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ORIGINAL ARTICLE

The Port Macquarie Settlement, New South Wales, 1821–1847: Interconnections within Landscapes of Convict Labor and Industry

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Abstract This article explores the convict-punishment settlement of Port Macquarie on the mid-north coast of New South Wales between 1821 and 1847. Synthesizing previous and new historical and archaeological research, it identifies a range of major and minor sites of labor, accommodation, reform, and punishment within the settlement's landscape during its period as a restricted convict prison from 1821 to 1830. From this it reconstructs the network of labor provision and infrastructure development, which we argue was not just about making the settlement economically self-sustaining, but also intended to create the framework for a transition to a "free" settlement. To this end this article also examines the ways in which that transformation occurred, with former sites of convict labor and the convicts themselves transitioning from government control to private settlers, until the withdrawal of the government infrastructure for convict management in 1847.

Keywords convicts · historical archaeology · landscape archaeology · colonization process

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Introduction

The British Empire was one of several European powers during the 18th and 19th centuries that practiced the transportation of its criminals to distant colonies as a form of punishment (C. Anderson and Maxwell-Stewart 2014; De Vito and Lichtenstein 2015; Maxwell-Stewart 2016). Britain had originally sent convicted criminals to the Americas, but with the loss of the colonies in 1776 was forced to find a new destination. In 1788 a new outpost was created with the establishment of New South Wales (NSW), Australia. From 1788 until 1840, almost 80,000 convicted men, women, and children were transported there, providing a foundation population and labor force (Hughes 1987). During this period a series of penal or "secondary punishment" settlements for recidivists was established in remote and offshore areas of NSW, including at Newcastle (1804–1824), Port Macquarie (1821–1830), Moreton Bay (1824–1842) and Norfolk Island (1825–1854). A further 85,000 convicts were also transported to other Australian colonies in Van Diemen's Land (Tasmania) and Western Australia, which had their own punishment settlements (Fig. 1).

Most previous archaeological and historical studies have emphasized the institutional design and architecture of the core penal establishments (Kerr 1984; Gibbs 2012). However, we argue that these settlements are better understood from the perspective of being industrial complexes with extensive

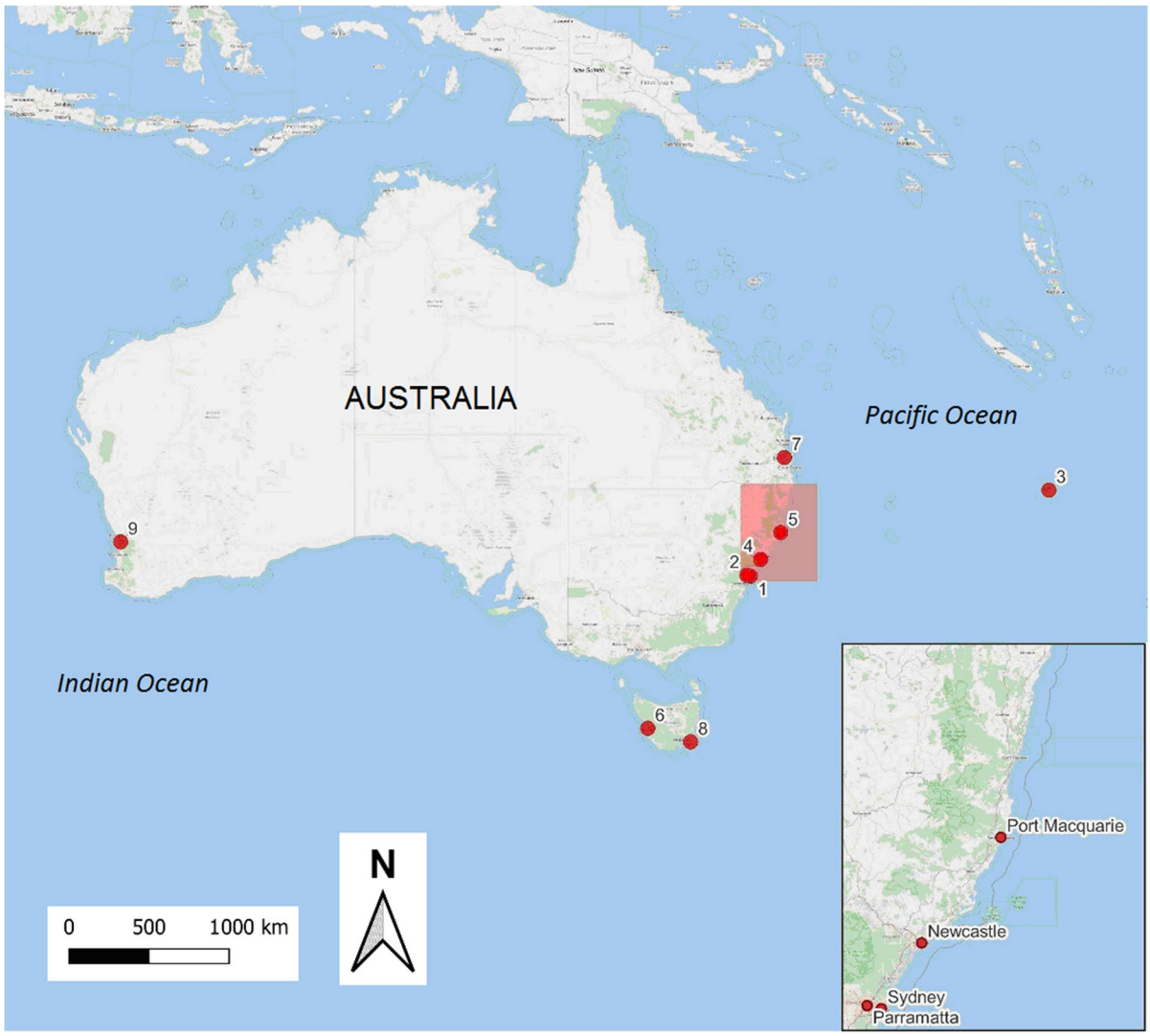

Fig. 1 Convict settlements in Australia overview. Settlements: (*1*) Sydney, (*2*) Parramatta, (*3*) Norfolk Island, (*4*) Newcastle, (*5*) Port Macquarie, (*6*) Macquarie Harbor, (*7*) Moreton Bay, (*8*) Port Arthur, and (*9*) Perth. (Map by authors, 2022.)

industrial landscapes of agricultural, pastoral, resource extraction, and infrastructure development activities supported by a network of large and small satellite stations, camps, and transport systems (Tuffin, Gibbs, Roberts et al. 2018; Tuffin, Gibbs, Clark et al. 2020). Taking Port Macquarie as a case study, we synthesize existing and new archaeological and historical data to reconstruct the settlement's extended landscape of labor. Established in 1821 in what was then a remote part of the mid-north coast of NSW, Port Macquarie was initially a restricted penal settlement for "the worst description of convicts" (Macquarie 1917:481). From the later part of 1830, however, it was opened as a "free" settlement, allowing colonists to take up land within the former convict town and hinterland. This provides an opportunity to consider the transition from government-controlled convict labor to individuals being "assigned" to private settlers until the withdrawal of the government infrastructure for convict management in 1847. This article also reconstructs the ways the network of labor provision and infrastructure development in Port Macquarie and environs impacted and shaped this transition.

