

**'A truly sublime appearance':
using GIS to find the traces of pre-colonial landscapes and land use.**

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10,894 words

Abstract

When the British landed on the island of Van Diemen's Land in 1803, they found lands seemingly prepared for them. Abundant open plains drew the newcomers further inland, attracted by the prospects of further pastoral and agricultural success. What they neither understood nor acknowledged were the thousands of years of cultivation prior to their arrival. As the custodians of the island, the Tasmanian Aboriginal people used fire to manage and maintain a landscape that nourished them.

This article proposes that analysis of land-use continuities can reveal new understandings of pre-colonial landscapes. This article uses two case studies to demonstrate two complementary approaches for uncovering this story. The first study follows a traditional approach that relies on historic sources such as maps, artwork and journals. The second methodology incorporates modern resources to build a Geographic Information System (GIS) from environmental and historic spatial data. The GIS compensates for an absence of traditional sources, and thus enabling researchers to investigate areas of colonial expansion that have previously been undervalued. Using GIS to understand this continuity of land use gives historians another tool for researching landscapes that have been obscured by subsequent occupiers.

Keywords

colonial landscapes; colonisation; indigenous landscapes; Australian history; GIS; Van Diemen's Land

In 1810, the explorer John Oxley travelled through the north of Van Diemen's Land, now Tasmania.¹ The colony was seven years old, the British having established their first settlements in 1803, and as he explored, Oxley recorded his observations of the landscape. He made clear the priorities of the British, as they planned for the prosperous future predicted for the land. Soils, the progress of agriculture, and potential areas for future development were among his concerns. However, not only did his words foreshadow the coming expansion, they also inadvertently captured elements of Aboriginal land management practices.² Just like much of *lutruwita* (Tasmania), this area was a working landscape long before the arrival of the British. This article demonstrates that colonial land use continued old patterns, and suggests that examining these continuities provides a new way to understand pre-European landscapes.

British decisions were clearly informed by the landscape they encountered on arrival. They were drawn to areas of open land, acreages apparently prepared for immediate cultivation with British seeds and grazing stock. This is well-accepted knowledge, as is the theory that the Midlands of Tasmania were open plains due to Indigenous management. But this article presents the first attempt to apply lessons from these accepted wisdoms to undervalued early European sites of occupation. The hypothesis proposed in this article is that Tasmanian Aboriginal people and British settlers were attracted to the same lands, and put them to very similar uses. This article does not seek to create new understandings of Aboriginal land management. Rather it draws on existing research to create an image of the 1803 landscape, over which British settlement patterns were laid.

These methodologies contribute to conversations about the process of colonisation and the lessons that can be pulled from transitory landscapes. Historians can uncover pre-European land use by combining three points of importance. The first point is understanding that both groups of occupants used cleared

¹ This article uses 'Van Diemen's Land' to refer specifically to colonial events, and 'Tasmania' for wider discussion. It also acknowledges the *palawa kani* name of *lutruwita*, along with the *palawa* and *pakana* Elders, past and present, who are the continuing custodians of these lands.

² Lyndall Ryan names the *leterremairrener*, *panniher*, and *tyerrernotepanner* nations in this area, but notes that there were probably two others whose names have been lost. Lyndall Ryan, *Tasmanian Aborigines: A History since 1803* (NSW: Allen & Unwin, 2012), 19.

land to maintain stock (although the animals and techniques were different). The second point is that this common usage aligns with the British tendency to alienate cleared lands first. Finally, by identifying the specific locations first alienated within an area, it is possible to infer areas that underwent extensive pre-European fire-stick farming.

Starting with an overview of modern understandings of Aboriginal fire-stick farming, this article considers the evidence of the Europeans who witnessed the firing of the country, before examining two case studies. These highlight the benefits of using Historic Geographic Information Systems (HGIS) to explore changing land use, particularly when other paper-based forms of evidence are lacking. The first case study focuses on an area in the north of the island, a region with a rich coverage of colonial-era charts, artwork and written descriptions. Analysis of these sources uncovers new details of the relationship between European land choices and Aboriginal land use. The use of traditional sources in this way is an accepted historical methodology, albeit one that relies on the creation and survival of such documents. Additional forms of environmental evidence, including soil types, topographies and archaeology, contribute to the story of those regions which are lacking in charts, maps, journals or other documentation. The second case study illustrates the power of these methods by examining the settlement of New Norfolk. The landscape of this area was not favoured by artists and was given only cursory attention in journals and charts. By incorporating the environmental factors and settlement patterns already discussed, a more complete image of the land and the people living on it emerges.

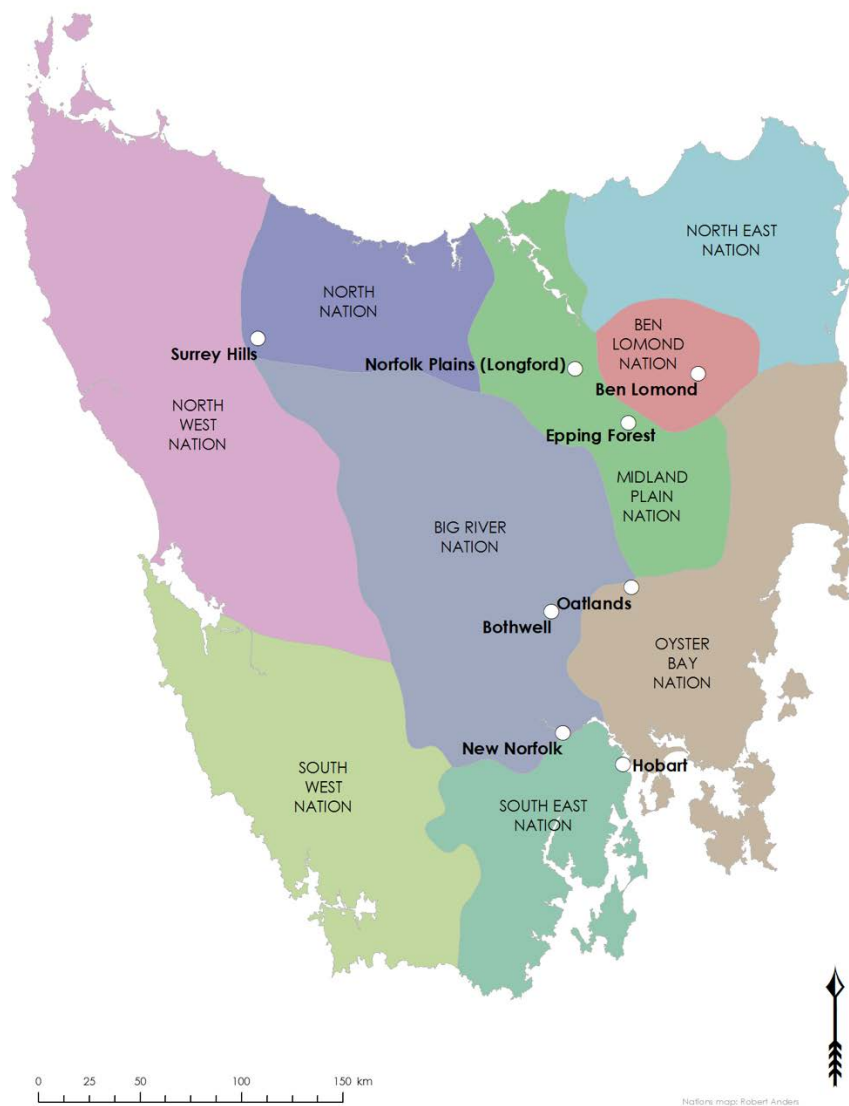


Figure 1: Locations discussed in this article. Sources: Robert Anders; the author

FIRE-STICK FARMING

Theories of fire-stick farming have always been controversial. For evidence they rely on oral histories, colonists' accounts, and analysis of vegetation types over time. A particular problem with the latter is that it has undergone change in the two centuries following European settlement. The use of fire in Aboriginal land care has long been of interest to historians, with the phrase 'fire-stick farming' coined in 1969, to

describe the use of fire to actively manage and maintain the land and its resources.³ It is, however, now widely accepted that fire was used intentionally before the arrival of the British, as a means of adapting vegetation to create habitats that suited particular animals, although the details remain contentious.

In 2011, Bill Gammage published his theory that all of Australia was managed as an ‘estate’ using fire, with techniques adapted to manage the different vegetation and climates across the continent, all with the same goal – to work the land.⁴ The result was a pattern that included ‘lightly wooded areas interspersed with grassland’. The small patches of scrub created shelters for birds and animals, while the fire rejuvenated many grasses and trees with fresh growth that would feed many of the animals, and provide both food and other resources for the people living in the area. As different plants respond differently to fire and require variable conditions to burn, this mosaic pattern also created self-reinforcing fire boundaries – a conflagration would slow or stop at the edge of a template.⁵ Fire would also remove small saplings, leaving the plains the Europeans revelled in. These areas were cleared specifically for hunting and cultural practices, as well as to create clear routes for travel through the land. Burning was planned well in advance, and it may have been a role overseen by high status members of the clans. Fire had ceremonial, as well as practical, significance.⁶ The result of this ‘mosaic farming’ was visible traces in the landscape that, Gammage argued, could not have been caused by anything other than long-term intentional use of fires.

These remnant landscapes are still visible today, often as patches of clear land surrounded by woodlands. Gammage used many illustrations to demonstrate this, including two of Goderich and Gatcomb Plains, near Surrey Hills in Tasmania. In aerial photography from 1949 and 1984, cleared areas are very obvious,

³ For multiple arguments about this, see: Rhys Jones, ‘Fire-Stick Farming’, *Australian Natural History* 16, no. 7 (1969): 224–8; D. R. Horton, ‘The Burning Question: Aborigines, Fire and Australian Ecosystems’, *Mankind* 13, no. 3 (1982): 237–52; D. M. J. S. Bowman and M. J. Brown, ‘Bushfires in Tasmania: A Botanical Approach to Anthropological Questions’, *Archaeology in Oceania* 21, no. 3 (1986): 166–71; R. Bliege Bird et al., ‘The “fire Stick Farming” Hypothesis: Australian Aboriginal Foraging Strategies, Biodiversity, and Anthropogenic Fire Mosaics’, *Proceedings of the National Academy of Sciences* 105, no. 39 (2008): 14796–801.

⁴ Bill Gammage, *The Biggest Estate on Earth: How Aborigines Made Australia* (Crows Nest: Allen & Unwin, 2011).

⁵ R.A. Bradstock, R.J. Williams, and A.M. Gill, *Flammable Australia: Fire Regimes, Biodiversity and Ecosystems in a Changing World*, ERA Collection (CSIRO Publishing, 2012).

