to feed travellers. This information greatly adds to our understanding of the social history of the region as these small mundane details are absent in historical archives such as newspapers or government records which instead detail prices, distances, ownership, etc. Lucy Gray's account also reveals that as her party consumed their supper and bathed, their personal mounts fed in the paddock provided by the Alice Hotel, while their packhorses were exchanged for fresh mounts, as this service had been arranged by Charles Gray in advance (Gray, 1868:15). Lucy Gray's journal also records her arrival at the base of the range (the fieldwork site for this research project) at the end of the first day, in which the party bivouac for the night in the Range Gazetted Camping Ground.

'At last on coming to the high bank of a creek, we saw the welcome light of a fire on the opposite bank. I wanted to sleep in the open air, but the dew was very heavy, and I had my first experience of "camping out" under a tent. Mr C had cut a quantity of rushes which made a most luxurious bed, but I was so tired from the ride, (for I had not ridden for nearly two years) and the novelty of the thing, that I could not sleep.'

(Gray 1868:16)

Although Lucy Gray does not provide details of the community who lived in this hamlet (such as the blacksmith or hotel) she does reveal that this was her first time in two years riding on horseback and found the experience to be novel. The following day Lucy Gray recorded their ascent up the range (at Thornton's Gap) in which she elaborates further on the horses in their party and how they were left to themselves (riderless) for the steep climb.

'The next morning we had to go up the ranges, at the foot of which we had camped. The road was very steep. We started riding, but were glad to walk

higher up. The horses left to themselves followed in zigzags, stopping in every little patch of shade to take breaks. About halfway up we crossed a narrow steep gully, at the bottom there was a lovely bit of tropical fruit palms, wild bananas, and trailing fern and above this, tall pines. A few more steep ascents and we were at the top from which we had a lovely view looking back towards the sea, the mountains on either side. All the country we thought so ugly last night looked soft and green, over the treetops stretching away to the sea, with the blue hills of the islands in the distance.'

(Gray 1868:16)

As mentioned earlier, nineteenth century photographs have proven rare for the frontier of north Queensland, Lucy Gray however drew the above scene she described, see Figure 6.22.



Figure 6.22: Lucy Gray's drawing of the 'Road to Dalrymple' 1868. The scene depicts the ascent up Thornton's Gap with Mount Black visible centre left and Magnetic Island to the distance in the centre. (Queensland State Library: 3723678)

This written account and accompanying image represents our best understanding of what the ascent up Thornton's Gap would have been like and greatly adds to our understanding of the region. Of most interest to this research project however is when Lucy Gray and her party arrive at the top of the range, in which she provides greater detail on the cross-species relationships between teamsters and their livestock.

'At the top we expected a descent equally steep, but we found ourselves in level tolerably bare open country — Near the top there is an inn [Eureka Hotel], a craftily placed at the end of the difficult ascent to catch travellers, especially dray men generally well-disposed just [when] they get there to refresh themselves. We saw some drays at the foot preparing to come up. They first put the bullocks of two teams, about 30, into one. The next step was a preliminary beating all round with heavy whips and sticks, the poor creatures not attempting to move until the word of command is given, and then they start and pull up steadily, all the company shouting and swearing at them by way of encouragement. They say some drivers make them pull without beating, but I fancy they all do it when the roads are bad. After we left the top and the view of the sea, the country was very monotonous low hills covered with different varieties of gum. In some places where the soil was thin and poor they resembled stunted apple orchards — small whitey gum trees scattered evenly over the hills — We stopped in the middle of the day to have lunch. The horses were hobbled (his fore feet strapped together) and turned out as at night — and a fire made on which the "billy" (a round tin can) is boiled for tea.

(Gray 1868:16)

This particular excerpt of Lucy Gray's journal is invaluable in informing the thesis as to the use of bullocks by carrier teams operating on the Hervey Range Roadway, given the historical literature places an emphasis on the use of draught horses. However, we do know draft horses were used both during the time of the Gray party's ascent as Eva Gray provided a rough sketch of the ascent, see Figure 6.23 (overpage) and draft horse teams (such as George Brabon and George Whalley) operated along this roadway during the early twentieth century see Figure 6.24 (overpage).



Figure 6.23: Sketch by Eva Gray illustrating horses pulling a carriage up the ascent at Thornton's Gap along the Hervey Range Roadway. (Allingham, 1987:333)



Figure 6.24: George Brabon and George Whalley horse team on Hervey Range Road 1930. (Townsville City Library: 636320)

Lucy Gray's written account also adds to our understanding of animal agency through the application of both hobbles to horses and also the use of whips on bullocks. While these are not necessarily affecting patterns of human settlement, the positioning of the Eureka hotel atop the range (and other hotels) and the camping grounds along the roadway reveal how settlers responded to the needs and necessities of their livestock on the frontier.

Furthermore, in later sections of Lucy Gray's diary she briefly mentions the presence of stockyards, which enabled the pastoralists to corral and move their herds. The details

provided in Lucy Gray's written account afford us with glimpses of interactions between settlers and their animals, while adding to the human social history of the region. Such details are of relevance to this thesis in addressing both the research questions of animal agency affecting the patterns of settlement and informing us as to how the cultural practices associated with livestock add to our own social history.

Animal Agency and Cross-Species Relationships Summary

This section investigated the environmental impacts caused by the introduction of domesticated livestock on the Australian landscape as well as assessed the breeds and types of horses present in use during nineteenth century north Queensland. Furthermore, this section has examined how humans in both urban city centres and the frontier viewed animals as living machines, and demonstrated varying levels of care and neglect towards the wellbeing of these creatures. Finally, this section explored the written account of Lucy Gray through the lens of both animal history and the progress industry to better understand the ramifications of cross-species relationships and how these might add to the social history of north Queensland. Thus far the thesis has focussed on identifying equine heritage and cultural practices associated with the progress and pastoralist industries, however preservation and protection of these practices has not been addressed. The following section will specifically address the research question of classifying cultural practices as heritage and how best to manage them.

6.4 Cultural Practices and Heritage

As discussed in the previous section, introduced livestock (including horses) have played a key role in the destruction of native Australian landscapes. When looking specifically at horses and their negative impact upon the environment, it is of relevance to this thesis to note this remains a contemporary issue across the globe. In Australia, at the Mount Kosciuszko National Park in New South Wales, a feral population of Australian Brumbies continue to exert negative pressure on the park's environment and ecosystem, most notably as identified by Pyne (1998:200), through erosion caused by their hooves, see Figure 6.25 (overpage).



Figure 6.25: Trampling and compacted soil damage to a pond in Kosciuszko National Park. (New South Wales State Government, 2020)

Of most interest to this thesis however is the ongoing debate between managing the heritage values of horses (Australian Brumbies in this instance) and the protection of the native ecosystem. The New South Wales Government passed the Kosciuszko Wild Horse Heritage Act of 2018 in order to manage the park's wild horse population while reducing their impact on the environment. On November 24, 2021, a wild horse management plan was adopted by the New South Wales Minister for Energy and Environment with the aim of addressing these concerns in which:

1. The heritage value of the wild horse population in parts of the park was identified.
2. The heritage value of the wild horse population in the park would be preserved with a population not to exceed 3000 animals in areas strongly associated with wild horse heritage values.
3. Environmental values of the park are maintained through the reduction of the wild horse population from an estimated 14,380 animals to 3000 by June 2027 with no wild horses being present in 68% of the park.