The Convict System

Casella (2007:58) and Tuffin (2013:1) have argued that Britain's system of convict transportation to Australia combined a variety of goals, including punishment, deterrence, reform, and economy. The male, female, and juvenile prisoners would spend the 7–14 years of their sentences engaged in some form of forced labor within the colony, with the context dependent upon the individual's sex, age, skills, capabilities, behavior, and resultant classification within the system, as well as the policies for punishment, reform, and progression prevailing at any given time (Dyster 1988; Maxwell-Stewart 2016:647). In practical terms, this might include incarceration within the walls of institutions, working in government-controlled gangs within a wider landscape, or assignment to private settlers. Labor tasks might involve anything from punishing work in extractive industries, construction, agriculture, manufacturing, domestic service, artisan crafts, or white-collar professions (Nicholas and Shergold 1988:106–107). Freedoms increased as convicts demonstrated reform through consistent compliance and labor performance. Conversely, recidivists could have freedoms removed, be shifted to different (and harsher) labor situations, be subjected to corporal punishment, and/or returned to institutional settings, including to remote penal outposts. In the later stages of their sentences, a "ticket of leave" or "conditional pardon" might be granted, allowing convicts to live in their own accommodation, marry, and work for themselves although with restrictions on mobility, while a "full pardon" would see them emancipated. In essence, yesterday's convict was tomorrow's free settler, a situation that thwarted the attempts by some to create enduring social or economic boundaries within the colony's population based on their past criminal status.

While none has denied the place of convict labor in the British invasion and colonization of Australia, historians had long debated its efficacy as a labor force and the role of the convict system in the formation of Australia's social, economic, and political systems (Roberts 2011:42). This changed in 1988 with the publication of the *Convict Workers* volume (Nicholas 1988), which used extensive quantitative data to argue for the convicts' diverse skills and productivity, the agency of groups and individuals in negotiating and achieving their own goals, and the overall successes of the system in establishing a thriving economy and society. Subsequent scholarship has supported this view and positioned convict studies within broader explorations of transnational and imperial systems, diaspora, and forced migration (Robbins 2000; Macfie 2002; Walsh 2006; C. Anderson and Maxwell-Stewart 2014).

Archaeologists have also considered convict labor and labor sites in different contexts (Gojak 2001; Lawrence and Davies 2010), including how convicts sat within the imperial project of colonization and economic development (Gibbs 2001; Casella 2016; Winter 2018), specific forms of convict institutional or industrial settings (Karskens 1985, 1986; Casey 2010; Gibbs 2010; Tuffin 2013; Tuffin, Gibbs, Roberts et al. 2018), and the role of assigned convicts working for free settlers (Connah 1997, 1998, 2001). Many hundreds more major and minor convict sites have been investigated as part of commercial heritage-management studies, although usually not subjected to broader contextual analysis (Gibbs 2012). The Landscapes of Production and Punishment Project builds on and synthesizes these earlier studies, proposing a framework that views the convict system as a complex industrial system of which the many and varied sites of convict labor, accommodation, reform, and punishment are all parts (Gibbs et al. 2018; Tuffin, Gibbs, Roberts et al. 2018). Part of the project has been to try to bring consistency to describing the diverse contexts and sites within the system by characterizing them in terms of the type of labor setting, as detailed in Table 1.

Port Macquarie offers several advantages as a case study of a convict-labor settlement and landscape, including existing secondary historical studies that provide a chronology of the settlement and its population (Rogers 1982; McLachlan 1988; Roberts 2017). In addition, there is a rich primary resource of correspondence and reports from the convict administration that provides information on the operation of the settlement and its outstations, including industrial production figures (Rolland 1824; Port Macquarie Penal Settlement 1830–1831). These official documents can be balanced against the private correspondence of government officials and visitors, e.g., Hunter (1997). There is also a handful of testimonies by former convicts that describe how individuals moved between different labor contexts, from the urban center to the outstations or to hard labor

Table 1 Settings associated with convict labor and administration

SETTING	PURPOSE/CHARACTERISTICS
Institutional	
Establishment	Includes larger institutional settings such as prisons, major barracks, female factories, and settlements. Labor confined to establishment or to day gangs, although smaller detached establishments might look to this as their central administrative and supply hub. Often also involved in manufacturing or service-related tasks.
Industrial station	Detached establishment which could have detached establishments (camps and stations) of its own. Depending on colony and period this category included stockades, probation stations, hiring depots, and major agricultural or stock stations, although their scale of operation could also mean they had a multifaceted labor focus. Some labor also dedicated to self-sufficiency.
Work station	Minor detached establishment with some degree of self-sufficiency. Often dedicated to a single work outcome, e.g., minor government farm or stock stations, quarry, lime burning.
Work camp	Temporary accommodation, usually for when daily travel to or from the main establishment or station would be too time consuming or difficult. Often of short duration with limited infrastructure or self-sufficiency (e.g., road, clearing, or timber-getting), and dedicated to a single work outcome.
Day gang	Often attached to a larger establishment or station, released on a daily basis to work within the establishment/station or immediate environs. Single or multiple gangs could be devoted to a single work outcome.
Workplaces	Places of resource extraction, manufacture, construction, and associated logistics. May be associated with day gangs, camps, stations, or establishments.
Public works	Structures and landscape modification products produced by institutional convict labor—and which are also indicative of workplaces.
Noninstitutional	
Assignment	Accommodation and workplaces directly associated with convicts assigned to "free" settlers in urban or rural settings.
Passholder and ticket of leave	Accommodation and workplaces directly associated with convicts undertaking self-managed labor.
Administration	
Command and control	Control of convict population, such as military outposts, police stations and watch houses, sentry points, and signaling systems.
Ancillary	Administration and service offices, housing, hospitals, commissariats, courthouses, amenities.