⁶ Patsy Cameron, *Grease and Ochre: The Blending of Two Cultures at the Colonial Sea Frontier*, Studies in the History of Aboriginal Tasmania (Fullers Bookshop, 2011), 10; 36–40.

and are still visible in more recent aerial photography.⁷ Gatcomb Plain is easily distinguished from the surrounding cultivated land (Figure 2). This area, Gammage suggests, was particularly effective for funnelling hot fires, and formed a deadly trap for prey that would be driven to the swampy edge of the Wandle River where they would be killed with clubs and spears.⁸

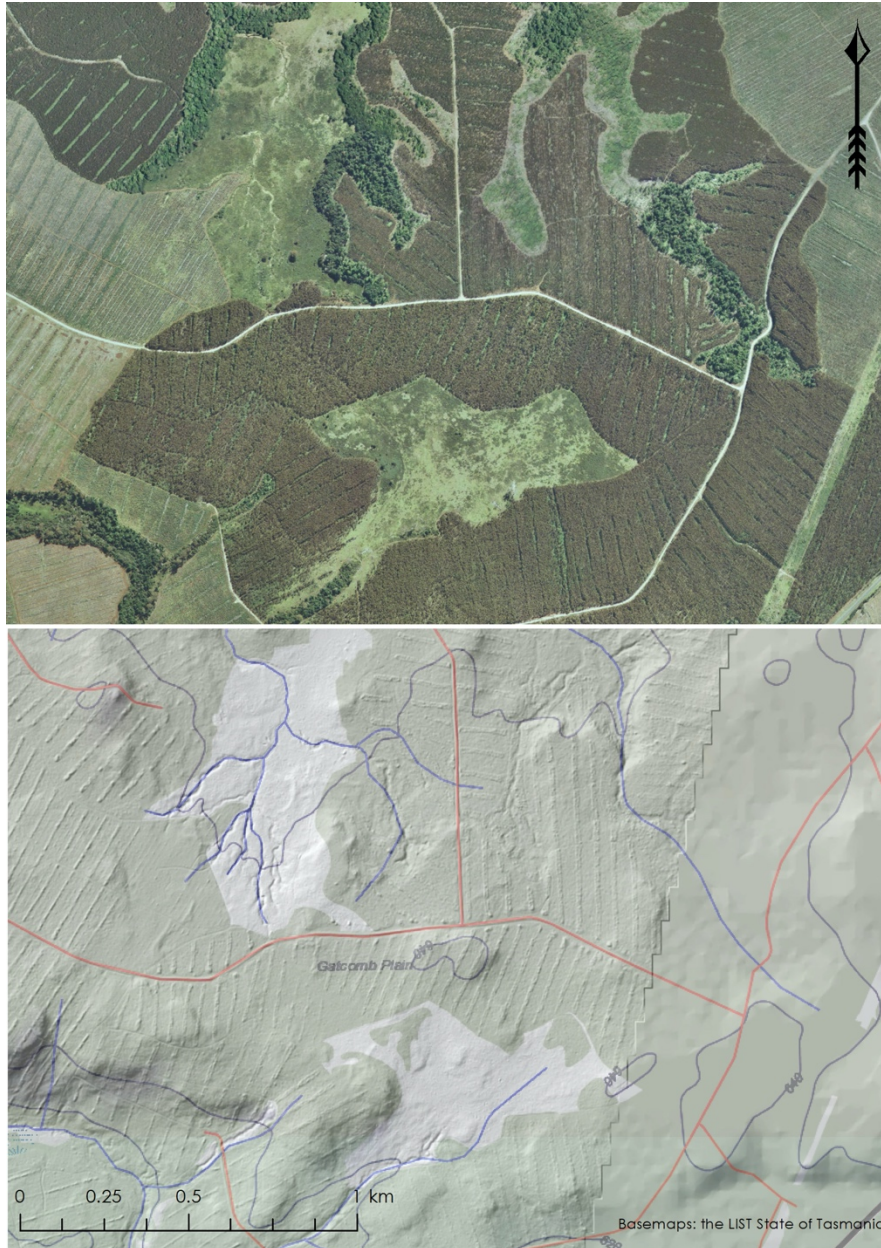


Figure 2: Gatcomb Plain visible at the centre bottom. Source: LISTmap Tasmania.

⁷ Gammage, *The Biggest Estate on Earth*, 81.

⁸ *Ibid.*, 80–82.

The broad sweep of Gammage's assertions have been cautiously accepted by historians, ecologists and archaeologists, although some critics consider his application of them to be too general. Ian Keen criticised Gammage for homogenising Aboriginal history, and expressed scepticism about his theories of continental connectivity.⁹ Adam Leavesley drew on research and professional experience to propose some alternative explanations for some of Gammage's case studies.¹⁰ More recently, in 2016, Fred Cahir and others critically surveyed the literature on the use of fire in Victoria. They advised their readers that individual areas needed more research, while cautiously accepting the broad sweep of Gammage's assertions.¹¹

Gammage's proposition of an fire-managed 'estate' across all of Australia may be too general, but there is certainly evidence that fire-stick or mosaic farming was practised across Tasmania. Recent empirical attempts to quantify the effects of fire-stick farming in Tasmania have looked at specific areas on the northwest coast. By using Henry Hellyer's diaries of explorations into the area, it is apparent that there were areas that had unexpected vegetation, and flora changes that could not be explained by soils or other environmental factors. In the two-hundred years since the European arrival there are at least two parts of Tasmania (Surrey Hills in the northwest and Paradise Plains in the northeast) that have seen a reduction in grassy plains, and increase in wooded country. Together, the work of three individual researchers builds a compelling image of the difference regular firing could make to the Tasmanian landscape.¹² This article extends this work by creating a framework with which to apply retrospective analysis of British settlement patterns to identify pre-European landscapes and usage. It is not intended

⁹ Ian Keen, 'Review: Bill Gammage, *The Biggest Estate on Earth: How Aborigines Made Australia*', *Australian Economic History Review* 54, no. 1 (2014): 86–9.

¹⁰ Fred Cahir et al., 'Winda Lingo Parugoneit or Why Set the Bush [On] Fire? Fire and Victorian Aboriginal People on the Colonial Frontier', *Australian Historical Studies* 47, no. 2 (2016): 225–40. For examples of criticism, see Adam Leavesley, 'Review of "The Biggest Estate on Earth – How Aborigines Made Australia"', *Ecological Management and Restoration* 13, no. 2 (May 2012): 4–5.

¹¹ Cahir et al., 'Winda Lingo Parugoneit or Why Set the Bush [On] Fire?'

¹² Jim Stockton, 'Fires by the Seaside: Historic Vegetation Changes in Northwestern Tasmania', in *Papers and Proceedings of the Royal Society of Tasmania*, vol. 116, (1982), 53–66; Robert Onfray, 'Cultural Artefacts or "Neglected Old Parks": The Colonization of Rainforests in North-Western Tasmania', (Australian Forest History Society, 2012); D. M. J. S. Bowman et al., 'Contracting Tasmanian Montane Grasslands within a Forest Matrix Is Consistent with Cessation of Aboriginal Fire Management', *Austral Ecology* 38, no. 6 (2013): 627–38.

to be a comprehensive discussion, but to open the conversation for new approaches to understanding more local Indigenous landscapes.

HISTORIC UNDERSTANDINGS

Prior to the arrival of the British, the island had been observed by other explorers. In 1642 Abel Tasman described the unseen inhabitants of ‘Anthoonij van Diemenslandt’ as ‘people of extraordinary stature’, after measuring cuts made in trees for climbing. From both the ship and the land, his party saw smoke from fires, and noticed land that had been ‘worked by hand and baked hard as flint by fires’.¹³ Tasman’s description might be better described as scientific interest rather than colonial judgment, recording the observations and speculation of himself and his company. As exploration continued in the late eighteenth century, discussion shifted from speculative to assumptive. Attitudes towards race hardened, as Europeans sought justification for their occupation of lands on the basis of cultural superiority. A good example of this is maps that routinely hide Indigenous occupation (or even presence).¹⁴

There is evidence, however, that the British were aware that Aboriginal people used fire intentionally, although they did not generally understand the complexity of fire management, attributing an artless simplicity to it. For example, explorer Edward John Eyre described landscapes in South Australia in 1839 as ‘purposely or accidentally lighted by the natives in their wanderings’.¹⁵ To acknowledge systematic intent would have been to grant more sophistication to the people of the area than the enlightenment image of the ‘noble savage’, or subsequent nineteenth-century views of Indigenous peoples and culture, would permit. Acknowledgment of Indigenous land management practices would have also undermined the philosophical assumptions that underpinned the British seizure of the continent. Their claim was based on the principle that the owners of land were those who cultivated and improved it.¹⁶ The foundation for this argument was laid by John Locke in the seventeenth century, when he proposed that

¹³2 December 1642 in Abel Janszoon Tasman, *The Voyages of Abel Janszoon Tasman*, ed. Andrew Sharp (Oxford: Clarendon Press, 1968), 110–11.

¹⁴ J.B. Harley, *The New Nature of Maps: Essays in the History of Cartography*, ed. Paul Laxton (Baltimore: Johns Hopkins University Press, 2002), 67–9.

¹⁵ Quoted in Gammage, *The Biggest Estate on Earth*, 10.

¹⁶ Henry Reynolds, *A History of Tasmania* (Cambridge: Cambridge University Press, 2011), 33.

‘the earth, and all inferior creatures be common to all men’, but that land became the property of an individual when he ‘removes it out of the state that nature hath provided ... [and] mixed his labour with, and joined to it something that is his own ...’¹⁷ The methods by which Australian Aborigines adapted the landscape to their needs were not recognised, or were wilfully ignored, thus giving Britain a legal foundation for its claim to the continent.¹⁸

Beginning with Tasman, basic uses of fire for defence, cooking, and warmth were attributed to the Tasmanian Aborigines by Europeans.¹⁹ The underlying assumption of explorers and settlers moving through these landscapes was that smoke indicated an Aboriginal presence. When George Harris first explored the Huon River in 1804, he reported an absence of smoke or traces of fire, perceived as an abnormality even in these early days of the settlement. He concluded that the land there was not suitable for habitation.²⁰ These early explorers knew that the fires were not always naturally starting, hesitantly attributing their existence to ‘the natives’, and assuming that an absence of smoke or fires (or the aftermath) indicted an absence of people in that area.