This indicates the relevance of discussing how to preserve horse heritage and cultural practices. In this instance we can observe that feral horses and their heritage protections are at odds with the conservation of native Australian ecosystems, although this is not the

case for domesticated horses. This is an important distinction as this thesis is concerned with the heritage and cultural protection of domesticated horses, not feral animals. However, given this research project's aims of classifying equine cultural practices and heritage value, the most significant outcome of the Kosciuszko Wild Horse Heritage Act is the framework that was used to assign a heritage value to horse populations. Key heritage themes identified by this act include the history of pastoralism and frontier pioneers, including the movement of stock across the landscape which links horse populations to historic heritage. In addition, animal management practices such as brumby running, horse trapping and local equine practices were identified as a source of heritage. Certain specific breeds of horses found within the Mount Kosciuszko National Park have also been assigned heritage value, as these animals are unique to the area, such as Kiandra Greys, Currango and Long Plain roans and bays. Finally, in terms of intangible heritage they identified stories, myths and legends surrounding the use of horses in the area, specifically in the case of the tale of *The Man From Snowy River*.

Given the diversity of both tangible and intangible elements, additional questions are raised as to how to best manage equine heritage. Principally, tangible elements such as camping grounds, blacksmiths, hotels, yards, cemeteries, and huts are identifiable, albeit sometimes difficult to locate in the landscape itself. In the context of the Range Gazetted Camping Ground, it has proven difficult to ascertain the exact location of such structures, but enough physical remains have been discovered to identify their likely presence within the general landscape, as part of a complex of identified sites and structures, and therefore protections have been applied to the site under both local council and Queensland State Government provisions.

What is perhaps far more challenging is assigning heritage value to the intangible cultural practices and values of domesticated livestock in this physical area. In addressing this question we can look at the Kosciuszko Wild Horse Heritage Act of 2018 where some stakeholders have identified that the aesthetic quality of horses being present within the landscape represents a feature of their overall heritage value, see Figure 6.26 (overpage).

3. The heritage value of sustainable wild horse populations

Sustainable wild horse populations in the park are of heritage value to many people in the local community and across New South Wales and Australia. The heritage values attributed to these wild horses by the community vary from person to person, but commonly include associations with past historical periods, events and persons. Key heritage themes often identified by stakeholders include the role of horses in:

- pioneering history and pastoralism (including transhumance, which is the seasonal movement of livestock)
- traditional mountain practices associated with stock management, brumby running and horse trapping
- legends, stories and myths of the Snowy Mountains (Context 2015).

There are both tangible elements (e.g. huts, campsites, yards, traps and tracks) and intangible elements (e.g. personal and community connections) associated with these heritage themes. Some stakeholders also identify the aesthetic qualities of being able to see horses in identified parts of the landscape as a feature of their overall heritage value (Context 2015).

In addition, advice provided by the Kosciuszko Wild Horse Community Advisory Panel (2020) is that some specific types of horses may have heritage values:

- Kiandra greys
- McDonald Silver and Taffy horses
- Currango and Long Plain roans and bays
- Cascade horses
- Byadbo and Pilot horses.

The park is one of 11 parks and reserves across Victoria, New South Wales and the ACT that collectively comprise the Australian Alps National Parks and Reserves – a national heritage place listed and protected under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*. The listing refers, in part, to some of the heritage associations identified by community stakeholders (Box 1) (Commonwealth of Australia 2008; Department of Agriculture, Water and the Environment 2021).

Figure 6.26: Excerpt from the New South Wales Wild Horse Heritage Act of 2018. Note that some stakeholders have identified the aesthetic qualities of the visibility of horses in the landscape as contributing to the heritage value of these animals.

From this we can ascertain that the physical presence of horses in the landscape is seen as a heritage value by some stakeholders. It is relevant for the thesis to note the similarities of this particular form of cultural and heritage value when compared to similar feral horse populations abroad, such as those in the United States of America and their population management plans.

In the Great Plains and southern border region of the United States of America there are some 70,000 free-ranging Mustangs, a type of feral horse unique to the region (similar to the Brumbies of Mount Kosciusko). Historically this horse breed underpinned many early pastoral and economic undertakings in the region from the 1850s to 1900s, in which the cowboys who undertook such practices were referred to as ‘mustang runners’ (Bradford and Pester, 2021). Just as the Waler, the Australian Stockhorse, and the Australian Brumby feature prominently in early frontier history, so too did the American Mustang in what is often referred to as the ‘Wild West’ era of the United States. As in Australia, the feral horse

population of Mustangs has similarly wreaked havoc on native ecosystems, with greater damage occurring in the latter part of the twentieth century due to the decline in predatory species such as wolves. As in Australia, equine management programs which include both culling and population relocation programs have sought to mitigate equine damage to the environment.

In 1971 the American Senate and House of Representatives passed into law the Wild Free-Roaming Horses and Burros Act which recognised the cultural significance of these animals and their heritage value (similar to the Kosciuszko Wild Horse Heritage Act of 2018). This Act declared that wild free-roaming horses and burros were living symbols of the historic pioneer spirit of the West and that they contributed to the diversity of lifeforms within the nation, thus enriching the lives of the American people. From this we can draw a direct comparison to the Kosciuszko Wild Horse Heritage Act where the horses being merely visible or present in the landscape are considered to constitute cultural heritage.

There is a significant difference, however, between the Kosciuszko Wild Horse Heritage Act and the Wild Free-Roaming Horses and Burros Act, in that the latter also awards protection to the equine population, in which they must not be captured, branded, harassed, or killed. It is specifically noted that in the United States that feral horses and donkeys are viewed as an integral part of the natural system of public lands. This is significant, as despite the equine population being an introduced and invasive species, it has been awarded protections given its prominent cultural and heritage value. Whereas in Australia, feral horse populations remain an invasive species, considered a pest and without any protections granted to them. One other difference is that horses were present in the United States prior the arrival of humans. These animals were re-introduced by the Spanish, and were possibly locally extinct from humans before this (Mitchell, 2015:33).

To expand upon the difference between feral horse protections between the United States and Australia we need only look at legislative restrictions with Australia. In New South Wales, feral horses are considered a Category 4 non-indigenous animal under the Non-Indigenous Animals Regulation of 2006, in which they are not afforded any protected status. In the Australia Capital Territory, feral horses are listed as pest animals under the Pest Plants and Animals Act of 2005. A feral horse population exists in the ACT within the Namadgi National Park where a horse management plan has been in place since 2005 to control their

population (Department of Territory and Municipal Services, 2005). In Western Australia feral horses in agricultural and pastoral areas are considered a declared species under the Agriculture and Related Resources Protection Act of 1976. Listed as category A5 animals under this act, landholders are required to reduce or control feral horse populations on their land (Dawson et al. 2006:11). In South Australia, feral horses are listed as a declared species under the Natural Resources Management Act of 2004. However unlike Western Australia, there is no statutory requirement for landowners to manage their population (Dawson et al. 2006:13). Feral horses in Victoria are also categorized as pests under the Catchment and Land Protection Act of 1994, while in the Northern Territory feral horses are classified as feral animals under the Territory Parks and Wildlife Conservation Act of 2001. When examining Queensland laws with regards to feral horses it is important to understand there is an estimated 200,000 feral horses, located mainly in the western and north-western areas of the state. These animals are not a prohibited or restricted invasive species under the Queensland Biosecurity Act of 2014, however, neither are they afforded conservation or protected status, which places them in line with other Australian states and territories.