Note: Adapted from Gibbs (2001) and Tuffin (2013).

on government gangs, as well as eventual assignment to private settlers (Delaforce 1900; Roderick 1963; Cook 1978). There have also been archaeological surveys, e.g., Edward Higginbotham & Associates (1994a), and several large-scale urban excavations investigating remains of the convict settlement (Umwelt Environmental and Social Consultants 2003; New South Wales Government 2010). The most comprehensive study has been of an early outlying pastoral estate, Lake Innes House, that also considered the life of the assigned convict servants at the property (Connah 1998, 2001). A detailed analysis of previous historical and archaeological studies has been provided elsewhere in author Phillips's honors thesis (Phillips 2017). This article expands upon some of the key findings of that thesis.

The Port Macquarie "Establishment"—Townscape and Immediate Environs

In April 1821 a new "secondary" punishment settlement for reoffending convicts was established at Port Macquarie, located at the mouth of the Hastings River on the mid-north coast of NSW. It was intended as a replacement for the earlier and initially remote penal station at Newcastle when it was felt that the expanding settled area of the colony had reduced its isolation

and increased prospects for successful escape (Roberts 2017). Earlier expeditions had identified Port Macquarie as potential site for a convict settlement, describing the sheltered harbor, the presence of timber along the river, climate and soils suitable for crops, and shell for lime (Wallis 1821; Oxley 1917). While these resources would provide the settlement with a degree of self-sufficiency, from the outset it was intended that the convict-labor force would supply the growing needs of the Sydney settlement and the rest of the colony, especially timber. It is, however, important to recognize that these resources were already utilized by the Indigenous owners of the Hastings and Manning valleys, especially the Birpai (also Biripi) peoples, with this ever-expanding frontier simultaneously an invasion of their lands. Although a detailed study of the practices of colonialism inherent in the establishment of settlements such as Port Macquarie is beyond the scope of this article, some of the relationships with Indigenous communities are noted below.

The first convict labor undertaken in Port Macquarie was by volunteers from Sydney, working for 18 months to establish the new settlement in return for a ticket of leave or conditional pardon. After constructing temporary accommodation for themselves, this group cleared land, established the first farms, and constructed accommodations for prisoners, administrators, and the military in readiness for the arrival of the penal convicts (Macquarie 1917:482–483). Many of the necessary resources, including timber, brick clay, and stone, were found in the immediate area, although these men also participated in expeditions along the Hastings River and its tributaries, searching for better materials for the next phase of the settlement and for export to the rest of the colony.

The main Port Macquarie settlement during its penal period is best understood as an "establishment" (Table 1), which included the full range of administration, accommodation, penal, military, supply, and industrial functions (Table 2). The years between 1824 and 1826 saw significant growth until it reached its maximum population of around 1,500 convict men and a small number of convict women attached to the establishment and its outstations (Roberts 2017). Key elements of the establishment's infrastructure included a large brick barracks supplementing the original timber convict huts, a jail, and a female factory (accommodation and workshops for female convicts). Ancillary, command, and control structures were also established, such as a palisaded commissariat (supply) store, administrative offices, military barracks and quarters, and accommodation for non-convict personnel. Governor Lachlan Macquarie and his wife Elizabeth had taken a central role in the initial layout of the Port Macquarie establishment's townscape (Kerr 1984:112). They abandoned the axial layout previously seen in NSW convict settlements, such as Parramatta and Newcastle, in favor of elements placed in response to the natural topography and in ways that emphasized views to and from the water. The church and the Commandant's House were located on the two hills in town, in contrast to the convicts' huts and barracks, which were on the lower land to the west near Kooloonbung Creek, exhibiting the usual elements of surveillance and hierarchy linked to topography (Fig. 2).

Although there are several plans of the settlement in the penal period, these are imprecise, with the archaeological investigations making it possible to pinpoint the locations of various convict-era structures (Phillips 2017). Archaeological investigations have also revealed the progressive modification of the landscape, including the infill of the swampy western part of the town where the convict huts were located (Edward Higginbotham & Associates 1994b:11).

Day Gangs

When the first penal convicts arrived from Newcastle and Sydney toward the end of 1821, they were immediately organized into work gangs to help construct the more substantial structures of the permanent settlement. These groups ranged from "iron" (chain) punishment gangs working on the laborious tasks of road building and landfilling, to specialized artisan "stone" and "brick" gangs (Fig. 3) (Rolland 1824; Delaforce 1900; Gillman 1974; Edward Higginbotham & Associates 1994b:11).

The Lumberyard

The main industrial complex within the establishment was the lumberyard situated behind a large palisade on the northern waterfront. As the name implies, one of its main features was the permanent sawpits for the conversion of the logs floated downstream from the timber getters along the Hastings River and

Table 2 Convict labor sites in Port Macquarie and hinterland 1821–1847

Site	Setting	Labor Type	Years Active	Approximate Distance from Town Center
Port Macquarie	Establishment	—	1821–1831	0
Aston Hill	Day gang	Quarry	1820s–1840s	1.5 km
Boatyard	Day gang	Manufacturing	1821–1831	0
Brickyard	Day gang	Manufacturing	—	—
Building	Day gang	Construction	1821–1831	0
Female factory	Day gang	Manufacturing	1828–1842	0
Lumberyard	Day gang	Manufacturing	1821–1831	0
Roads	Day gang	Construction	1821–1847	0
Settlement Farm (Allman's Plains)	Day gang	Farm	1821–1837	3 km
Ballengarra Farm	Industrial station	Agricultural station	1824–1832	25 km
Rollands Plains Farm	Industrial station	Agricultural station	1824–1831	30 km
Rollands Plains sugar plantation and mill	Work station	Agricultural station and processing mill	1824–1831	24 km
Redbank	Work stations	Farm	1820s–1830	16 km
St. Rocks	Work stations	Farm	1821–1830	13 km
Prospect	Work stations	Farm	1821–1830	15 km
Blackmans Point	Work stations	Timber	1821–1830s	9 km
Limeburners Creek	Work stations	Lime burning	1820s	14 km
Pipers Creek	Work station	Lime burning	1832–1880s	23 km
Oxley Head	Work camp	Timber	1820s	14 km
Rosewood	Work camp	Timber	1820s	21 km
Camden Haven	Work camp	Lime burning	1820s	25 km
Ballengarra Road	Work camp	Road camps	Ca. 1828	9–25 km
Wool Road (Oxley Hwy.) to New England Tablelands	Work camp	Road camps	1838–1842	25 km

tributaries, reducing them to the structural timbers needed for the town. In addition, however, the complex housed the manufacturing facilities, including the various metalworkers and blacksmiths, shoemakers, tailors, and woodworkers servicing the needs of the settlement. Some of the craftsmanship of the lumberyard's convict carpenters is still visible in the form of the cedar pews of St Thomas Anglican Church (1824), the settlement's original place of worship (Fig. 4). Although the lumberyard has yet to be excavated, excavations along the shoreline have identified a lime shed, used for storing the burnt lime from the kilns located beyond the settlement.