Whether they believed the Aboriginal Tasmanians could make fire, or only continue its use once ignited by lightning is unclear. Shayne Breen tracked the arguments of scientists, historians and archaeologists through the nineteenth and twentieth centuries, as they struggled to establish whether the indigenous inhabitants were capable of starting fire. George Augustus Robinson made a comment that suggested they were not able to. Breen suggested this evidence was interpreted too broadly by subsequent researchers and shaped a century of misinformation. After all, in other instances Robinson observed the Bruny Island inhabitants using a stone to strike a fire. Breen concluded that the vast array of uses for fire

¹⁷Locke also argued that man should take only as much as he was able to work, ‘beyond this is more than his share, and belongs to others’. While happy to claim possession over the land under these principles, the settlers in Van Diemen’s Land were equally happy to ignore ideas that might have limited their allowances. William Uzgalis, ‘John Locke’, in *The Stanford Encyclopedia of Philosophy*, ed. Edward N. Zalta, n.d., <https://plato.stanford.edu/archives/spr2016/entries/locke/>; J. Locke, *Two Treatises on Government*, Reprint, Library of American Freedoms (R. Butler, 1821), 209–30.

¹⁸Reynolds, *A History of Tasmania*, 33.

¹⁹Phillip Tardif, *John Bowen’s Hobart: The Beginning of European Settlement in Tasmania* (Hobart: Tasmanian Historical Research Association, 2003), 23; Stockton, ‘Fires by the Seaside’, 58–9.

²⁰G.P. Harris, *Letters and Papers of G.P. Harris, 1803–1812: Deputy Surveyor-General of New South Wales at Sullivan Bay, Port Phillip and Hobart Town, Van Diemen’s Land*, ed. Barbara Hamilton-Arnold (Sorrento: Arden Press, 1994), 68–70.

across the island attests to the mastery the occupants had over the technology. It is now widely accepted that they were able to start fires intentionally, and that fire-sticks were a convenient way to transport fire rather than a necessity for keeping it burning once naturally ignited.²¹

There were similarities in purpose between Aboriginal and British agricultural practices, even if they looked considerably different and had varying priorities. These lands were cultivated to provide for the most basic of needs – food, water and shelter. What the British did not, however, recognise, were the nuanced uses of these lands. They had their own templates, based on crop rotations and seasonal stock requirements, but did not see the Tasmanian templates built over thousands of years by the traditional owners. These were areas that were cultivated to grow species of grass that would attract particular animals. These templates have been likened to modern day fenced fields: ‘hunters [knew] exactly where their quarry could be located when required’.²² These same areas would be admired by the British for their pastoral potential – the same purpose, but for different animals. In other areas, fire-stick farming would encourage the growth of tubers and other plants for human consumption, while the British would use fire to clear what they saw as weeds in order to sow consumable plants.

CASE STUDY ONE: A TRADITIONAL APPROACH TO UNDERSTANDING THE LANDSCAPE

Using primary sources to uncover the story of settlement has long been an accepted manner of conducting historical research, but the range of sources is often limited to texts and artworks. This section follows this conventional approach in an attempt to use European observations of the Van Diemonian landscape to understand the Indigenous pre-European landscape. The Europeans had particular

²¹Shayne Breen, ‘Tasmanian Aborigines: Making Fire’, vol. 39 (Papers and Proceedings: Tasmanian Historical Research Association, Tasmanian Historical Research Association, 1992), 40; M. Johnson and I. McFarlane, *Van Diemen’s Land: An Aboriginal History* (Sydney: UNSW Press, 2015), 51–4. Disappointingly, doubts continue to be cast on Indigenous Tasmanian abilities to make fire, most recently in Tim Flannery, *Europe: A Natural History* (Melbourne: Text Publishing Company, 2018), 176.

²²Johnson and McFarlane, *Van Diemen’s Land: An Aboriginal History*, 51–52.

priorities that informed their land choices, and understanding them is the starting point for visualising a pre-European landscape.

The priorities for choosing initial sites of settlement and expansion are plainly stated in many reports written for the Colonial Office and other official bodies. These were composed for a particular audience however, and while they could not outright lie about the conditions, they were sent with the knowledge that it would be at least eight months before any response was heard (by which time many obstacles had already been resolved). In 1804, at the north of the island, Lieutenant-Governor William Paterson explored the banks of the South Esk River, and wrote rapturously of their agricultural potential. He saw ‘... nearly three Miles [five kilometres] in length ... along the Banks of the River, where Thousands of Acres may be ploughed without falling a Tree’.²³ When Oxley noted, of the same area, that ‘...the Grounds being in a great measure unencumbered with Wood ...’, he was recording the results of systematic firing to clear areas for pasture and hunting. The land near the coast was ‘very heavily wooded’, but only a few miles inland he was surprised by the change in the country: ‘never did the Eye behold more beautiful prospects or apparently more fertile land’. This land, he predicted, could be prepared for cultivation at five times the speed of the country he had previously encountered in New South Wales.²⁴ Several years later, this region would be chosen to house a large group of former convicts.

Stretches of land along the Derwent River, in the south of the island, were similarly described. In 1803, one British lieutenant proclaimed that the ‘Banks are more like a Nobleman’s Park in England than an uncultivated country ... very little trouble might clear every Valley I have seen in a Month ...’²⁵ In 1806, Lieutenant-Governor David Collins described what would come to be called Macquarie Plains, twenty kilometres (twelve miles) north of Hobart as ‘very fine and open Country’, with ‘extensive Plains’.²⁶ Like Meehan, he showed very little interest in the land below these plains, and no report of their

²³ Paterson to King, 27 December 1804, Historical Records of Australia (HRA) III (i), 616–7.

²⁴ J. Oxley, Remarks on the Settlement of Port Dalrymple, HRA III (i), 759–61.

²⁵ Lieutenant Bowen to Governor King, 20 September 1803, HRA III (i), 197–8.

²⁶ Collins to King, 27 January 1806, HRA III (i), 616–7; 355.

exploration appears to have been sent to the Governor in New South Wales.²⁷ Descriptions such as these were not confined to the land in Van Diemen's Land; Gammage engages deeply with written impressions from across the Australian continent, demonstrating the importance of cleared lands for the colonial explorers and settlers.²⁸

From the very start, surveyors explored the land, looking for potential sites of settlement. This is reflected in the charts they made of these explorations, which included information about the soils, topography and ground cover they found. James Meehan's chart of the River Derwent, drafted over 1803 and 1804, demonstrates this concern.²⁹ While the details he recorded relate directly to settlement priorities, Meehan also unintentionally captured a picture of the pre-European landscape. The early European settlements remained tethered to the large rivers and waterways, with survey teams only venturing into the more remote areas from the 1820s onwards. Even then, they focussed their explorations on areas accessible by river.³⁰ Charts depicting these travels survive, and other maps of archaeological finds made by walking groups and weekend wanderers, suggest human life has always been based along the waterways on this island.³¹ The information from these maps, however, established an ongoing systematic bias by always placing Aboriginal occupation and activity near rivers without allowing for those landscapes that may not have been surveyed and charted by Europeans until later years.

There are other limitations to the charts as well. They only intentionally show those details relevant to informing future settlement decisions. The language used reflects British ideas of good and poor land, using words like 'barren', 'bad', 'rocky' and evaluating it in terms of potential pasturage. When Harris explored the Huon he described the soils as 'a coarse hard Clay', and determined that the combination

²⁷The Historical Records of Australia include explorations of the Derwent River to Herdsman's Cove (ibid.), and above New Norfolk, but nothing in between. No other reports have been found.

²⁸ Gammage, *The Biggest Estate on Earth*, 5–17.

²⁹ James Meehan, *Monmouth 0: Plan of Settlement at Derwent River as Examined by James Meehan, Assistant to the Surveyor-General between 16/10/1803 and March 1804 by Order of Governor King*, 1804, AF 396/1/206, Tasmanian Archives and Heritage Office (TAHO). <https://stors.tas.gov.au/AF396-1-206> last accessed 25 October 2018.

³⁰The notes on this chart only say 'Mr Darke', meaning one of the brothers John or William. The archival notes attribute it to John Erskine Calder. It was probably John Charles Darke, who explored this area in 1835. Darke, *Exploration Chart 9: Derwent River*, 1834, AF395/1/21, TAHO. <https://stors.tas.gov.au/AF395-1-21> last accessed 25 October 2018

³¹'Exploration Maps 1800–1949', AF 395, TAHO.

<http://search.archives.tas.gov.au/default.aspx?detail=1&type=S&id=AF395> last accessed 25 October 2018.

of them and the difficult terrain made the area unsuitable for habitation.³² When the evidence of charts is combined with artwork, other reports, and modern observations, a more detailed illustration of the landscape before and after British arrival can be created. The region of the Ben Lomond Nation can be used to provide an excellent demonstration of this.

Lyndall Ryan's important work on Tasmania understood there to be (probably) four clans within this area, three named by Plomley (the *plangermairreenner*, the *plindermairhemener* and the *tonenerweenerlar*), all of which were highly mobile, and had various rights to forage, hunt and winter in other Nations. The land around Ben Lomond was used as a summer camp, for an estimated 150 and 200 people. Ryan notes this nation was 'virtually destroyed' by the expansion of the British into the area in the 1820s.³³

On 8 November 1827, several Land Commissioners rode through this area, evaluating the farms for profitability and efficiency. They described the country as consisting of

Plains ... very similar to the Salt Pan Plains. The Soil red, and covered with Stones, affording excellent Sheep Pasture, if stocked lightly. The Hills at the back are also good for a short distance.³⁴

Exactly one month later, surveyor John Helder Wedge charted the Break O'Day Plains, east of Ben Lomond. The boundary for the Ben Lomond, North East and Oyster Bay Nations is thought to have lain here. Parts of this region had been alienated for several years, with some landholders claiming large quantities of land for their stock. Stepping out of his tent in the evening to stretch his legs, he saw a fire, his description so evocative it is worth repeating here in full:

My attention was at once fixed on a most magnificent and imposing sight – The hills for a few miles (about 3) were on fire, and had been for several days, but being fanne'd up by the

³²It is interesting therefore that this area was colonised by emancipists and other individuals seeking to escape the oversight of the government. Today the Huon is renowned for its orchards, some of which were established with these first families in the 1830s.

³³Ryan, *Tasmanian Aborigines*, 32–4.