From this we can see that across Australia the feral horse population of Australian Brumbies are considered pest animals with each state adopting policies towards their population control or management. However, irrespective of this feral horse population, we can see that in the Kosciuszko Wild Horse Heritage Act and the Wild Free-Roaming Horses and Burros Act that horses merely being present within the landscape can be considered upholding and maintaining their heritage value and honouring the cultural practices associated with early pioneering and pastoralism, despite potential conflicts with natural heritage.

There is another similarity between the United States and Australia when it comes to feral horse management in the form of these animals' value as a resource. Part of the population control measures in the United States allows for the Bureau of Land Management to capture, hold and offer the animals out for adoption (similar to how Mustang Runners would have operated during the 1800s). However, this is not without controversy as the American Wild Horse Campaign has argued that feral horse and donkey populations on public lands still pose a threat to the native flora and fauna and has instead pushed for other

methods of population control such as contraceptive methods or culling (Bradford and Pester:2021).

In Australia similarly, the feral horse population of Australian Brumbies possess value as a resource. In the Northern Territory and Queensland, some Indigenous groups still engage in the herding of these animals both with the purpose of retaining the animal for use in pastoralism and for export as meat for both human and pet consumption. In particular in the Kennedy district of north Queensland (where the Range Gazetted Camping Ground is located), there is a push by federal MP Bob Katter for funding to allow Indigenous groups to continue this tradition, as well as passing on horsemanship skills to at risk youths in lieu of detention or incarceration (Dawson et al. 2006:14, Dobbie et al. 1993:21). In addition to this, there exists a small population of Brumbies in the Bluewater area, some 20km northeast of the Range Gazetted Camping Ground. This population was left unmanaged until the early 2010s when traffic incidents on the nearby Bruce Highway involving these animals resulted in human fatalities. The Queensland state government responded with a culling program to reduce the size of the herd, which was met with resistance and uproar among local horse enthusiasts and animal welfare groups. A not-for-profit organization and charity named Bluewater Brumbies formed shortly after with the ultimate goal of capturing and rehoming many of these animals to horse enthusiasts around the region (McClaren, 2011:296). This particular scenario is frequent throughout all Australian states and territories when it comes to Brumby population control, whereby these animals are largely ignored until growing pressure warrants a reduction of the herd. Ultimately, state and territory governments have responded with culls that have produced often mixed results, such as the accidental killing of lawfully owned domestic horses who are kept pets. In lieu of an effective and consistent animal management program, not-for-profit organizations and charities have instead made inroads into managing these feral horse populations. In south-east and central Queensland an organisation known as the Brumby Project, has been in operation since the 2000s in which they capture feral brumbies, break the animals in and find new homes for them (McClaren, 2011:296).

From this we can see that despite the risks posed to native flora and fauna, feral horse populations and their effective management remain a topic of relevance and debate to contemporary Australians. This thesis however is not specifically concerned with feral horse

populations and their heritage value, but that of all horses which might be associated with north Queensland's early progress industry, pioneering history, and pastoralism. To this end, there still exists a large number of cattle properties in north Queensland where horses are favoured over helicopters and ATVs as a means of mustering and moving stock. Specifically the Wonderland Station operated by Geoff and Vicki Toomby, located on the Alice River Gazetted Camping Ground (some 15kms east of the Range Gazetted Camping Ground), still utilises horses to herd its cattle while also promoting traditional horsemanship skills associated with early pastoralist practices.

In New Zealand, another type of feral horse, the Kaimanawa horse has similarly presented challenges to the environment and raised issues around heritage protection. These animals are descendants of domesticated horses that were released during the nineteenth and twentieth centuries and were first reported in the Kaimanawa Range in 1876. European settlers deliberately released horses into the area (other captive horses have also escaped and similarly crossbred) during this time for the purpose of experimenting with producing hardier breeds. It should also briefly be noted that these horses continue to play a role in the social history of the region, with yearly round ups taking place, as both a means for humans to control the herd population, but to also maintain a connection to the cultural practice of mustering these animals (Mincham, 2011:321).

While Kaimanawa horses are feral horses, it is interesting to note that there is a concentrated effort by horse enthusiasts to classify these animals as a breed with unique characteristics similarly to the Kosciuszko case discussed above. This is also the case in Australia and the United States with their Brumby and Mustang populations, where there is an ongoing debate whether these animals really constitute a unique breed or a type of horse of mixed breeds. As discussed earlier, feral horses such as Mustangs and Brumbies, possess characteristics which vary greatly amongst the population with the only consistent trait being their wild temperament and hardy constitution (Carruthers, 2008:76; Pickerall 1999:340). Furthermore, in New Zealand there is a concerted push to classify the Kaimanawa horses as wild, rather than feral, despite these creatures being an invasive species introduced within the past two hundred years. Members of the Kaimanawa Wild Horse Welfare Trust continue to assert that these animals are more representative of a Zebra than a Brumby within the landscape they inhabit (Mincham, 2011:321).

Irrespective of this debate however, this thesis is more concerned with how the heritage value of this animal population is established. These animals are managed by the Department of Conservation in New Zealand and were listed as not protected (except within areas specified) by the 1953 Wildlife Act. However, from 1981 onwards these animals were provided with a protected area (the Kaimanawa region), in which their population is managed and controlled by the Department of Conservation. Interestingly, it is claimed that the heritage value of these animals is important not only to New Zealand, but the world. The reasoning for this assertion is the comparative lack of herd control (when compared to Mustangs and Brumbies). It is claimed that due to this lack of human interaction that the Kaimanawa horse reflects an animal with a higher degree of agency and presents an opportunity for scientific research into how animals adapt to an environment without human input.