Brick Fields and Quarries

Local brick production commenced in 1821 on the northern bank of Wright's Creek on the south edge of the settlement, where rich clay deposits can still be seen today. When the earliest timber structures in the town were replaced, it was with the substantial and imposing brick edifices seen in early paintings of the settlement (Fig. 5). There were 29 brick makers listed in 1824, although only 5 bricklayers (Rolland 1824). This might mean that the men worked at both tasks interchangeably, or other gang laborers were employed in construction under the supervision of the experienced men. St Thomas Anglican Church, constructed between 1824 and 1827 from over 365,000 handmade bricks, represents one of the few buildings still standing from the convict period in Port Macquarie (McLachlan 1988:205). Stone for building foundations and road construction was quarried locally from the face of Aston Hill in the center of the establishment, where the quarry site is still visible (Rogers 1982:133).

Fig. 2 Port Macquarie settlement 1826, based on Wright (1826): (*1*) Prisoner barracks, (*2*) Convict huts, (*3*) Granary (temporary barracks), (*4*) Lime shed, (*5*) Boat sheds, (*6*) Bell house, (*7*) Principal superintendent's quarters, (*8*) Assistant superintendent's quarters, (*9*) Free overseers' cottages, (*10*) Post office, (*11*) Granary, (*12*) Pilots' quarters, (*13*) Commissariat store keeper, (*14*) Acting engineer's store, (*15*) Commissariat store, (*16*) Guardhouse, (*17*) Deputy assistant commissariat general quarters, (*18*) Surgeon's quarters, (*19*) Blacksmiths, (*20*) Schoolhouse, (*21*) Married soldiers' quarters, (*22*) Guardhouse, (*23*) Government house, (*24*) Military barracks, (*25*) NCO's houses, (*26*) Temporary military barracks, (*27*) Officers' quarters, (*28*) Police office, (*29*) Jail and female factory, (*30*) Shops and work sheds, (*31*) Hospital, and (*32*) Church. (Map by authors, 2024.)

Settlement Farms and Gardens

The creation of several farms and gardens in the immediate area of the establishment was one of the priorities for developing a degree of self-sufficiency. Small gardens for vegetables were initially located within the boundaries of the settlement, including the Government Garden, where the initial experimental crops, such as tobacco, sugar, and tropical fruits, were grown (Rogers 1982:43). The first farm for grain (later renamed "Settlement Farm") was established at Allman's Plains only several kilometers west of the settlement along the southern banks of the Hastings River. While it is likely that there was a work camp or minor station at the site to maintain a guard over the produce, it is unclear whether the labor was provided by day gangs from the main settlement.

White Collar, Domestic, and Assistants

Convicts were employed in a range of tasks associated with maintaining the operation of the settlement. The "special" (educated) men could work as clerks within the convict administration. In addition to assisting with the recordkeeping within the commissariat, including reporting industrial production, there was the endless task of updating the records associated with the conduct and sentences of the convicts themselves. The commissariat and hospital also required laborers, assistants, and orderlies, while officers and civil servants were allowed domestic helpers.

Female Factory

Although the majority of convicts sentenced to Port Macquarie were men, small numbers of women were

Fig. 3 Port Macquarie labor sites. (Map by authors, 2022.)

Fig. 4 Interior of St. Thomas Anglican Church, constructed in 1824 (Tanner 1951).

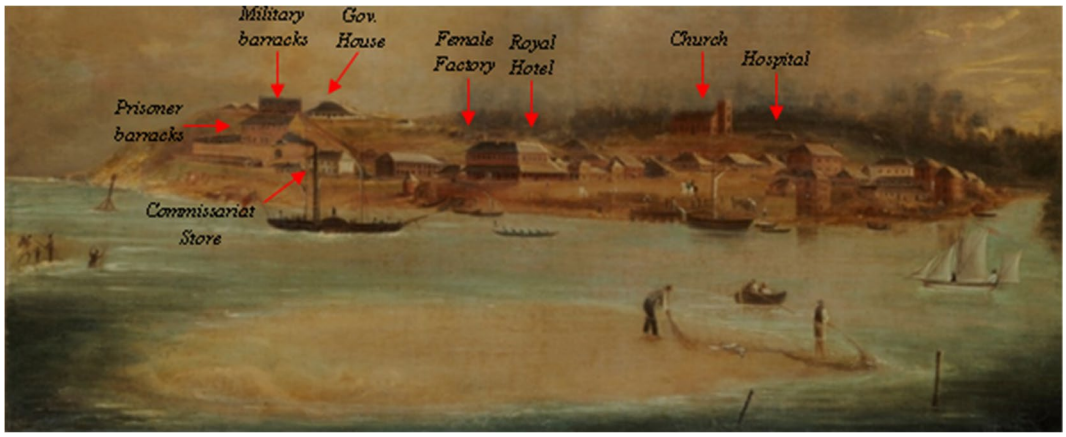

Fig. 5 Detail of *Port Macquarie*, showing major brick structures, 1840 (Backler 1840).

also sent after 1821. The same as for the men, it was thought that labor would reform the women, although it has been noted that there was not sufficient employment, and the women were reduced to cooking and doing domestic work in the settlement, picking cotton, weeding, picking oakum, washing, and sewing (Alexander et al. 2010). The Female Factory also housed infirm and nursing convict women. The initial log-and-plaster building capable of holding 50 women proved unsuitable and easy to break out of (and into), with a new and slightly more removed brick structure completed in 1828 (Kerr 1984:115). Despite this, the Female Factory continued as a place of misconduct, with reports of other prisoners, officials, and even the jailers engaging in sexual liaisons with the female prisoners, as well as misbehavior during religious services (McLachlan 1988). Marriage liberated convict women from the confines of the factory, as married women were allowed to stay with their husbands provided they did not reoffend. In later years most of the women were assigned as servants for free people, with the factory abandoned in 1842.