³⁴*Journals of the Land Commissioners for Van Diemen's Land, 1826–28*, ed. Anne McKay (Hobart: University of Tasmania in conjunction with the Tasmanian Historical Research Association, 1962), 66.

gusts of wind it had this night blazed up to an unusual extent – a range of Hills five to six Miles in extent were burning – the general blaze was obscured by the intervening trees, but here and there a streak of fire was to be seen, formed the edge of the hills, and now and then a flare of fire would burst through the volumes of dense smoke and appear above the tops of the trees occasionally – the falling of the trees would [illegible] upon the general stillness, and convey to mind the destruction the devouring element was making – I should conceive the conflagration of an extensive city would present much such another appearance – But I had the satisfaction of contemplating and enjoying its truly sublime appearance without having to contemplate the ruin, perhaps excruciating death of some of my fellow creatures.

In the margin he noted ‘The natives had set the grass on fire, as is their custom, whilst hunting, and it had spread in the way described – whilst in the neighbourhood they speared upwards of a dozen of Mr. Talbott’s sheep and chased his shepherds’.³⁵

Although the specific location the fires is not known, it is most likely that he was looking west towards the mountains around Ben Lomond – Talbott had properties in Fingal, on the eastern side of the mountain at the edge of the Oyster Bay Nation. This entry reveals that in 1827 fire was still being used to manage this landscape, although probably in diminishing amounts with the encroachment of the British and accompanying demise of the clans.

³⁵John Helder Wedge, *The Diaries of John Helder Wedge, 1824–1835*, ed. W. F. Ellis (Hobart: Royal Society of Tasmania, 1962), 40.



Figure 3: Artwork locations, and the artworks. Sources: LISTmap Tasmania; artworks: Scott (State Library of NSW), Lycett (Tasmanian Archives and Heritage Office), Glover and Guerrard (National Library of Australia), Prout (National Gallery of Victoria).

Ben Lomond was a popular subject of sketches and paintings throughout the nineteenth century, and the changing landscape was captured. Thomas Scott's 1823 sketch *Ben Lomond from Fletcher's Hut* (southwest of the mountain, Figure 3), shows trees scattered through an open area. Their branches spread out wide, suggesting they did not have to compete upwards for light as they grew – they were able to stretch out into space around. The land in this area had been opened for settlement for only a year or two. These trees, however, had been growing in a cleared environment since long before the arrival of the British.³⁶ Joseph Lycett's similarly situated 1824 painting *Ben Lomond from Arnold's Heights* supports

³⁶Thomas Scott, *Ben Lomond from Fletcher's Hut*, 1823, 1823, PXB 216, State Library of NSW, <http://acmssearch.sl.nsw.gov.au/search/itemLargeCopyright.cgi?itemID=1282531&size=full&album=1&collection=824042&parent=423959>.

this image of a mountain surrounded by plains. Here we see straight edges of trees as the slopes start to rise, forming wide green plains with a river running through. Although somewhat stylised (and probably painted from someone else's work rather than the site itself), this painting shows the same qualities of a 'nobleman's park' as Scott's sketch, and was taken from a vantage point not far east of Scott's.³⁷ Wedge associated the fire with hunting, although he did not have the knowledge to note whether it was intended to drive out prey, prepare the land for future use, or intimidate the British moving around the area. Nonetheless, both the written and visual evidence show that this area was being fire-stick farmed. Other artists captured this landscape as well – Glover from Bonney's Plains, while a little further east Prout took the view from Fingal, and Guerrard painted what he saw from the western located Epping Forest.³⁸ All show a cultivated landscape, with sharply defined edges of trees and plains, and trees growing with hearty enthusiasm into the space around them.

Not all of the landscapes shown in these paintings are the result only of Aboriginal cultivation, however. Some of these artworks show a mixed landscape, such as Guerrard's *Ben Lomond, Epping Forest*. By the time this artist was in the area, the landscape had been somewhat adapted to British purposes, with some clearance occurring. The trees on the left grew surrounded by others – they are tall and concentrate most of the growth at the top, indicating they competitively grew upwards towards the light. In the distance, however, the boundary trees have wider spread branches, and the growth of low shrubbery associated with the cessation of fire burning regimes testifies to recent changes in land management practices. Eucalypts respond to the availability of light, stretching to get maximum exposure. When they are surrounded by other trees they will reach up towards the sky, while those on the margins or standing in an open space will expand into their surrounds.³⁹

³⁷Joseph Lycett, *Ben Lomond, from Arnold's Heights, a Part of Tasman's Peak, Van Diemens Land*, 1824, 1824, TAHO, <https://stors.tas.gov.au/AUTAS001124073248w800>.

³⁸John Richardson Glover, *Benn [i.e. Ben] Lomond from Boney's*, 1835, National Library of Australia, <http://nla.gov.au/nla.obj-138922690>; John Skinner Prout, *Ben Lomond from Fingal V.D.L.*, 1844–1846, National Gallery of Victoria, <http://www.ngv.vic.gov.au/explore/collection/work/28585/>; Eugen von Guerard, *Ben Lomond, Epping Forest, Tasmania*, 1867, National Library of Australia, <http://nla.gov.au/nla.obj-135745089>.

³⁹Gammage, *The Biggest Estate on Earth*, 18–47.

The name of the viewpoint gives a significant insight into the uses of that particular area. The area may have been named after the Epping Forest in England for abstract honorific rather than descriptive reasons. Evans stated that the Tasmanian version was a ‘A wooded tract called, by His Excellency the Governor, Epping Forest’, but gave no more specific reasoning for the choice of name.⁴⁰ However, other evidence suggests the name described an area reminiscent of England.⁴¹ In Guerrard’s painting Epping Forest is shown as relatively open ground, leading into thick woods. Not only was it wooded, some of the earliest colonial descriptions of the area imply it was the only forest for several miles around. On his journey of exploration through from Hobart Town to Port Dalrymple, through the Midlands, Surveyor General Charles Grimes scrawled notes on *Exploration Chart 29*. On Friday 6 December 1807, they reached the ‘Commencement of Epping Forest’ and the next day travelled ‘about 10 miles [16 kilometres] thru Epping Forest’ to Henrietta Plains. Now called Powranna, these plains sit four kilometres (2.5 miles) north of the modern boundary of Epping Forest. This area is named Camden Valley on both *Exploration Chart 29* and the annotated 1814 print of Flinders’ Chart of Terra Australis.⁴²

Grimes noted the route on his chart, with trees lining the path. This map used minimal symbology, indicating land and flora quality through simple illustrations. If trees were drawn, it was because Grimes had found trees in that area, and they were of note. On Flinders’ map, however, the area is described as ‘fine hilly country’ without any mention of trees. This is not surprising. Flinders’ survey was not exhaustive in any way, merely indicative of the terrain. Most compelling is *Exploration Chart 2* (Figure 4), drawn by William Wedge Darke in 1829. It shows a very large wooded area, labelled ‘Forest’, with land grants encroaching on the edges. R.J. Fensham compared this map to the 1989 boundary of Epping Forest, and found it to be very similar.⁴³ Today much of the forest has been cleared, leaving only a small

⁴⁰G.W. Evans, *A Geographical, Historical, and Topographical Description of Van Diemen’s Land* (John Souter, 1822), 76.

⁴¹Sharon Morgan labels the general application of British names to new locations an attempt to ‘retain their Englishness’: Sharon Morgan, *Land Settlement in Early Tasmania: Creating an Antipodean England* (Cambridge: Cambridge University Press, 1991), 163.

⁴²Charles Grimes, *Exploration Chart 29: Launceston to Ross, 1807, 1807*, AF395/1/42, TAHO, <https://stors.tas.gov.au/AF395-1-42>; Matthew Flinders, *Historic Plan 1: Chart of Van Diemens Land, 1814, 1814*, AF395/1/2, TAHO, <http://stors.tas.gov.au/AF395-1-2>.

⁴³RJ Fensham, ‘The Pre-European Vegetation of the Midlands, Tasmania: A Floristic and Historical Analysis of Vegetation Patterns’, *Journal of Biogeography*, 16(1) (1989): 41.

reserve, used for rough sheep grazing, surrounded by farmland.⁴⁴ In 1924, Stephen Roberts wrote that land grants expanded to the ‘inferior lands of Epping Forest as well as to the luxurious Macquarie Plains’.⁴⁵ This land stretches along the South Esk River, which is known to flood.



Figure 4: South Esk, Macquarie and Elizabeth Rivers, 1829. Source: Tasmanian Archives and Heritage Office, AF395/1/14.

Epping Forest appears as a Forest among Plains on some of the earliest charts of this area. Bounded on east and west by the Macquarie and South Esk Rivers, Epping Forest has Henrietta Plains (Powranna) to the north, and Macquarie Plains directly south.⁴⁶ These names reveal that this was a patch of woodland surrounded by open areas, even when the British first came to the area. As a popular thoroughfare, the

⁴⁴*People, Sheep and Nature Conservation: The Tasmanian Experience*, eds. J. B. Kirkpatrick, Kerry Lynn Bridle, and CSIRO (Australia) (Collingwood: CSIRO Publishing, 2007), 51.

⁴⁵Stephen H. Roberts, *History of Australian Land Settlement: 1788–1920*, Reprint (New York: Johnson Reprint Corp, 1924), 45.

⁴⁶G.W. Evans, *Historic Plan 2: General Map of Tasmania Compiled from Various Maps and Surveys by GH Evans, Deputy Surveyor General* (London, 1821), AF395/1/3, TAHO, <http://stors.tas.gov.au/AF395-1-3>.

Midlands were often described by travellers, with explorer William Breton calling the transition from trees to plains ‘not at all gradual’ in about 1830.⁴⁷ Unwittingly he confirmed the existence of abrupt forest edges, or fire boundaries, as shown in contemporary paintings. This was an area under extensive British habitation by 1824, when Thomas Scott showed grants stretching along almost the entire lengths of the main rivers running through. These were ‘fine lands’, with ‘excellent pasturage’ and land of the ‘best description’, ‘perfectly free from timber or underwood’, much admired by Evans in his *Description of Van Diemen’s Land*, and the first choice land for the land hungry colonists.⁴⁸

It is unlikely that this pocket of forest formed naturally – clans of the North Midlands and Ben Lomond nations passed through this area, possibly other nations as well.⁴⁹ In an archaeological study of the Midlands, Sue Kee suggested that the riverine lands surveyed along the South Esk and Macquarie Rivers were used in connection with the river – the waterways formed travel routes, and the lands were used transitorily.⁵⁰ The routes of Aboriginal tracks are not known with any precision, although many of the earliest colonial roads followed what was already there, and may preserve long used trails. Nonetheless, a forest located between two navigable rivers, and on several different cross-country routes must have been convenient for the travellers needing reliable resources in another Nation’s territory. When viewed in light of the surrounding plains its significance becomes clear.