American author Stephen Budiansky, who is widely published within the field of animal domestication, nature management and earth sciences, has explored this topic further and presents an argument for what could be viewed as a middle ground. Budiansky (1997:218) in his book *The Nature of Horses*, accepts the destructive nature of horses upon fragile ecosystems of which these animals are not part of the natural order and further warns of the shortfalls from humans indulging in allowing these creatures to run wild. He advocates strongly for the population control of feral animals from culling to contraceptive methods, where his views align with conservative government bodies. However, it is pertinent to note that Budiansky (1997:219) is a strong advocate for the 're-wilding' of horses. In this manner he warns against permitting 'feral' horses to subsist or reside in environments to which they are not a native species, but believes that horses (which have served their purpose as tools) should be released back into their original ancestral homelands. In this endeavour Budiansky (1997:219) provides an example with Przewalski's horse, (also known as takhi or Mongolian wild horse), where conservation efforts in the late 1990s led to an increase in their wild population. Over two decades of conservation and breeding programmes have resulted in Przewalski's horse transitioning from a 'critically endangered species' to an 'endangered species' (Rutz, 2014:2). Budiansky (1997:219) contends that these animals being returned to their place of origin is a means where humankind can maintain their ancestral links with horses and preserve fragile ecosystems. Przewalski's horse represents a

wild animal that was briefly in captivity for use by humans, where minimal amounts of cross-breeding occurred. Therefore, it is possible to re-wild Przewalski's horse into their native habitat on Mongolian Steppes, but the same practice is not feasible for the majority of domesticated horse breeds. Budiansky fails to acknowledge that many existing horse breeds do not originate from a specific natural ecosystem, these animals have instead been developed and shaped by humankind and the foreign environments they have been introduced to. The Australian stockhorse for example, a breed that was successfully established in the 1970s, is not a native Australian animal. English Thoroughbreds, which have been cross-bred with Arab, Barb and Turkish horses are equally not part of the natural ecosystem of the British Isles. Therefore Budiansky's (1997:218) model for re-wilding is inapplicable to the majority of domesticated and working horses who exist today. However, Budiansky's assertions that horses being present within the landscape represents the preservation of important cultural links with humans resonates with the previous arguments for feral horse control in Australia, New Zealand, and the United States.

To this end, when we examine feral horse species in the environment, we can observe an overlap between Mustangs, Brumbies and Kaimanawa horses when it comes to their heritage, in that all three are recognised as possessing both a historical value and intrinsic aesthetic value to the human population of their respective countries (Mincham, 2011:321). Within Australia however, it is interesting to note this lack of heritage value assigned to feral horses outside of Mount Kosciusko National Park, both across New South Wales and other Australian States. Given the effort that humans have dedicated to responding to control feral horse populations it is obvious that these creatures possess agency, and that often human involvement is required in order to oversee the management of affected areas. This suggests that the cultural value of the horse has a direct correlation to their proximity and use by human beings, such as in pastoralist or pioneering endeavours.

This assertion can be examined further through the means in which human beings have selectively chosen how to preserve animal history and heritage, as well as the limitations of such approaches. Most notably the Stockman's Hall of Fame, which was established in 1988, principally preserves the history of Australia's explorers, pastoralists, stock workers and Indigenous Australians. Animals and their contribution to Australia's exploration, settlement and development are not directly recognised from such a human-centred approach, again,

the animals are denied any sense of agency or independence. Instead, horses, cattle, sheep, and a myriad of other domestic livestock serve as a backdrop for the achievements of human beings, just as we have found within the academic literature. When focussed specifically on horses and their contribution to Australia and north Queensland's development and progress industry we can examine the Cobb and Co. museum which was built in 1987. Again, as with the Stockman's Hall of Fame, the Cobb and Co. museum is largely concerned with human heritage, with horses featuring as a tool which enabled human accomplishments, although the importance of horses and their contribution has been given greater weight in recent years. Further to this, the Cobb and Co. museum has introduced workshops centred around saddle making, coach wheels and other skills that were of importance to horse and coach maintenance. Another similar organisation which has focussed on the preservation of early pioneering techniques is that of the RM Williams Australian Bush Learning Centre in Eidsvold, of the North Burnett area of Queensland. This centre was established as a tribute to the pioneering spirit and character of the people of the bush. Similarly to the Cobb and Co. museum, informative workshops are held on tools for use with horses such as saddle and stock whips. However, the focus is again on human history and inventions, not that of animals. It should also be noted for comparison's sake, that in the United States of America similar institutions exist such as the National Cowboy and Western Heritage Museum in Oklahoma City. Established in 1955 as the Cowboy Hall of Fame and Museum (and later that year changed to National Cowboy Hall of Fame and Museum), its purpose was to honour the American cowboy and the era of the American West. The museum houses more than 28,000 Western and American Indian art works, artefacts and photographs and features the world's most extensive collection of saddlery, rodeo trophies and barbed wire. Like the Cobb and Co. museum (and the Stockman's hall of fame), there is a great deal of horse paraphernalia on display, including wagons, coaches, whips, horseshoes, and the aforementioned collection of saddles. However, as is the case with the Australian museums, the National Cowboy and Western Heritage Museum similarly focusses on human history with the horse again appearing as an exotic background or prominent tool of the trade. From this we can observe the close relationship between both humans and domesticated livestock, although there is clearly a limitation in the ability for humans to afford acknowledgement to non-human species and more-than-human history. However, it should also be noted that these museums do not claim to be centres for the

preservation of animal history or heritage, and they are well designed and successful in their targeted purpose of preserving human history.

It must be recognised, however, that a further limitation of heritage centres such as the Stockman's Hall of Fame and the Cobb and Co Museum is their emphasis on a broader history, whereby they are effective at preserving the general knowledge and heritage of Queensland and Australia, but are less able to obtain and retain the history and heritage of more isolated or remote areas, such as north Queensland. This shortcoming is not unique to either institution or animal history in general, it is common among historical and archaeological practices in general as archived material is most commonly located in metropolitan areas, often in the south-eastern corner of Australia. The issue that arises from this, however, is that these repositories of knowledge and heritage often have limited access to knowledge from regional areas which are important to the national story which could otherwise be misrepresented if such information is lost. It is important to recognize and acknowledge these limitations when seeking to establish methods to preserve equine heritage and cultural practices.

One possibility to address such shortcomings could be an online database with a community-based approach which would allow members of the public in more remote areas to both access and upload materials relevant to heritage preservation. We can look to the *'Frontier Conflict and the Native Mounted Police in Queensland'* database [<https://frontierconflict.org/>](https://frontierconflict.org/) as an example as to how this might be accomplished and managed. This database originates from research that was funded through the Australian Research Council Discovery Project grant and focuses on archaeological research into the Queensland Native Mounted Police, conducted by Flinders University, the University of Southern Queensland, the University of Notre Dame Australia, the University of New England, and James Cook University. As an online database, the material is accessible to users in any location in Australia and across the globe who can examine the camps, events and investigate the social history of the Queensland Native Mounted Police (a paramilitary organisation that operated in Queensland during the nineteenth and early twentieth centuries).

When investigating cultural practices and heritage it is relevant to briefly discuss another option for conversation, that of monuments. It must be acknowledged that monuments possess inherent limitations when it comes to retaining cultural practices as they are static tangible structures that serve to commemorate people, places, or specific events. In this manner, monuments may serve to indicate the importance of equine heritage in general, but they are unable to communicate the specific cultural practices that involved settlers working with and alongside horses (riding, shoeing, etc.) which museums have aimed to do. As such, monuments would be unsuitable as a means to preserve equine heritage and their cultural practices, but it is relevant for this thesis to note that despite the significance of frontier horses in building European colonies, the historical record gives greater prominence to horses engaged in less economically significant work. Representative of this is the absence of monuments devoted to working horses. In an extensive, private, web-based database of monuments in Australia <<https://monumentaaustralia.org.au/>> there are 110 monuments dedicated to horses. Of those 110 monuments, 66 are dedicated to military horses involved in the Boer War and the world wars; 18 are dedicated to racehorses; 16 are dedicated to working horses; 3 are dedicated to urban horses; and 7 are dedicated to horses of cultural significance such as breeding horses and the mounts of Banjo Patterson and notable bushrangers. Thus, frontier horses are poorly represented despite their historical significance, and military horses are given prominence. Irrespective of this however, horse monuments are incapable of preserving equine cultural practices, instead they serve to acknowledge the contribution of the animal population towards human endeavours.