Transport Systems and Boat Building

Throughout the convict period, Port Macquarie was dependent upon the ocean as its link to the other colonies. Smaller vessels could enter the harbor by carefully navigating the rock and sandbar at the mouth of the Hastings River, with the superintendent appointing a pilot and pilot-boat crew only six months after the establishment of the settlement (McLachlan 1988:135). Despite this, multiple ships were damaged or completely wrecked at the river mouth, with many and especially larger vessels opting to moor in the bay and transship goods and people from barges crewed by convicts (*Australian* 1827). Similarly, for most of the penal period the Hastings River and its tributaries provided the only means of transporting people and supplies out to the hinterland stations and camps, as well as bringing back produce, timber, and lime to the main establishment.

The frequent damage to vessels and the need for barges, ferry punts, and riverboats, facilitated by its ready access to high-quality timber, meant that boat building became an important focus of labor for the settlement. A report from 1827 states that there were no trained boat builders in Port Macquarie, and this task was completed by carpenters who repurposed their skills (*Australian* 1827), while early in the following year it was noted that an average of 35 "mechanics" (the general term for skilled laborers) were engaged in boat building and repair (Laidley et al. 1922:21). The mode of adapting skills from one profession to another, given the constraints of a fluid prisoner population, was a feature common to many of these penal settlements (Roberts and Tuffin 2020). It is not clear where boat repair and construction occurred, although the boat sheds situated on the harbor waterfront at the north end of Hay Street seem the most likely area.

Jetties and wharves for loading and unloading goods were constructed at the main establishment and at the hinterland stations. Figure 2 shows one of the

harbor wharves at the main establishment. A wharf was built close to Ballengarra in 1824 at the highest navigable point in the river in order to bring produce down to the settlement, although within several years a new wharf had been constructed several kilometers downstream, presumably to allow for larger vessels (State Archives of New South Wales 1828).

Surveillance and Control

The mechanisms of surveillance and control of the convict population were embedded in the landscape of the Port Macquarie establishment in various ways. The town site was bounded by the ocean to the north and east, the Hastings River to the west, and Wright's Creek to the south. The convicts' accommodation, including the female factory, was on the western side, separated from the rest of the settlement by the overseers' huts. Accommodation for the military and administrators was on the higher ground to the east, with the second jail (completed in 1840, just as convict transportation ceased) poised on the far eastern edge of the town site. Although less obvious in early maps, images of the establishment show physical barriers, such as fences, around buildings and gardens, as well as high walls and palisades around sensitive areas, such as the commissariat, lumberyard, and military barracks. Documentary sources, including court records, also reveal a network of physical checkpoints and watch houses, as well as regular patrols through the establishment, with the military available should there be more serous dissent and need for an armed response. The Birpai community also assisted with the control and recapture of absconders from the settlement (Moyes 1986:84).

Hinterland Sites

Governor Macquarie's 1821 instructions on how to lay out the Port Macquarie establishment also provided directions for expansion into the hinterland:

> After your numbers have been thus increased, so as to admit of their being subdivided into several distinct Gangs, they must be employed at such useful branches of Labour as are most likely to prove beneficial to the Crown as well as to the improvement of the Convicts, by keeping their Minds constantly employed, and their Bodies enured to hard Labour. The most useful and beneficial branches of Labour to employ them on are Agriculture, cutting down Cedar and other good Timber, and making Lime for the use of the Government. (Macquarie 1917)

Convict sites in the hinterland of the Port Macquarie establishment are much harder to identify and there are far fewer descriptions of their location or nature. Often their likely locations are determined by a close analysis of the few contemporary maps of the region combined with contextual reading of the documentary sources describing labor (Oxley 1825; Ruthven 1828; State Library of New South Wales [1830–1839]) (Fig. 3). A more detailed accounting of the sites and industrial activities is available in Phillips (2017).

Timber Work Stations and Camps

Timber-getting (work) camps were quickly established as much as 40 km or more from the main establishment. Most prized was the Australian red cedar (*Toona cilliata*), which grows to 40–60 m and was in demand for construction and cabinetry (*Australian* 1827; *Sydney Monitor* 1829). Documentary evidence of the activities and locations of the timber gangs and their temporary camps is limited, as is archaeological evidence, given that many of these areas were re-logged in the post-convict period. Presumably the convict phase focused on the most accessible and easily extracted timber along the rivers, meaning that there was almost certainly a link between timber getting and clearance for farming on these fertile alluvial areas. Once felled, de-limbed, and cut into manageable lengths, the trunks were skidded or dragged down to the riverbanks using bullocks, from where they could be rafted down the rivers to sawpits at the semipermanent timber stations or to the lumberyard sawpits at the main settlement for conversion into planks and export. There are few records of social and economic interactions between timber gangs and the Indigenous communities they encountered, although much more is known about the intermittent hostile clashes between these groups. This includes newspaper reports of cedar getters being speared along the Hastings in 1821 and the Wilson in 1837, the latter leading to the trial and conviction of an Aboriginal

man named Terrymidgee (*New South Wales Government Gazette* 1837). These repeated clashes saw Aboriginal people from Worimi country to the south (although they speak the same language as Birpai, known as Gathang) being sent with cedar parties as mediators (Moyes 1986:84).

Farms and Agricultural Establishments

Within several years agricultural stations were established along the fertile alluvial flats of the rivers. There were farms (work stations) at Sancrox and Redbank on the Hastings River, as well as at Prospect at the junction of the Maria and Wilson rivers, with the latter also experimenting with sugarcane and tobacco cultivation. Several large-scale agricultural and stock (industrial) stations, each with labor forces of several hundred men, were also formed on the upper reaches of the Wilson River at Ballengarra and Rollands Plains. These stations had over 2,500 ac. of cleared land for maize, wheat, and other vegetable and fruit crops, as well as for stock (Rogers 1982; McLachlan 1988). Consistent with Tuffin's (2013) hierarchy, these larger stations are described as having barracks buildings for the convicts and cottages or houses for overseers, military, and officers, as well as barns, granaries, stockyards, pigsties, sheds, blacksmith shops, and fenced vegetable gardens, indicating a high degree of self-sufficiency (*Sydney Monitor* 1829; McLeay 1830). Adjoining the main Rollands Plains station was also a sugar plantation of over 80 ac., together with a two-story brick sugar mill and boiling house, watermill, and a tobacco-drying shed, as well as cottages and barracks for the workers and military (McLeay 1830). This is one of the rare instances where there is a contemporary plan of a hinterland industrial station (Fig. 6) as well as archaeological evidence in the form of brick scatters and the remains of the millrace (Umwelt Environmental and Social Consultants 2003). It is intended to undertake a pXRF analysis of the bricks to determine whether they were made onsite from locally quarried clay or transported from the Port Macquarie brick kilns.