Such pockets of forest were not unusual – Robinson expressed relief at finding cleared land after ‘being immured in forest for four days’, while Edward Curr puzzled over ‘whether the forests in this Island are encroaching on the clear grounds, or the clear grounds on the forests’.⁵¹ Gammage has more recently interpreted it as the latter, arguing that forests were moved to allow soils to rejuvenate.⁵² No description of Epping Forest’s condition at the beginning of the colony has been found, but Grimes estimated

⁴⁷W.H. Breton, *Excursions in New South Wales, Western Australia, and Van Diemen’s Land, during the Years 1830, 1831, 1832, and 1833*, Second (London: Richard Bentley, 1834), 305.

⁴⁸Evans, *A Geographical, Historical, and Topographical Description of Van Diemen’s Land*, 77.

⁴⁹Ryan, *Tasmanian Aborigines*, 29–34.

⁵⁰Sue Kee, *Midlands Aboriginal Archaeological Site Survey*, Occasional Paper 26 (Tasmania: Dept. of Parks, Wildlife and Heritage, 1990).

⁵¹G.A. Robinson, ‘7 July 1831’, in *Friendly Mission*, ed. N.J.B. Plomley (Hobart, 1966), 371–2; E. Curr, 2 October 1827, VDL Co P 20/231, MM 71/5, TAHO, cited in Gammage, *The Biggest Estate on Earth*, 221, see also 194.

⁵²Gammage, *The Biggest Estate on Earth*, 211–38.

travelling ten miles (sixteen kilometres) through it in a day. In comparison, Henry Hellyer reported enormous difficulties when travelling through part of Surrey Hills, estimating his party were managing ‘five hundred yards [500 metres] in some ... horrid scrub’.⁵³ For Grimes and his party to travel ten miles in a day suggests it was relatively easy going, although still impeded by some obstacles. A daily distance of twice this might have been expected, but the party probably took a slower pace to record their findings.⁵⁴ While Gammage placed more significance on cleared areas over forested, without dwelling in depth on the uses of wooded regions, timbered areas were important for many species. The edges were valuable for providing shade and shelter for animals that prefer to eat in the open, but sleep hidden. Kangaroos like open grass on forest edges, while possums search for fresh tips in open forest.⁵⁵ Epping Forest was not the only treed part of the Midlands – the paintings discussed earlier demonstrate clearly the patchwork in place, but its location and size follow Gammage’s argument that these were intentionally created habitats that would enable the reliable sourcing of particular animals.⁵⁶

CASE STUDY TWO: AN UPDATED METHODOLOGY TOWARDS

UNDERSTANDING THE LANDSCAPE

The example of Ben Lomond and Epping Forest demonstrate some of the ways in which a fire-stick farmed Aboriginal landscape was visible to the colonists, and how we can identify them today. The Midlands of Tasmania were, however, highly travelled and admired for their picturesque qualities, and therefore well documented. Not all areas were as popular with Europeans, and the surviving records contain only sparse descriptive detail. The approach taken in this section demonstrates that further detail can be discovered by using HGIS data, enabling historians to extend their analysis beyond the constraints of surviving charts, artwork and journals. This case study still uses primary sources, but takes land grant and sale records, and aligns them to the landscape itself. In order to discuss the continuation of land use

⁵³Onfray, ‘Cultural Artefacts or “Neglected Old Parks”’, 2.

⁵⁴Naismith’s Rule suggests that an easy expedition in fair conditions should allow one hour for three miles by foot. William Douglas, ed., *Scottish Mountaineering Club Journal*, vol. II (Edinburgh: Scottish Mountaineering Club, 1893), 136.

⁵⁵Gammage, *The Biggest Estate on Earth*, 199.

⁵⁶*Ibid.*, 1–4.

between the different inhabitants, it is necessary to first understand how the Europeans chose their initial sites for agriculture. This means attempting to assess it through their perceptions, thus ignoring (briefly) the millennia of management that preceded their arrival.

New Norfolk sits at the southernmost edge of the Big River Nation, where the Derwent River formed the boundary between the Big River and South East Nations. The Big River Nation stretched up to Surrey Hills, while its eastern boundary followed the Jordan River and Western Tiers. Ryan suggested that the Big River people, the largest nation, had a population greater than the conservative estimates of 400 to 500 people who were split into seven or eight clans. Although lacking direct coastal access, the Big River territory contained a number of lakes and rivers, and they were the only group thought to have regular passage to both east and west coasts, through trade agreements, following a number of well-worn trails through the country. It is also possible that they had very little contact with their immediate neighbours, the South West Nation. The locatable clans were all situated west or north of New Norfolk, around the Dee, Ouse and Clyde Rivers, although it must be remembered that there were several unidentified clans that may have been located further south.⁵⁷ This is not an area that has undergone any extensive archaeological survey, and it is difficult to establish an archaeological basis for understanding Aboriginal land uses in this area.⁵⁸

The environmental factors that attracted the Europeans to particular areas were, however, more complicated than the appearance of the landscape. Although they did not have the complicated knowledge of twenty-first century agricultural scientists, the evidence shows that they were still able to evaluate land potential. A comparison of all of the soils found within the areas of alienation reveals the common determinants.⁵⁹ The alienation of land across Van Diemen's Land was conducted by several

⁵⁷Ryan, *Tasmanian Aborigines*, 25–9.

⁵⁸There may have been archaeological reports conducted by private organisations that have not been accessible to this study.

⁵⁹ This study uses the Land Systems of Tasmania descriptions. In brief, each soil is evaluated against five common features with a sixth to allow for miscellaneous variation. Within each feature, the numbers 0 to 9 represent the specifics of that category (for example a one in rainfall means it receives 375–500 mm annually, and a seven gets 1500–2000 mm), although only the Geological Period has nine variations. The full descriptions are found in J.B. Davies, *Land Systems of Tasmania: Region 6* (Hobart: Tasmanian Department of Agriculture, 1988), 7–9. They are also accessible online, as Appendix Eight of Imogen Wegman, 'Profitable and Unprofitable Acres : Patterns of European Expansion across Van Diemen's Land, 1803–35' (PhD thesis, University of Tasmania, 2018), <https://eprints.utas.edu.au/28336/>.

different groups, each with their own priorities. Former convicts were directed to large groupings of riverine intensive long-lots, where they were expected to become self-sufficient, and to start contributing back into the colonial stores quickly. In New Norfolk these plots were based along the Back River. Free settlers came in a second wave, and were given more freedom to choose open extensive land grants that would enable them to start building large agricultural empires of sheep, wheat and other products.⁶⁰ From the riverine intensive plots of Back River, the New Norfolk settlement expanded to open extensive plots at Macquarie Plains (Figure 5).

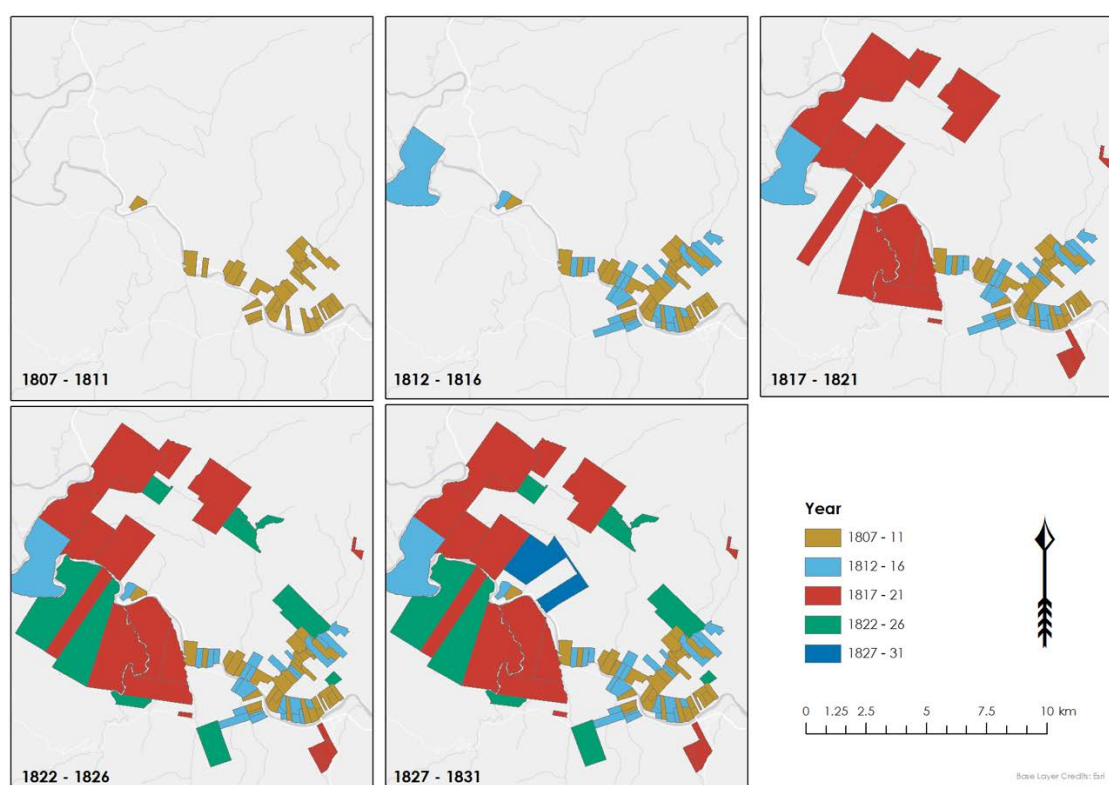


Figure 5: Breakdown of lands alienated in New Norfolk, 1807-1831. Source: the author.

By focussing solely on the soils that touch any land grant that has a date of alienation, the similarities become clear. The importance of water access was a continuing theme throughout the earliest years of the Van Diemen's Land colony. What this data reveals is that it was not only access to the rivers, but a

⁶⁰ For detailed definitions and analysis of riverine intensive and open extensive land grants, see Wegman, 'Profitable and Unprofitable Acres'.

reliable rainfall that influenced land choice. 74 percent of the soils received 500–625 mm of rain annually (when this data was collected in the 1980s).

Explorers, surveyors and settlers assessed the rainfall potential of an area by observation – one of the failings of the initial British camp at Risdon Cove was that it was established during the spring, and the quality of green grass misled the British about the reliability of rainfall and fresh water.⁶¹ Drought prevention quickly became a factor in land choice, and their consistency in locating areas with similar rainfall suggests the British were quick to learn to read the landscape. But as we will see, in following pre-existing land-use patterns, the British were also unwittingly accepting the wisdom of the original custodians of these lands. The land grant and conveyance records are not reliable enough to evaluate the seasonal land granting patterns – knowing when the settlers were more likely to choose their land would shed light on how they understood seasonal rainfall distribution in different areas. As the records reflect when a land grant was formally recognised, rather than when the settler first used the acreage, they cannot reveal that level of information. It must be remembered that the areas were first found to be suitable by surveyors who had the opportunity to observe the patterns across the island as they explored and mapped it. The areas ‘opened’ for settlement were those that had been found suitable for agricultural and pastoral pursuits, a qualification that included sufficient reliability of water.