It is important for heritage to be preserved otherwise there is a risk that it can be lost as argued earlier by Raulf (2017:208). Based on current methods of animal history and heritage management from feral horse management to museums and monuments, this thesis can therefore propose some key elements identifying equine cultural practices and offer some insight into the preservation of this animal heritage, as outlined below, see Table 6.4 (overpage).

Table 6.4: Equine Heritage and Cultural Practice Preservation

Source of Heritage/Cultural Practice	Preservation
<p>Pioneering/Pastoralist Sites and Structures</p> <ul style="list-style-type: none"> • Campsites • Hotels • Blacksmiths • Yards • Huts • Dwellings 	<p>Protected status under council/state laws to preserve the physical boundaries and remains of sites and structures associated with early pioneering and pastoralist history.</p> <p><i>e.g. Range/Alice River Gazetted Camping Grounds</i></p> <p>Documentation of historical and archaeological material, including fieldwork and information on recovered artefacts to be uploaded to an online database.</p> <p><i>e.g. Community based online heritage resource/database</i></p>
<p>Pastoralist and/or Animal Handling Practices (including Transhumance)</p>	<p>Landowners be allowed to move stock with horses or operate on their property with horses in a manner that does not endanger the public or place undue pressure on any potentially at-risk native flora or fauna.</p> <p><i>e.g. Wonderland Station and the seasonal movement of livestock along public roadways.</i></p>
<p>Traditional Practices associated with Brumby Running and/or Feral Horse Trapping</p>	<p>Where applicable relevant Indigenous stakeholders are able to engage in traditional practices which involve the procurement of feral horses and the subsequent harvesting of the animal as a resource, within the grounds of both state and federal laws.</p> <p><i>e.g. Indigenous groups are able to herd and trap feral horses for use in either pastoralist pursuits or to export the animal and its products (meat) for human or pet consumption. Charities able to herd and trap feral horses to be rehomed.</i></p>
<p>Aesthetic Value of Horses to the Cultural Landscape of Australia and North Queensland</p>	<p>Population control methods to be enforced on feral horse herds across north Queensland while permitting this population access to lands where there has traditionally been pastoralist or equine related activity</p> <p><i>e.g. Brumbies allowed to exist within the natural landscape, but relocation or contraceptive methods in place to reduce risk to native flora/fauna and public safety.</i></p>
<p>History of Interpersonal Relationships and Interactions with Domesticated Livestock within</p>	<p>Documentation of historical and archival material, including photographs, journals, diaries, and personal accounts of interactions between</p>

<p>the context of north Queensland's early Pastoralist History</p>	<p>domesticated livestock and Australians (including both Indigenous and non-Indigenous) during north Queensland's pastoralist history.</p> <p><i>e.g. Community based online heritage resource/database</i></p>
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Table 6.4: Recommendations for the identification of cultural practices and traditions associated with horses and how this heritage could be preserved.

The above table identifies five key sources of equine heritage and cultural practices, and provides a possible foundation with which to preserve this information. Firstly, structures and sites associated with the pastoralist industry and pioneering frontier of Australia (such as the Range Gazetted Camping Ground) represent physical areas of tangible heritage. The identification of these sites (and their boundaries) would allow for local council and state governments to assign these areas protected status. Furthermore, historical, and archaeological work at these sites could provide additional information (artefacts, maps, personal stories of individuals from these areas, etc.) that could be uploaded to an online database to be both preserved and shared with the wider community.

Secondly, pastoralist and/or animal handling practices were identified as a source of heritage and cultural practice for preservation. In particular is the focus on transhumance, in which pastoralists and station owners move their stock along established pathways to and from pastures and markets. It needs to be acknowledged that many of these traditional pathways have since been incorporated into public spaces such as roadways. Therefore, it is important to balance the use of these passages between public transport and pastoralists moving their herds, in order to ensure there is no danger to road users. In the area around the Range Gazetted Camping Ground along Hervey Range Road, transhumance still occurs, during this time road signage is clearly visible to warn motorists of the possibility of road hazards in the form of livestock.

Next, traditional practices associated with brumby running and feral horse trapping was identified as a source of equine heritage, in particular it features an overlap with Indigenous cultural practices. While feral horses are not a focus for this thesis, the manner in which Indigenous stockmen and stockwomen engage in Brumby running and feral horse management is in concert with the preservation of domesticated equine cultural practices.

Furthermore, in the region of north Queensland there remains an ongoing push by state and federal politicians to keep these traditions active and in use.

In addition to this, a common theme that was identified in Australia, New Zealand and the United States was the aesthetic value of horses being present within the landscape as a source of heritage. While the focus of this was centred around the conservation balance of feral horses in an environment in which they are not a native species, it did inform the thesis as to the importance of the visibility of these creatures being of heritage value to society. This highlights the importance of domesticated livestock and their continued visible presence at pony clubs, racing events, military parades, and livestock exhibitions (such as the Ekka) in Australia. It must be acknowledged, however, that these domestic populations of horses are unlikely to become extinct in the near future.

Finally, interpersonal relationships and interactions with domesticated livestock within the context of pastoralist history was identified as another source of heritage and cultural practice. Specifically, the collection, preservation and shared distribution of historical and archival materials which may include photographs, journals, diaries, and the personal accounts of interactions between humans and livestock during the region's past. These resources could further be stored and shared on an online database with a community based approach that would allow for stakeholders to preserve both personal histories as well as that of animal and regional histories.

Cultural Practices & Heritage Summary

This section of the discussion is unique in that it is primarily aimed at addressing the single research question of establishing cultural practices associated with horses and establishing how best to manage this heritage. To do so, this section has explored the ongoing debate between equine heritage (and feral horse population) preservation when weighed against the protection of the natural environment, both in Australia and further abroad in the United States and New Zealand. The fact that these issues remain widely debated and persist today, illustrates how horse agency and equine heritage protection remains a contemporary issue.

6.5 Addressing the Research Questions

This chapter began with a review of previous fieldwork and research conducted at the study area by Clarkson and Hatte, who presented possible locations for both the Range Hotel and associated blacksmith. Fieldwork undertaken by this research was then discussed and compared against the previous fieldwork undertaken at the site. Historical evidence was then used to cross examine our understanding of the site through the lens of animal agency and the progress industry of north Queensland. Next, the Progress Industry of north Queensland was discussed in relation to the role domesticated livestock played in settler expansion, which included an examination of the observable outcomes present in the study area today. This section was followed by an investigation into the agency of domesticated livestock which included the environmental impacts of horses on the landscape as well as an assessment of the horse breeds and types in usage in the area during the nineteenth century. The discussion then analysed contemporary issues concerning the cultural practices associated with equine heritage and management, including how state, territory and federal governments classify and manage these interests.