An interesting side note on agricultural production comes from an 1828 Commission of Inquiry into the operation of the settlement. The officers, administrators, and free overseers of the settlement were allowed to develop small farms on the north side of the harbor opposite the settlement for the purposes of growing crops for personal use. However, the commissioners discovered that these farms were not small allotments but often seven to twelve acres in area, each illegally maintained by several convicts in government employ, while also producing pork and selling these to the settlement commissariat for profit (Morisset and Busby 1922:497).

Lime Burning

Initially, lime was manufactured by burning shell dug out from along the banks of the rivers, in all likelihood originally from Aboriginal middens. Some of the known shell-collecting areas were to the north of the establishment at the aptly named Limeburners Creek, although when these beds were exhausted shells were collected from Camden

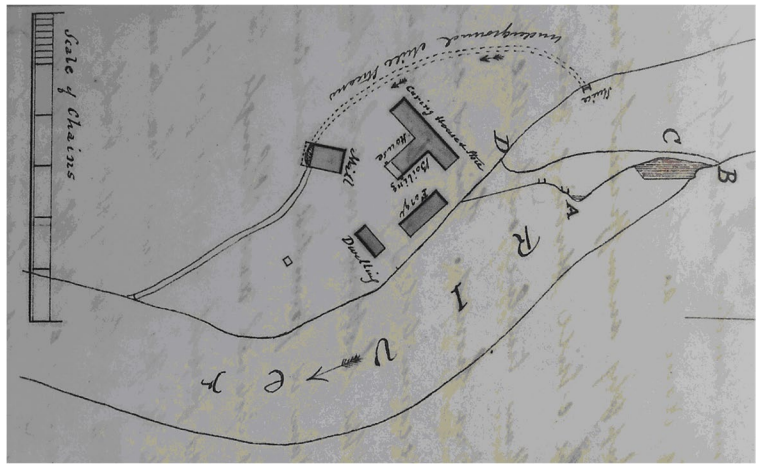

Fig. 6 Sugar mill at Ballengarra, 1828 (State Archives of New South Wales 1828).

Haven, some 30 km southward by boat (*Australian* 1827). A survey conducted by James Ralfe in 1831 identified limestone deposits at Pipers Creek, 30 km north of the settlement. Archaeological evidence of these lime kilns survives, together with some footings of the brick and wooden structures that housed the workers at this work station (New South Wales Government 2010). The lime was carried in barges down to the establishment, with a storage shed located on the northern foreshore.

Surveillance and Control

The sheer size of the settlement's extended landscape made it difficult to control absconding from the hinterland stations. The larger industrial stations had military detachments, guards, and overseers to maintain order, although the smaller stations and camps often had only one or two guards to oversee them. Military personnel were also stationed at Ballengarra and Rollands Plains, in part to prevent Aboriginal people from taking crops (*Sydney Monitor* 1829). The convict stations extended the range of the government's power and control over convicts far beyond military barracks in the main settlement, creating a net of surveillance and control not only over the convicts but also over Aboriginal people in the area.

Even then, contemporary newspapers regularly reported men who had escaped from these sites (*Sydney Gazette and New South Wales Advertiser* 1825, 1827). There is evidence of smaller military outposts at critical junctures of rivers (e.g., Soldiers Point at the mouth of Limeburners Creek) or at fords where absconders attempted crossings, such as at Camden Haven.

By 1825 the new governor Ralph Darling had already concluded that Port Macquarie was a failure as a penal outpost and consequently shifted the population from hardened criminals to "specials" (educated convicts), "invalids," and "lunatics," although many of the labor tasks remained the same (Table 2). The 1828 inquiry into the operation of the settlement, with its revelations of incompetence and corruption, sealed its fate. The hinterland industrial stations and camps were closed, and the number of convicts in government service diminished rapidly as the settlement prepared itself for a free population.

Post-Penal Period 1831–1847

By 1831 and the start of the post-penal period, what had been the Port Macquarie establishment had already been transformed from Governor Macquarie's original design. For the new "free" townscape, Governor Darling had ordered the realignment of the streets to a regular grid pattern, which required a number of buildings (such as the surgeon's quarters) to be demolished. Many convict-era buildings also changed function or fell out of use. For instance, by 1840 the western area where the convicts had once lived was now home to an increasing number of buildings belonging to free settlers. This mirrors the available census data, as between 1836 and 1843 the free population almost tripled. However, it is important to highlight the fluid nature of the population, with emancipated convicts, including some who had been former inmates of the establishment, accounting for (at least) one in five of the free population as recorded in the 1841 census (*Sydney Herald* 1841; Phillips 2017).

The remaining government convicts had been moved to a new jail on the east of the headlands, at a distance away from the settlers and the growing town center. This took them out of sight of the free settlers, but kept them under the watchful eye of the military and the police magistrate. The jail's isolation from the rest of the town's population also reflects shifting power dynamics, as a class between the convicts and the government began to grow and shape the construction of the built environment. The composition of the remaining convict population itself had also changed. Transportation to NSW ended in 1840, and the remaining men and women were an aging workforce, with many labeled as "invalids" or "unassignable," meaning they had not many options on where to go, a trend seen throughout the former convict colonies. The brick former prisoner barracks building was converted into a hospital and later a "Destitute Asylum" for older and former convicts who could not provide for themselves (Edward Higginbotham & Associates 2016). The withdrawal of the military from Port Macquarie in 1847 acts as the symbolic end of its convict era, although in truth convicts remained in the area for some years afterward.

Government Convict Labor

Most of the convict-labor sites that remained in use in the post-penal period were less than 10 km from the main settlement and could by operated by day gangs. These sites included Blackmans Point, Settlement Farm, and the Aston Hill Quarry. An outlier station was the Pipers Creek Lime Kilns, as the scarcity of lime for construction outweighed the need for convicts to be kept close by (New South Wales Government 2010). Road construction around the new town became one of the last vestiges of convict-gang labor, with the last major roadwork being Gordon Street in 1846, cutting through a hill adjacent to the second burying ground and forming a bridge and road to serve the growing town. In the hinterland, roads were cleared to connect the burgeoning farming areas with the town. One of the clearest reflections of the redirection of labor efforts toward serving the needs of a growing free settlement was the establishment of the "Wool Road" from Port Macquarie up the ranges to the pastoral areas of the New England Tablelands. Pressure for this road's creation came largely from Major Archibald Clunes Innes, a former commandant of the convict settlement, now a major landowner along the coastal plain and on the tablelands (Connah 1998).