The other primary determinant of all the settlement patterns was altitude, with 69 percent of soils touched lying between 0 and 300 metres above sea level. The topography of these lands is surprisingly variable, but the majority of soils are either undulating plains or low hills (less than 100 metres high). This confirms the appearance of these settlements, as they lie on the river edges, and stretch only reluctantly up the sides of the valleys. Land away from the river edges still had value – riverine land was not always suitable for grazing stock, especially during wet seasons.⁶² Those acreages located away from the rivers or flood plains were usually part of a larger grant or intended specifically for grazing.

⁶¹Kathy Evans, “‘Antipodean England’? A History of Drought, Fire and Flood in Tasmanian from European Settlement in 1803 to the 1960s,” (PhD Thesis, University of Tasmania, 2012), 68.

⁶²An example of cautions about this is *The Hobart Town Gazette and Southern Reporter*, 20 July 1816, 1. For further discussion, see Chapters Four and Five in Wegman, ‘Profitable and Unprofitable Acres’.

When historians write about land alienation in Van Diemen's Land, they often incidentally suggest a continuous front pushing out from a core. An example of this can be seen in Sharon Morgan's work when she focussed on the increasing size and number of grants. By listing them as numbers, within broad districts, it is easy to imagine they were all connected as entire regions removed from Crown land.⁶³ By using HGIS to chart the individual properties, however, the patchwork nature of land grants is illustrated. It becomes clear that the frontier was not a solid line. Lyndall Ryan called land granting 'corridor fashion', as the settlers took in the Aboriginal hunting grounds and ignored the forested areas, but even this suggests a contiguous push across the land.⁶⁴

Instead it was a series of forays into the hinterlands, slowly expanding out like inkblots on tissue paper until they joined with other properties in their vicinity. This allowed the free settlers to utilise the Crown lands surrounding their properties. Although this practice was officially discouraged, its importance was also recognised, with the *Hobart Town Gazette* noting that '...there are many to whom it would be death to be confined within the limits of their own grants, abridging so materially as it would, the advantages they enjoy by the full liberty of grazing upon Crown land...'⁶⁵ Figure 6 shows the scattered nature of early alienation around Campbell Town in central Tasmania. By assuming continuity in the frontier, the considerations driving the alienation of every acre have been ignored.

⁶³ See Chapter One in Morgan, *Land Settlement in Early Tasmania*, 5–23. James Boyce, *Van Diemen's Land* (Melbourne: Black Inc, 2008), 146–50. Robson obliquely acknowledged the dispersed nature of large grants, by explicitly referring to small grants as 'fixed together': Lloyd Robson, *A History of Tasmania: Volume I Van Diemen's Land from the Earliest Times to 1855* (Melbourne: Oxford University Press, 1983), 114.

⁶⁴ Ryan, *Tasmanian Aborigines*, 75.

⁶⁵ 'Miscellany, Original and Select', *Hobart Town Gazette*, 2 December 1826.

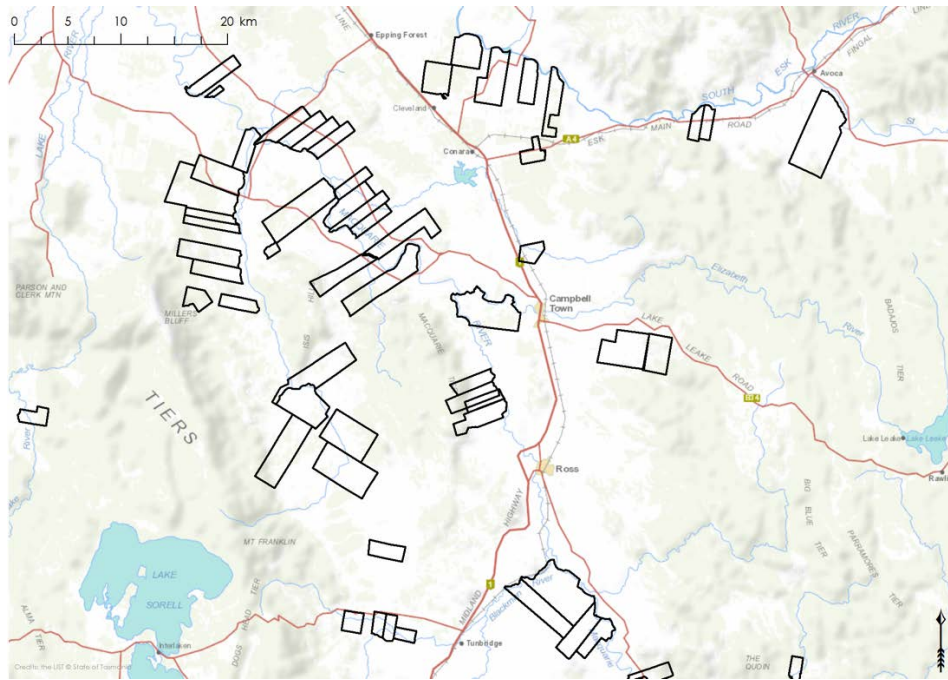


Figure 6: Scattered properties around Campbell Town to 1825. Sources: LISTmap; the author.

All settlers, whether they were former convicts or free emigrants, sought reliable soils and water access. Flatter lands also held a strong appeal for the earliest grantees. The Land District Charts (LDC) recorded the official acreage and landholder, along with the status of landholding at the time of drafting – whether it was a provisional (a ‘location order’) or confirmed grant, or if it had been purchased. Figure 7 shows all the properties of Bothwell (fifty kilometres north of New Norfolk), as contained on the LDC. The data in this figure was not filtered by year of alienation, and therefore shows every property including those outside the date range of this research. By displaying these properties according to their landholding type, they reveal that the vast majority of properties granted (or held under location order) were on the plains, while the purchased properties spread into the hills around them. Land granting ceased in 1831, to be replaced with auction and sale.⁶⁶ This procedural change is reflected in these charts – the majority of properties that have an identified date of alienation before 1835 are grants and lie on the flatter lands. The hills are dominated with properties alienated later and by purchase. By 1831, this

⁶⁶ Prior 1831, the purchase of land came with obligations including taking assigned convicts, and utilised an informal procedure of recording and taking possession. ‘Purchase’ and ‘grant’ were often interchangeable. After 1831, the process was formalised, with an emphasis on paying quit rent (tax). John West, *The History of Tasmania*, ed. A.G.L. Shaw, Revised (Sydney: Angus and Robertson, 1971), 107–14.

suggests, the land available for alienation was lower quality, hillside ground. The flats had already been claimed by the settlers of the 1810s and 1820s.

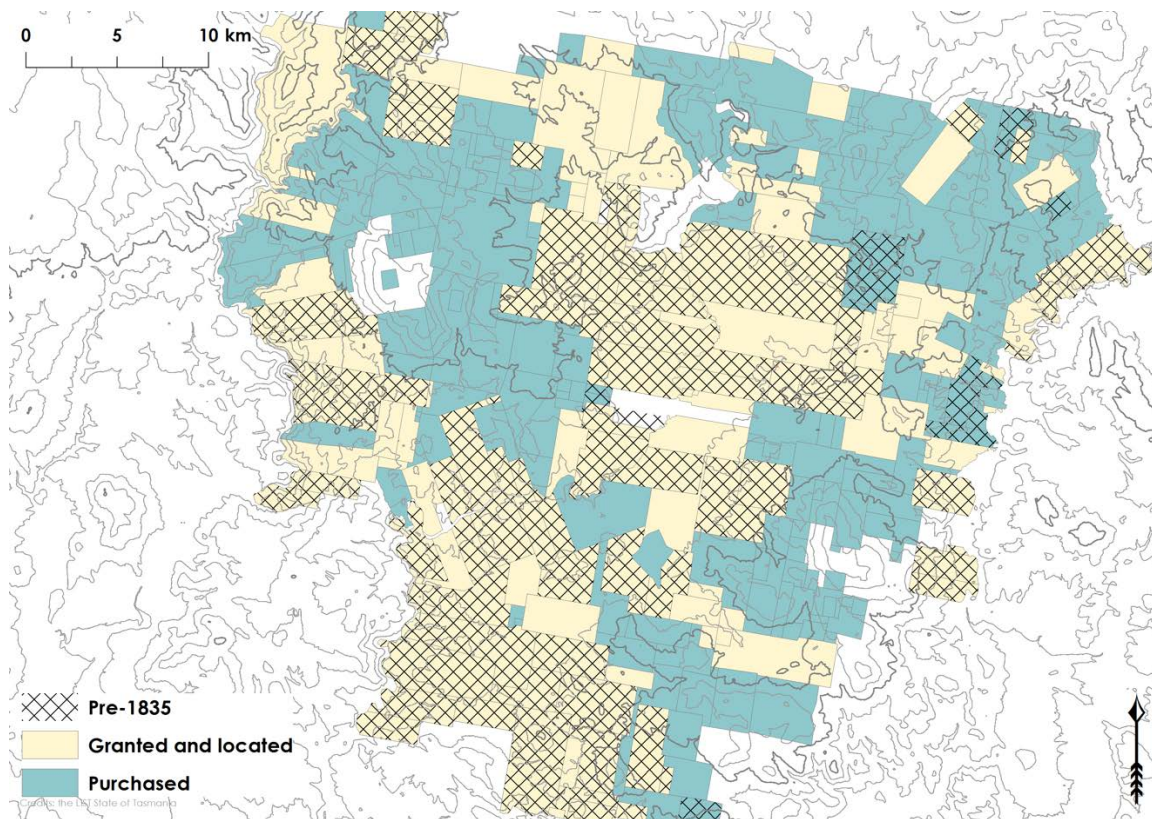


Figure 7: Bothwell shown by landholding type, overlaid with contours. Properties with an identified purchase date shaded. Sources: LISTmap Tasmania; the author.