This section will build on the above discussion to address each of the original thesis research questions individually.

Question One: How does the agency of horses and other livestock affect the pattern of settlement?

In terms of addressing the research question of how the agency of horses and other livestock affect the pattern of settlement we can look to the archaeological fieldwork conducted at the Range Gazetted Camping Ground in section 6.1 The presence of stables, fencing and a blacksmith at the site indicates that animal agency played a role in how the camping ground developed during its use. Stables indicate that working animals required shelter and fencing further indicates that these animals had to be contained within a space that was allocated to their care. In this manner, the settlement of the Range hamlet responded to the agency and freewill of these animals in order to retain them for use in transportation. Although it has proven challenging to determine the exact location of these structures within the boundary of the site, it is relevant to note the Range Gazetted

Camping Ground remained in use until the 1970s. This site provides us with a valuable insight into north Queensland's progress industry as we can identify the three observable phases of boom, bust and export rescue. The **boom** phase is evidenced by the Range Hamlet's existence, its hotel, the blacksmith, and the constant traffic that travelled along the Hervey Range Roadway to and from the goldfields. The site represents a valuable stopping point on the way to access the Star River diggings and the Cape River and Charters Towers goldfields. We can further identify the **bust** phase of the region's progress industry when these goldfields ceased to produce significant returns on investment (due to the depletion of their resources) traffic along the roadway and through the hamlet declined until in 1884 the hotel, blacksmith and community were abandoned. While the decline of traffic along the Hervey Range Roadway would have normally led to the roadway being abandoned altogether, it instead returned to a stock route to service the interior pastoral stations and their mobs of cattle. This is of great importance as it represents the transition of north Queensland's progress industry into the **export rescue** phase, where leather and animal hides were the chief commodity (and beef in the early twentieth century). This highlights the close link between the Range Hamlet and north Queensland's progress industry as the site provides us evidence of the transition from **boom** (goldrushes) to **bust** (decline in traffic) and finally **export rescue** (pastoralist economy). During the entirety of this colonial economic undertaking, it was the operational requirements of domesticated livestock that dictated how the Range Gazetted Camping Ground developed. First, a roadway was needed to better facilitate the travel of domesticated livestock for the initial colonial economy, this was followed by camping grounds to allow animals to rest, feed and be watered. The roadway was then developed further to enable wagons, coaches, and the drays of carrier teams to more easily access the goldfields. The heavier tonnage of material being transported led to the presence of blacksmiths at the camping grounds to provide repairs to wagons, as well as to shoe working horses. While it is most likely that horses from carrier teams were shod in a township before they departed on their journey, blacksmiths at camping grounds would have been able to provide running repairs or provide additional care if an animal had thrown a shoe during travel. This is indicated by the historical evidence as well as the limited archaeological remains that were discovered at the Range Gazetted Camping Ground, which were discussed earlier in section 6.1. Ultimately, human settlement was forced to respond and adapt to the agency of horses and other livestock by providing

both services and infrastructure capable to deliver adequate care in order to maintain the working ability of these animals in order to facilitate the development of north Queensland. While sites such as the camping grounds, the blacksmiths and their hotels are difficult to identify or observe in the landscape today, many frontier towns today still illustrate how carrier teams, and their horses affected the layout of townships. This is evidenced in section 6.2 where we can observe both on Mossman and Gill street in Charters Towers that these were built as wide thoroughfares to allow horse teams to navigate the settlement. To explore this assertion further we can look to the 1878 map of north Queensland (Figure 6.11 in section 6.2) where I marked and detailed the various physical assets and infrastructure of the region's progress industry. Some twenty-one camping grounds (their location dictated by how far an animal can travel) are observable along with four cattle yards to service the five pastoral stations of the region (with many more further afield). Furthermore four wagon/coach change over stations can be observed with some twenty-three hotels (with more residing within Dalrymple, Charters Towers and Townsville) provide additional evidence of the infrastructure required to maintain a population of working animals and the human crews who worked alongside them. In this regard, the placement of these assets within the landscape might be compared to modern petrol stations today as the range in which goods can be transported via vehicles is determined by their access to refuelling facilities. In the context of the nineteenth century's animal transportation workforce, however, refuelling via fossil fuels replaced the original process of feeding and watering animals, as well as providing them with rest. From this we can establish the importance of domesticated livestock in that these creatures through their agency determine the placement of support and service facilities within the physical landscape.

While the literature and historical evidence within this thesis clearly indicates that humans have long viewed horses as living tools, it is fascinating to observe now animal agency has forced the human operators to respond and adapt to their freewill through the creation of new technologies (horseshoes, hobbles, saddles, etc) and services (stables, fences, blacksmiths, etc.).

Horses, and other livestock, thus had a direct impact on the pattern of colonial settlement. Interestingly, we can take this a step further with the ongoing debate around equine management in section 6.4. This further serves to underline the impacts of the first research

question, where it is evident that animal agency continues to play a role in the pattern of settlement of modern humans who are compelled to respond to the equine descendants of the pastoralist and progress industries. This is evidenced by state, territory, and even national levels of government instituting feral horse management plans, that serve to both control and protect these animals, while mitigating ongoing damage to native ecosystems. From this we can conclude that horses, while long viewed as a human tool, have forced human populations to respond to their agency and will continue to do so into the future.

Given the ongoing relationship between horses and humankind, it is important to explore how the examination of animal history might better inform our understanding of our own human social history. To do so, this thesis will now address the second research question.

Question Two: How can examining the cultural practices associated with horses and other livestock add to the social history of north Queensland?

When examining the research question of how cultural practices associated with horses and other livestock add to the social history of north Queensland we can look to the historical accounts of settlers for insight into how their interactions with animals provide tales and stories which enrich the social history of the region. One such example provided in section 5.5 of frontier histories is that of Bill Smith's famous golden horseshoes, whereby this story provides both a glamorous tale of an individual's exploits and provides additional insight into a prominent character of far north Queensland's frontier history. This story which has featured prominently in the social history of the region owes its origins to the practice of shoeing horses to provide increased traction over difficult terrain. The golden horseshoes were therefore subsequently of poor use for their intended purpose as gold proved too soft a material, and were later replaced with iron horseshoes. Despite the intricacies and details of correct horse footwear, it is the dazzling tale of gold, glamour and success on the frontier that has resonated within our social history and this account.