Convict Assignment in Town

With the opening of the town of Port Macquarie, convict-labor deployment shifted to assignment to free settlers. It was up to the settlers who had engaged these convicts to provide accommodation, clothes, and food, although government facilities remained in the town to provide health care or, if necessary, to punish recidivists. Assigned convicts were engaged in the full gamut of potential labor tasks both within the town and in the hinterland, and their industrial activity is evident within the archaeological record. For instance, Major Innes had used his assigned convict workers to construct the Royal Hotel in 1841. Excavations of the site demonstrate not only the nature of construction, but also inform on post-penal brick production as well as revealing a lime kiln on the site (Appleton 1999, 2002b). This site is a physical manifestation of the shift of Port Macquarie from a closed to an open system and the social changes that came with it. It also demonstrates the powers of free settlers and that the level of affluence they were able to attain derived from convict labor.

Convict Assignment in the Hinterland

The opening of Port Macquarie to free settlement included the whole county of Macquarie, encompassing not only the former area of the convict settlement, but stretching far beyond, from the Macleay River in the north to the Manning in the south, and as far west as the headwaters of the Hastings River in the Great Dividing Range. The former convict properties, including Rollands Plains and Ballengarra, were put up for sale (McLeay 1830), and although it was hoped that someone might continue the experiments with sugar production, that did not eventuate. However, the new settlers clearly benefited from previous land clearance and timber felling. Part of the government policy at the time was to grant land to settlers and assign them a convict-labor force to help clear vegetation and assist in agricultural and development activities. This has been well documented elsewhere, including in the Hunter Valley (Oakes 2007; Dunn 2020) and the Shoalhaven (J. Anderson 1993; Peter Freeman Pty Ltd 1999). Assignment in the hinterland was a different experience for women convicts, who were predominantly employed as servants, cooks, and dairymaids (Alexander et al. 2010).

Land sales and title deeds in *New South Wales Government Gazettes* from the 1830s, and contemporary maps of the county of Macquarie demonstrate the growing number of settlers in the region (National Library of Australia [1830–1839]). Gazettes also include lists of assigned convicts and to whom they were assigned (*New South Wales Government Gazette* 1833a, 1833b, 1833c). Although the location of assigned convicts is often given as "Port Macquarie," a closer examination of the land titles held by the people to whom they were assigned reveals that many of these convicts were posted to properties in the hinterland some distance from the township. Table 3 contains a list of settlers recorded as having convicts assigned to them in the post-1830s period of Port Macquarie and the distance of their properties from the main settlement to illustrate the dispersal of assigned convict labor in the landscape.

Among the settlers were emancipated convicts and former officers and administrators of the former penal settlement who clearly took advantage of their

Table 3 Location and distance from Port Macquarie of major properties in Macquarie County to which convicts were assigned, post-1830

Settler	Landholding	Approximate Distance from Port Macquarie
E. L. Adams	Macleay River	40 km
Charles Blewitt	Prospect Farm, Wilson River	20 km
William Cross	Crosslands	20 km
M. Fahy	Rollands Plains	24 km
Maj. Archibald Innes	Innes Lake	6 km
John Maughan	Bago	19 km
James McIntyre	Rollands Plains	24 km
H. Parker	Koree	25 km
W. S. Parker	Rollands Plains	30 km
Stephen Partridge	Limeburners Creek	3 km
Stephen Partridge	Thrumster	5 km
James Ralfe	Sancrox	13 km
Richard Smith	Blackmans Point	9 km
Jeremiah Warlters	Rollands Plains	25 km
Andrew Wauch	Wauchope	18 km
Joseph Wilson	Limeburners Creek	4 km
William Wilson	Rolland Plains	25 km
Robert Woodlands	Bellangry	29 km
William Wynter	Manning River, Taree	70 km

prior knowledge of the area. The most notable of these was Major Archibald Clunes Innes, mentioned above. Innes had been aide-de-camp to the governor of NSW before being appointed as commandant of Port Macquarie for six months in 1826–1827 (Connah 1998:10). He returned several years later in 1830 as police magistrate and during the transition to free settlement managed to leverage his familiarity with the area to claim and develop several pastoral properties, both on the coast and on the newly opened New England Tablelands. Since the number of assigned convicts made available to a settler was based in part on the amount of land they owned, he not surprisingly became the largest employer of assigned convicts, with an 1837 census showing he had 90 convicts assigned to him, representing almost 20% of all convicts at the settlement at the time (Connah 1998). However, the end of transportation and the loss of cheap labor, as well as a fall in international wool prices, saw a rapid decline in fortunes (Connah 1998:22).

Although Innes's assigned convict-labor force was spread across his properties, his main homestead was Lake Innes House, 11 km south of Port Macquarie. The site of the house and the associated landscape has been the subject of intensive archaeological investigation by Graham Connah and provides some of the best insights into the powers of free settlers and their relationship with their assigned convicts (Connah 1997, 1998, 2001). The house was considered one of the finest mansions outside of Sydney, containing 22 rooms on an estate of 2,560 ac., and was one of the earliest sites in the colony to have running water (Connah 1998:11–12, 2001:143). The building was made of brick, with his workforce including brick makers and archaeological evidence of at least four brick-making sites on the main estate (Connah 2001:150–151). Other records show his assigned convicts included domestic servants, mechanics, artisans, agricultural workers, and shepherds (Connah 2009:84). Connah notes the complex hierarchy into which the assigned convicts were placed, in part connected to their labor classification and reflected in the archaeological record, including whether they were housed in the servants' quarters near the main house or in the separate workers' village, as well as their access to higher-quality consumer items (Connah 2009).

We have some insights into Major Innes's character and power over his assigned convicts, courtesy of an account by William Delaforce, who was assigned to Innes in 1838. For example, when Delaforce, who was digging trenches for drains, asked for more tea and sugar for the hard work of being up to his knees in water all day, Innes replied: "I think a flogging would do you more good than tea and sugar" (Delaforce 1900:23). This same convict had previously worked in the road gangs and explained that, when he worked in wet conditions, he was let off early, but Innes had them continue until 6 P.M. with no compensation (Delaforce 1900:23).