What these conditions show is a European propensity to move into the ‘plains’, almost to the exclusion of other landscapes. As they jumped across mountains and forests to the next cleared area, they mimicked the pattern established by thousands of years of management by the preceding occupants. But the Tasmanian Aborigines did not only have one use for mosaic clearance. In some areas, such as the aforementioned Goderich Plains, chutes would drive the animals into traps, while elsewhere, such as in the southwest, fire kept sedgelands clear to encourage the growth of edible plants.⁶⁷ Likewise, the settlers’ intentions towards these lands were not always the same. The riverine intensive was informed by

⁶⁷Gammage, *The Biggest Estate on Earth*, 69–70, 80–83.

government policy and the island's status as a penal colony, while the open extensive was created when free settlers arrived with assets and ambition as the pastoral economy expanded.

Returning now to New Norfolk, the earliest European descriptions come from James Meehan's *Monmouth 0* chart, drawn up in 1804.⁶⁸ This is also the only surviving chart showing this area before 1814 – any other charts made at the time of settlement have been lost to time. This leaves a large gap to fill, especially as *Monmouth 0* does not give a compelling argument for the habitability of the site around Back River. A pre-European vegetation chart suggests that much of this area was covered by open eucalypt forests, but this chart is not reliable at this level of fine detail (and the provenance of the data is also unclear). Figure 8 demonstrates this by showing the contradictions between Meehan's descriptions and the hypothesised vegetation.⁶⁹ This lack of reliability reduces the pre-1788 vegetation chart to the point of near uselessness, but its existence is nonetheless worth noting.

⁶⁸James Meehan, *Monmouth 0: Plan of Settlement at Derwent River as Examined by James Meehan, Assistant to the Surveyor-General between 16/10/1803 and March 1804 by Order of Governor King*, 1804, 1804, 0, AF 396/1/206, TAHO, <https://stors.tas.gov.au/AF396-1-206>.

⁶⁹Geoscience Australia, *Vegetation – Pre-European Settlement (1788)*, version 4.2, <https://ecat.ga.gov.au/geonetwork/srv/eng/catalog.search#/metadata/42280> (it should be noted that the dataset download is currently under review, and the associated product information is only available through the Internet Archive).



Figure 8: Meehan's descriptions (1804) over the Pre-European vegetation chart. Sources: Geoscience Australia; Tasmanian Archives and Heritage Office, AF396/1/206.

When Meehan pushed through the bush and scrambled up hills on either side of the Derwent, he was one of the first Europeans to enter the area. His journal of the journey survives and, as with the resulting map, Meehan captured a landscape that was previously unseen and, more importantly, unaffected by Europeans. Very few features had names that can be recognised today; measurements are made against prominent features such as Mount Direction or Frederick Henry Bay, but the majority of locations are given only a physical description – ‘steep gully’, ‘moderate pasturage’ or ‘gum tree’ – and surveyor’s measurements (Figure 9).⁷⁰ His journey lasted almost six months, and he covered (at a very rough calculation) the major rivers in an area of approximately 250000 hectares, stretching east to today’s Dunalley, north to Kempton and west to Mt Field National Park (Figure 10). The final map does not contain dates that can be correlated with the field books, and at least two named volumes (‘Risdon Cove’ and ‘River Derwent and Adjoining’) may contain the area. To identify Meehan’s comments about the

⁷⁰ James Meehan, ‘Meehan Survey: Risdon Cove’ (1803–1804), LSD 355/1/1, TAHO; James Meehan, ‘Meehan Survey: River Derwent and Adjoining’ (1803–1804), LSD 355/1/3, TAHO.

New Norfolk area a surveyor would need to use the coordinates and measurements to reconstruct his explorative wanderings. Such an exercise would make a valuable contribution to discussion about Indigenous Tasmanian landscapes, and the author hopes here only to establish a framework through which that knowledge could be utilised.

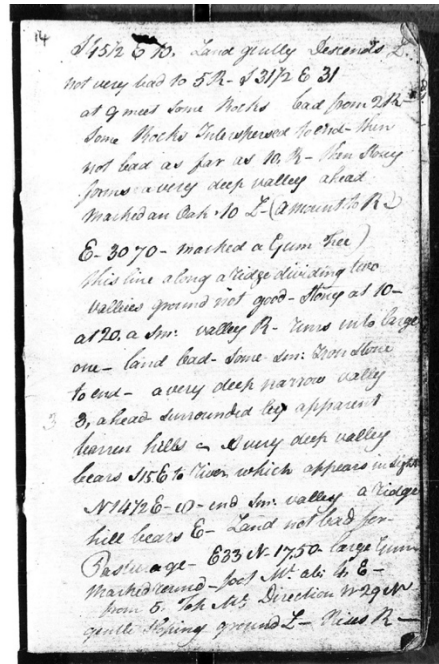


Figure 9: A page from one of Meehan's Field Books, showing his notes of the terrain and vegetation somewhere out of the Risdon Cove camp. Note his reference to 'marked a gum tree' and 'a very deep valley bears S15E to river'. Source: Tasmanian Archives and Heritage Office, LSD355/1/3.



Figure 10: The map Meehan made of his explorations in Southern Tasmania between October 1803 and March 1804.
Source: Tasmanian Archives and Heritage Office, AF396/1/206.

Without a reconstructed journal, we are reliant on the map Meehan made showing these explorations, *Monmouth 0*. He did not describe every metre of land, often including only general comments about a broad area. One of the first things that stands out is the almost complete absence of comments in the area that would become the riverine intensive section of New Norfolk at Back River. What comments there are, show that this land was not of the quality Meehan sought – it was ‘chiefly bad’, while the entire stretch from the area now known as Bridgewater to Sorell Creek was ‘unfit for cultivation’, although it did offer the small consolation of having ‘moderate good Pasturage’. West of the Back River, the land was ‘good a short distance in’.

There is very little detail about this area, on either the eastern or western banks of the river, and it is possible that the terrain here was impassable for Meehan, either because of topography or dense scrub. When Thomas Laycock made his 1806 expedition from Launceston, he too was forced away from these lands. After admiring the Macquarie Plains, with ‘fine grazing Land, the timber thin and Small...’, he found access to the river blocked by ‘a body of high Mountains...which appeared difficult to penetrate’.⁷¹ In light of these descriptions, the choice of such a site for settlement is somewhat mysterious.

Macquarie Plains, a short distance upriver from the initial emancipist grants at Back River, was chosen for the open extensive stage, and was praised by Meehan (Figure 11). *Monmouth 0* shows the land above Plenty as having ‘modtly [moderately] good’ lands, ‘reddish soils’, with ‘gentle hills and Dales’. The note ‘no trees’ is written several times across this section of the chart. Further up the river there were ‘very Extensive planes [sic]’, and the land was ‘apparently not bad’ in patches. This map shows Meehan travelling through what he took to be uninspiring country, and passing the falls, before finding himself

⁷¹Journal of T. Laycock, 9–10 February 1807, HRA III (i), 746.

in a pocket of land seemingly made for British agriculture. These descriptions captured a mosaic landscape, one which shifted very suddenly from unremarkable to valuable by British standards.

The question remains, what exactly did Meehan find around Back River that resulted in almost a blank space on the chart, and what did the British see as making it ideal for settlement? From the environmental and historical evidence, is it possible to speculate that the area initially chosen for the Norfolk Island evacuees was also an open landscape when the Europeans arrived?



Figure 11: Two stages of settlement in New Norfolk, on Meehan's description of the areas. Sources: Tasmanian Archives and Heritage Office, AF396/1/206; the author.

The next description of the area was made four years later in 1810, three years after the land had been alienated. John Oxley commended the area for its ready water access and for being 'extremely fertile'.⁷² Ten years later John Bigge reported the formerly 'rich soil' had been exhausted by continual cropping.⁷³

⁷²J. Oxley, Report on Settlement, 1810, HRA III (i), 574.

⁷³John Thomas Bigge, *Report on Agriculture and Trade in New South Wales*, Australiana facsimile editions; no. 70 (Adelaide: Libraries Board of South Australia, 1966), 26.

What its capabilities were over a decade after settlement is irrelevant; his comments suggest that this was good land at least at the beginning. What these contradicting assessments reflect are the changing priorities of the colony. Meehan and Laycock were more interested in large areas that could be used for grazing, suggesting that the colony was interested in large-scale farming from the beginning. The Derwent River was a significant route of transportation for the early colony, and the site of New Norfolk provided a gateway that opened up Macquarie Plains and further, beyond the navigable reaches of the river.

But the New Norfolk settlement was located within a valley surrounded by steep inclines, with limited prospects for expansion. The earliest plots of land granted here were set out in a riverine pattern, made up of long-lot style properties that stretched back from the water's edge. This pattern was usual for the emancipist grants, but in other parts of the island, such as Norfolk Plains in the north, they had a second row of grants behind the first (see Figure 12). This compact layout was in keeping with the colonial government's intent to continued surveillance of the former convicts, but it also lay the groundwork for future pastoral expansion, as it would form a hub within a larger agricultural region.⁷⁴

⁷⁴ For discussion of different purposes of these grouped emancipist grants, see: Examination of G.W. Evans, 22 March 1820, HRA III (iii), 319; Grace Karskens, *The Colony: A History of Early Sydney* (Australia: Allen & Unwin, 2010), 120.