Further narratives of animal and human interactions explored within this thesis have illuminated the value of exploring the cultural practices associated with livestock and how these add to our own social history as in section 6.3 with the account of Lucy Gray's travel along Hervey Range Road. In her account she describes the adversity of the ascent of

Thornton's Gap and how wagons were chocked, and passengers disembarked to make for easier travel for the horse teams hauling the wagons. It is perhaps relevant to note that the drawings and sketches both Lucy and Eva Gray produced of the landscape and their ascent were done so only because both were on foot and taking respite as the animals and wagons ascended the range. Had either Lucy or Eva been a passenger in their vehicle during the ascent it is doubtful whether they'd have the means (or time) to sketch the images they did. This is a fairly important detail as Lucy Gray in particular provides us with the first visual representation (the drawing in Figure 6.22) of what the landscape west of Townsville looked like during the 1860s. There exists no other photograph, image, or visual representation of this landscape until the early 1920s. Furthermore, Lucy Gray's sketch of the Alice Hotel (Figure 3.12) in section 3.6 provides the only image of this structure which is no longer standing. Her reason for stopping at this location (which afforded her the opportunity to sketch the hotel) was to rest, water and feed the horses and packhorses the Gray party rode and travelled with. This indicates how the practice of resting and caring for livestock at each camping ground in turn afforded an opportunity for us to understand more of our own human social history.

In terms of our understanding of a more general and broad social history, we can in section 6.3 of the discussion observe the cross-species interactions between coach teams and their animals a source of additional insight. In particular the violence that was manifested with great regularity against stubborn animals by wagon teams and the practices associated with whipping or abusing animals informs us to the behaviours and attitudes towards animals of the time. It should also be further noted however that the rise of animal amnesty groups and the criminalisation of these violent actions in 1866, further indicates a shift in social attitudes and moral values of the latter nineteenth century. Therefore, the exploration of the (sometimes cruel) practices of wagon teamsters affords us a greater understanding of our own social history. Furthermore the role of livestock featuring in human interpersonal relationships is evidenced in section 6.3 with the inclusion of Indigenous ranch hands in north Queensland who worked on pastoral stations. In this regard, the tradition of Indigenous Australians engaging in Brumby herding (feral horse management) can be observed (in Figure 6.21) which adds to our understanding of the evolving nature of colonial/Indigenous relationships on the nineteenth century frontier of north Queensland.

This provides an important and poignant contrast to the experiences of Indigenous Australians at the hands (and hooves) of the Native Mounted Police whose use of horses during the frontier wars resulted in violence against the and the dispossession of Indigenous peoples.

On the topic of Brumbies and feral horses we can further look to section 6.4 where we observe a continued interest (and often involvement) in feral horse management. This informs the thesis' second research question regarding how examining the cultural practices associated with horses adds to our social history, not only in the nineteenth century but in our current society. The vast number of feral horse protection agencies, charities and not-for-profit organisations that exist to protect these animals indicates the interconnected relationship between the history of the two species. On that note, the existence of Brumby's (and the continued tradition of Brumby running) indicates that horses and the cultural practices associated with them remain important today. As horses are not likely to become extinct in the near future, we must instead look to the cultural practices associated with the use of these animals, as these traditions are of greater risk of being lost if not maintained. To address heritage identification and preservation, the thesis will now turn to addressing the final research question.

Question Three: Can these cultural practices be classified as heritage and how should they be managed?

The examination of both past and present animal history has informed the thesis as to how Australia and other countries have classified equine heritage and the cultural practices associated with early pastoralist industries. In particular, section 6.4 of the discussion has explored the contemporary issues surrounding the management of feral horse populations and has further provided insight into how state, territory and federal levels of government have classified the heritage values associated with this horse population and the cultural practices associated with them. From this the research project has established a table (Table 6.4) by which to classify both equine heritage and cultural practices associated with these animals and provided a foundation as to how they could be managed. As noted above, sources of potential heritage and cultural practices included physical sites associated with the pioneering frontier and pastoralism (such as the Range Gazetted Camping Ground), as

well as animal handling practices (transhumance and brumby management). Further to this was the identification of interpersonal relationships and interactions between humans and horses within the context of the pastoralism and the pioneering frontier. Furthermore, a central and recurring theme of this heritage preservation that was identified in section 6.4 of the discussion is the continued physical presence of horses (and domesticated livestock) within the landscape. To this particular end, the continued use of horses in ranch work within the pastoral and agricultural sector today (as well as pet ownership on rural/regional properties) indicates that horses are not at risk of disappearing from visibility from our society within the near future. There may be potential to revisit this criterion in the future given the current climate crisis the world is experiencing, where special status may be granted to select operators to use horses and domesticated livestock, that otherwise damage the natural environment and may potentially present risks to the climate. However, to further add to this discussion is the possibility that the adoption, or more accurately the re-incorporation of horses into the pastoralist sector may provide a means to mitigate some climate change issues which are otherwise present from motorised vehicles such as ATV's, motorbikes, and helicopters which run on fossil fuels and contribute to the carbon footprint. It is therefore possible for a case study to investigate the potential climate benefits of horses being used in pastoralist activities over that of motorised vehicles.

However, the principal concern for the preservation of equine heritage therefore remains the traditions and practices of animal care and use from the nineteenth century (and earlier) such as saddle making, the fitting and forging of horseshoes, etc. To this end, establishments such as the Bush Learning Centre, The Stockman's Hall of Fame and the Cobb and Co. museum represent institutions best suited to record and archive this knowledge and these traditions. In particular, the hands on workshops featured by both the Bush Learning Centre and the Cobb and Co. museum provide the best possible means of preserving this heritage. However, as discussed in section 6.4 these institutions focus on a generalised and broad knowledge, often with the bulk of their archival material originating from the surrounding areas. Due to this, there archives often do not include information from regional areas such as north Queensland. Further to this, there remains the possibility that certain techniques and traditions that were limited in use at more remote locations further afield are potentially underrepresented within these institutions. One suggested outcome to address

this shortfall could be a community based online resource, where members of the public from more remote areas could share archival material or knowledge they possess to an online open access platform. In this manner, the rich social history and traditions and cultural practices associated with domesticated livestock and horses could be better recorded and preserved for future generations. Adding an aspect of the 'animal turn' to those resources and acknowledging animal agency would be of benefit here in understanding both human history and the ways in which it is intimately entwined with more-than-human history. In particular, how horses and humans affect, and are affected by, each other.

Ultimately, humans are the ones who have the ability to observe, record and document the animal history of horses and other domesticated livestock. While there is limited risk in the future of horses disappearing from visibility within our society any sort of deep understanding is very rare in the wider population today. Important knowledge of animal history and the longstanding traditions associated with domesticated livestock have been in gradual decline since the mid twentieth century as argued by Raulf (2017:208). This thesis has provided a foundation for how we can reduce this rate of decline through the preservation of equine heritage and our knowledge of animal history. To answer the question directly, these cultural practices are clearly 'heritage' and some specific suggestions as to how this heritage can be managed are provided.

The following chapter will conclude the thesis and present additional avenues for future research, which have been identified through by the project questions and outcome.

Chapter 7

-Conclusion-



"We have all forgotten how strange a thing it is that so huge and powerful and intelligent an animal as a horse should allow another, and far more feeble animal, to ride upon its back."

(Peter Gray, cited in Pickerall, 1999:39)

7.0 Introduction

This chapter will examine the outcomes of the themes and approaches undertaken during this thesis and how they shaped the research. This will begin through an examination of the approach to animal history through the use of animal agency and the animal turn. The model of the progress industry and its application in understanding north Queensland's expansion will then be addressed. Next, the outcomes of investigating cultural practices with horses and their heritage value will then be examined. Finally the chapter will conclude with the consideration of several possible future avenues for research that have arisen from this project.