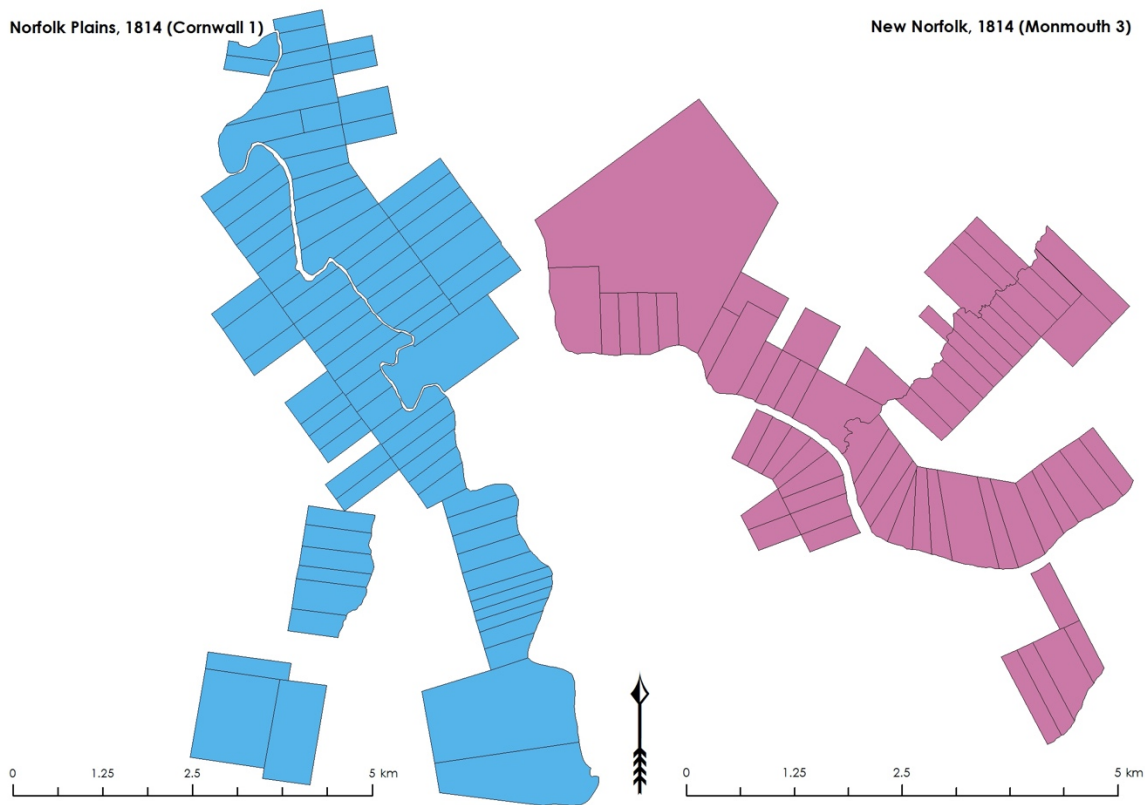


Figure 12: Grants for former convicts, laid out in the prescribed riverine intensive long-lot style in two topographically different locations. New Norfolk and Norfolk Plains, both 1814. Sources: Tasmanian Archives and Heritage Office, AF396/1/1325; Tasmanian Archives and Heritage Office, AF396/1/210; the author.

The New Norfolk site must have been chosen from the river rather than overland, as the mountains surrounding it apparently dissuaded explorers from entering by foot. The absence of abundant narrative description shows that this area was not one highly regarded by the earliest Europeans to venture through. The environmental evidence and the record of events are, however, in agreement: the Back River site at New Norfolk was similar to that of Macquarie Plains. Both areas are based along the *Bushy Park Plains* soil (298122) that follows the river. This soil is characterised by undulating hills and chromosol soil orders, which can be put to agricultural uses. The only difference is that the Back River strip is narrow, and is largely surrounded by the less fertile *Heathy Hills* soils (273141) which is characterised by a more acidic kurosol soil order.⁷⁵ The open extensive areas granted to free settlers also sit on *Bushy Park Plains*, but the surrounding soils are largely chromosol and dermosol soil orders, which are more conducive to grazing

⁷⁵Davies, *Land Systems of Tasmania: Region 6*.

and cereals than kurosols.⁷⁶ This area had capacity for expansion, and this quality was recognised from the earliest European explorations, even as Back River was ignored.

The land along Back River must have been at least partially open on European arrival; for the settlement to survive it needed to become established rapidly, and extensive clearing would only hinder that process. When Bowen said ‘very little trouble might clear every Valley I have seen in a Month’ he may not have meant New Norfolk specifically, but the entire length of the Derwent River ripples with hills and valleys, and they must have all been sparsely covered for him to show such confidence.⁷⁷

By moving beyond the contemporary accounts of the landscape, the landscape of the pre-European New Norfolk area has become clearer. While written accounts explicitly disagreed on whether it had bad or fertile soil, they still contain details that can be viewed alongside modern environmental evidence to build an image of the landscape that existed before the land was alienated. The earliest plots of land granted out along Back River were relatively flat, received sufficient rainfall, and had workable soils. The only deficiency of this area was its apparent initial inaccessibility, and the narrowness of the fertile strip. The preferences of the Europeans were also consistent across the island, valuing rainfall and topography, but also apparently seeking out pre-cleared areas. By confirming that New Norfolk shared similar attributes with other early settlements, we can assume that the land chosen along Back River was somewhat open, and had probably been fire-stick farmed prior to the arrival of the Europeans.

Ascertaining the purpose of the clearing requires further study. The intensity of European occupation on the river edges, without any attempt to form a second row behind the first, reflects the terrain of the steep valley slopes, but probably also mirrored the pre-existing clearance patterns. Here we must accept some speculation, which will hopefully be tested more thoroughly through the transcription of Meehan’s journal, and archaeological surveys in the future. The land along the Back River may have formed part of a trap, a thin corridor along which animals were chased down to the water’s edge, hemmed in by the

⁷⁶ For a brief overview, see: Katharine Brown et al., ‘Australian Soil’ (CSIRO Land & Water, 2001), http://www.clw.csiro.au/aclep/asc/Soil_Poster.pdf; for more detailed descriptions, see: CSIRO, *The Australian Soil Classification*, Second (CSIRO Pub, 2016), http://www.clw.csiro.au/aclep/asc_re_on_line_V2/soilhome.htm.

⁷⁷ Lieutenant Bowen to Governor King, 20 September 1803, HRA III (i), 197–8.

hills on either side. In which case verdant greenery would be a secondary consideration only after creating a clear route for panicked animals to take. This might explain why it was considered unremarkable by the earliest explorers. It does not, however, mean that it is not an area of interest for historians today.

In developing a more complete understanding of the environmental history of Tasmania, these less conspicuous areas can contribute as much as the enormous regions granted to free settlers. It is only a matter of finding ways to extract the details. Viewing them through a spatial lens is an effective way to do so. This case study has shown that using HGIS to combine disparate pieces of evidence can shed light on a wider range of areas than it has been possible to interrogate through more traditional paper-based historic sources. New Norfolk, ignored and denounced by the earliest explorers, became an important site for expansion along the Derwent River, but it would not have been chosen as an initial settlement had it not possessed certain attractions. HGIS provides that spatial lens through which historians can explore continuity and changes of land-use over time.

CONCLUSION

The examples of New Norfolk, the Midlands and Norfolk Plains reveal a European predilection for clear land, accessible by river. In the early years, water carriage and ready-to-farm land were crucial; both made it possible to establish a self-sustaining farm quickly. As the pastoral economy expanded, with the introduction of fine wool farming and a growing market for Tasmanian grains, the importance of water shifted, but obtaining land on the valley floors with reliable watercourses was still a priority. It was to this end that these lands were chosen. The biggest factors influencing Europeans in their selection of land grants were that the land were: close to river transportation; relatively open and free from forestation; on flat or low hilled ground; and, close to, and granting access to further lands that could be alienated.

This article has demonstrated that there was a continuation of land-use, from Aboriginal fire-stick farming through to European agrarian practices. Although there is debate about the spread of fire-stick farming across Australia, it is accepted that *lutruwita*/'Tasmania was a fired landscape. By using principles established by Rhys Jones, David Bowman, Bill Gammage, and other ecological researchers we can

recontextualise European land choices.⁷⁸ As with all regional studies, it is important to evaluate the applicability of different evidence to an area, including the use of fire-stick farming, but in this instance it is a useful environmental influence to include. From the very beginning of European occupation, settlements were placed within areas that had been cleared as part of the pre-existing Aboriginal mosaic farming system. This in itself is accepted knowledge, but through the example of an under-studied location we see the potential of applying cross-disciplinary approaches to interpreting transitional landscapes and environmental histories.

This article has considered several different aspects of historical analysis of both Tasmanian Aboriginal and European land use in *lutruwita*/Tasmania. Colonial interest in an area has influenced where historians focus their attention, resulting in patchy consideration of the relationship between pre-European and colonial land use. By combining the evidence of contemporary journals and artwork with HGIS, along with environmental evidence and analytical methodologies it is possible to build up a picture of the lands the Europeans were first drawn to. The Europeans moved into areas that had already been cleared through thousands of years of Aboriginal land management. By viewing colonial land use in Tasmania as a continuation of these old patterns, rather than as a fresh start, the historian can draw an illustration of the land the Europeans found, even when there are few surviving descriptions. This in turn allows for speculation about how the Tasmanian Aboriginal people of that area used the land.

⁷⁸ Including: Jones, 'Fire-Stick Farming'; Bowman and Brown, 'Bushfires in Tasmania'; Gammage, *The Biggest Estate on Earth*; Cahir et al., 'Winda Lingo Parugoneit or Why Set the Bush [On] Fire?'

Acknowledgements

This article is adapted from a thesis chapter. An abbreviated version was presented at the GeoCart'18 conference in Wellington, New Zealand. The author thanks the anonymous reviewers, but also those who gave subsequent feedback and encouragement in the form of examination reports and conference discussions.

Funding

This research was supported by an Australian Postgraduate Award, from the Australian Government, with further support from the University of Tasmania.

Captions

Figure 1: Locations discussed in this article. Sources: Robert Anders; the author

Figure 2: Gatcomb Plain visible at the centre bottom. Source: LISTmap Tasmania.

Figure 3: Artwork locations, and the artworks. Sources: LISTmap Tasmania; artworks: Scott (State Library of NSW), Lycett (Tasmanian Archives and Heritage Office), Glover and Guerard (National Library of Australia), Prout (National Gallery of Victoria).

Figure 4: South Esk, Macquarie and Elizabeth Rivers, 1829. Source: Tasmanian Archives and Heritage Office, AF395/1/14.

Figure 5: Breakdown of lands alienated in New Norfolk, 1807-1831. Source: the author.

Figure 6: Scattered properties around Campbell Town to 1825. Sources: LISTmap; the author.

Figure 7: Bothwell shown by landholding type, overlaid with contours. Properties with an identified purchase date shaded. Sources: LISTmap Tasmania; the author.

Figure 8: Meehan's descriptions (1804) over the Pre-European vegetation chart. Sources: Geoscience Australia; Tasmanian Archives and Heritage Office, AF396/1/206.

Figure 9: A page from one of Meehan's Field Books, showing his notes of the terrain and vegetation somewhere out of the Risdon Cove camp. Note his reference to 'marked a gum tree' and 'a very deep valley bears S15E to river'. Source: Tasmanian Archives and Heritage Office, LSD355/1/3.

Figure 10: The map Meehan made of his explorations in Southern Tasmania between October 1803 and March 1804. Source: Tasmanian Archives and Heritage Office, AF396/1/206.

Figure 11: Two stages of settlement in New Norfolk, on Meehan's description of the areas. Sources: Tasmanian Archives and Heritage Office, AF396/1/206; the author.

Figure 12: Grants for former convicts, laid out in the prescribed riverine intensive long-lot style in two topographically different locations. New Norfolk and Norfolk Plains, both 1814. Sources: Tasmanian Archives and Heritage Office, AF396/1/1325; Tasmanian Archives and Heritage Office, AF396/1/210; the author.