7.1 Conclusion

The research conducted during this project has revealed the benefits of adopting Reid's ethnographic approach to zooarchaeology and incorporating the animal turn as recommended by Swart when it comes to addressing animal history with a more holistic approach. This is clearly evidenced in the divide between the visibility of horses in the historical record against their visibility within the archaeological record. It is intriguing to observe that in the instance of this thesis, that the historical record was able to provide additional insight into the agency of a past animal population while the archaeological record by comparison presented only limited material with which to do so. It must be acknowledged of course, that in no small way this could be attributed to the usual archaeological sampling issues and simply digging in the wrong location. However, given the historical record's clear assertion of the high volume of animal traffic (horses, sheep, bullocks, and cattle) travelling along the Hervey Range Roadway and stopping at the Range Gazetted Camping Ground, limited physical remains have been recovered that indicate such events ever occurred. Further to this, we can observe the difficulties in identifying structures associated with livestock (and the progress industry) within the landscape as they leave limited physical evidence for us to find or are quickly reintegrated into the environment. A significant limitation of this research project stemmed from limited access to the archaeological site (seven days total across two years) which largely occurred due to Covid restrictions. As such, the thesis primary supervisor decided on excavating a known location (the rubbish pit behind the assumed forge) in lieu of further surveying to identify additional

sites of archaeological interest or relevance to horses. To identify other areas of archaeological interest at the Range Gazetted Camping Ground, most notably sites more closely associated with horses, a more thorough and comprehensive survey of the area would be required. This would ideally include more extensive ground truthing over a longer time period (several days) and possibly include the use of metal detectors to aid in the location of metal artefacts or paraphernalia associated with the use of horses or the blacksmith site. Additionally, consultation with artefact and treasure hunters may need to occur, given they have previously discovered (and removed) archaeological materials from the area and may possess knowledge that has not been documented or shared with the relevant authorities. This would aid in better understanding the area and provide a means with which to better protect the heritage of the site.

Further to this, and adopting a more landscape archaeology approach, the incorporation of the progress industry as a central theme to understanding animal agency successfully served to greatly inform the thesis as to the important role of domesticated livestock and further added to our understanding of colonial patterns of settlement. The camping grounds, hotels, pastoral stations, cattle yards, and other infrastructure which formed part of north Queensland's early progress industry reveal the close proximity of animals to human economic endeavours. In particular the adoption of the progress industry as a central theme allowed the research to re-examine the existing literature, archival and archaeological material through a new lens which provided greater insight into how north Queensland's colonial conquest and expansion developed alongside that of New Zealand and the western United States. In particular, the inclusion of animal agency as a central theme and research approach synergised with the model of the progress industry, which allowed for the cross-examination of both archaeological and historical material which would have otherwise not been possible. As a direct result, this thesis has added to our existing understanding of frontier economies and the manner in which they were manifested.

Finally, when investigating and assessing how to establish cultural practices as heritage between humans and domesticated livestock, the results indicate that this remains an ongoing debate in many countries and cultures. It is heartening to note the passion that exists within the greater community who wish to maintain strong links between humans and horses, who recognise that both species possess a special bond through our shared

histories. By shining light on the animal history of colonial and frontier societies we can in fact, become better informed on what life was like in these landscapes in the nineteenth century. Therefore, both the benign, malign, and indifferent views and behaviours that humans manifested towards their animal colleagues and companions better informs us of our own social history. This project has illustrated the relationship between humans and domesticated livestock, and how we interact with and to one another will remain a contemporary issue for future generations.

7.2 Future Research Avenues

Several avenues for future research have been identified by this research project. Primarily, given the limited amount of archaeological material recovered thus far, is the continuation of the current research direction to identify and incorporate greater volumes of archaeological material and/or faunal remains. To this end, the identification and examination of Cobb and Co. wagon changing stations along the region's highways and on nineteenth century pastoral stations may provide additional archaeological material or faunal remains for better analysis and comparison with the historical record. The current research project illustrated the difficulties of this approach, and therefore future research could seek to establish a model or methods through which archaeological evidence for the use of domesticated livestock could be better established.

Another potential research direction would be the examination of First Nations peoples and their incorporation of European domesticated livestock into their societies and cultural practices. It must be acknowledged that the current research project was focused on colonial (largely European) settlement and economic endeavours, this meant a wealth of information on Indigenous peoples and their adoption of introduced livestock was overlooked. In particular, future research could provide a comparative analysis of how First Nations people in the western United States and Indigenous Australians responded to the introduction of introduced livestock. Of great interest would be how First Nations people in the Americas adopted these animals in the absence of Europeans, while Indigenous Australians encountered these creatures alongside colonial European settlers/invasers. This would provide an interesting insight into how different First Nations groups learn to adapt to new species and technologies with and without external influences.

Finally, another research direction which would continue to focus on animal history and the animal turn would be a comparative analysis between the animal technologies (including living technologies of different animal breeds) of Australia and New Zealand. This would examine how populations from a similar origin, moving to two separate and different regions adapted technologies to better suit and exploit the resources of domesticated livestock and working animals. In particular a focus on animals as living technology could further examine how certain (now quintessential) breeds such as the Australian stockhorse came to exist. The current research topic scratched the surface of this topic through the brief discussion of English and American methods of shoeing horses, as well as the Australian response to both American and English saddles which led to the Australian stock saddle. It would be of great interest to investigate further what other technologies were adopted and adapted. In particular, the rich history of both Australia and New Zealand in incorporating working dogs and horses as a living technological tool to better exploit resources could provide us with greater insight into these two distinct societies. Questions that might arise through this research approach may include how domesticated livestock and working animals shape cultural landscapes and feature in regional identities. This research direction would serve to explore possible differences and similarities between the traditions and animal practices of Australia and New Zealand given the similar colonial origin of both nations. In particular, how do animals and human interactions with animals add to and shape our sense of personal, regional, and national identity? Similarly a focussed comparison between different regions within Australia and New Zealand (and then against each other) may compare settlers approaches to sheep and cattle and provide us with a greater understanding of not only how humans attempt to shape animal behaviour, but how these animals can in turn force humans to change their behaviours to respond to them.

These suggested directions for future research topics would serve to better inform future generations about the importance of understanding more-than-human history. These approaches and the information they could provide would better inform future generations about the shared history and cultural links between humans and domesticated animals. This is of great significance, as horses and other livestock represent both living technologies and living machines, upon which the success of humankind been on the back (often literally) of these creatures. Fundamentally, the hubris of humans is that we have long held the

relationship of humans and animals as a one way transaction, when in fact, one could argue animals such as horses, dogs, sheep, and cattle have chosen humans as a means to ensure the continued success of their species. This co-evolutionary school of thought is rising in its application in both history and archaeology, where we can view a feedback loop between human and animal species (Swart, 2007:27). Perhaps as some final food for thought, we could view humans as the vector for the successful animal invasion and colonisation of Australia, New Zealand, and the United States, and not the other way around.

-References-



"The wagon rests in winter, the sleigh in summer, the horse never."

(Yiddish proverb, cited in Pickerall, 1999:11)

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