Emancipists—Hayward House

A different form of free settler becoming established in the region during this period was that of former convicts who had attained freedom, commonly referred to as "emancipists." Charles Hayward was transported to the colony of NSW for life in 1823 for theft (Browne 2019). It is unknown exactly when he was sent to Port Macquarie, but there are records of his marriage at St. Thomas Anglican Church there in 1837. In 1841 he was granted a ticket of leave and was allowed to stay in the town. He subsequently built his dwelling on Horton Street. Charles and his wife Rebecca had a large family with 12 children and were foundational members of the early free settlement of Port Macquarie. Charles is listed as being one of 85 residents who petitioned for Port Macquarie to become its own municipality in 1859 (Cowper 1859). His son Fredrick later became Port Macquarie's second mayor, his son Thomas continued the family business of saddlery, and his son John opened a bakery and "Family Emporium" in the Port Macquarie central business district. Charles's grandson, Percy Hayward, also owned a successful general store on Horton Street in the 1900s. This demonstrates that, although convict heritage had a level of associated stigma, it did not prevent upward social and economic mobility.

Hayward's house is one of the few heritage homes still standing in Port Macquarie (New South Wales Government 2011). The ground floor, dating to the 1840s, is constructed of repurposed convict brick, with a second floor built in the 1860s. The building is tangible evidence of the hard work of emancipated convict Charles Hayward and the notable roles he and his descendants had in the shaping of Port Macquarie and the significance of emancipists in the shift from a convict landscape to a "free" one.

Conclusions—Convicts, Colonization, and Industry

In this article we have sought to redefine the nature of the penal phase of the Port Macquarie settlement, moving attention away from the core institutional setting toward understanding how it functioned as an interconnected, extended landscape of labor. By synthesizing a range of historical and archaeological materials we have identified a range of industrial sites and places within that extended landscape and described how the agricultural products (stock, grain) and primary resources (timber, limestone) from the hinterland stations were transported, primarily by river, to the main storage, manufacturing, and transport hub at the main port establishment. Convicts were organized in various ways as best required to undertake the various tasks, including the extensive use of gang labor.

Although designed by Governor Macquarie to reflect a more sympathetic response to the landscape than seen in earlier NSW convict settlements, the positioning of the various elements within the main Port Macquarie establishment's townscape still reflected the complicated push and pull of social power dynamics of the settlement and strategies to isolate and control the convict population. However, that initial design already forecast the eventual transition from convict outpost to free settlement. When the penal period ended, many of the existing convict sites were closed, removed, or repurposed. Former symbols of government power were adapted for more of a range of civil government roles and private roles, although, over time, the surviving buildings of the convict era have also become symbols of convict agency.

The hinterland of interconnected industrial camps and stations illustrates not only how the colonial (and British) governments linked convict reform to labor, but also how they perceived the potential economic productivity of these secondary-punishment settlements. Although promoted initially as being aimed at self-sufficiency, the scale and nature of agricultural activity indicates a broader colonization agenda.

These sites were also overtly experimental, with a range of non-subsistence crops and obvious intentions of establishing a profitable industry. The sugar plantation and refinery was a substantial operation and required investment of labor to build a dam, dig a water race, quarry clay, and burn bricks, as well as construction of the storerooms, water mills, and sugar-boiling plant, as well as the labor to clear, plant, and tend the cane. Their establishment addressed the need to create places of labor for the secondary-punishment workforce and, on the face of it, achieved decent economic returns. However, the ever-changing view of what constituted "success" within the convict industrial system saw the numbers of men attached to these hinterland stations, including the sugar refinery, diminish quite rapidly after the first several years. Based on returns of labor in 1824, 353 (31.8%) convicts worked in agricultural establishments, and in 1833 it was only 31 (16.2%).

Some of the reasons for the discrepancies in claimed successes and actual production can be found in the 1828 Commission of Inquiry into the operation of Port Macquarie. The investigation showed that multiple overseers employed at these establishments were corrupt, and thus the "punishment" aspect of these establishments was not being fulfilled (Morisset and Busby 1922). Simultaneously, Port Macquarie was not meeting its quotas for grain, and this was also attributed to corruption in the Port Macquarie administration, including the convict workforce being deployed illegally for the gain of the officers and administrators (*Sydney Monitor* 1829). The abandonment of the distant agricultural establishments, work stations, and work camps in the late 1820s, together with the shift to road-making activities, demonstrates a shifting cultural landscape, as the roads physically connected Port Macquarie with the rest of the colony and ended the attempted strategy of isolation in the hinterland as a means of controlling the convicts. Thus, future policy in the closing years of the penal period aimed at keeping the majority of convicts closer to the administrative and military center of the settlement.

Despite the problems of administrative malfeasance, the underlying trajectory of the convict industrial hinterland was fulfilled. The landscape had been explored, resources and industries had been tried and proven, and transport infrastructures had been developed and within a decade had been shifted to private enterprise. The overall transformation of the hinterland as a consequence of convict timber getting, clearance, agriculture, and infrastructure development ultimately eased the transition of the landscape into free settlement, the convicts acting as a colonizing industrial force (Tuffin and Gibbs 2020).

The convict contribution continued into the "free" settlement period, although over the next decade the government gangs gave way to assigned labor. The number of settlers with assigned convicts and their spread across the county of Macquarie demonstrate that convicts continued as a colonizing labor force well after the close of Port Macquarie as a penal settlement. The archaeological remains of the homes and estates of the free and emancipated demonstrate the social mobility and level of power and affluence that could be achieved by individuals through the convict system, with Lake Innes House being the most notable example. Convictism offered the incentive to free settlers to reach a state of privilege unattainable in their homeland (Connah 2001:140).

The colonization and early industry of Port Macquarie was largely dependent on resources already known and used by the local Aboriginal people. Particularly in the hinterland sites, there are written and oral histories of conflict between the Birpai, convicts, free settlers, and military personnel. Discussion of the convict landscape and social dynamics must also include Aboriginal people. Future archaeological investigation of hinterland convict-labor sites should also consider the potential for post-1821 Aboriginal artifacts to indicate early cross-cultural relations and exchange in the region.

Collectively, the dynamics among Aboriginal people, convicts, emancipists, "free settlers," and colonial governments interacted with the local natural resources to form a landscape of punishment and productivity that was ultimately abandoned when it could no longer maintain the balance between these two purposes. Convict labor in the area then had to shift and adapt, transitioning as a colonizing force for free settlers and emancipists on their land grants in the hinterland. While Port Macquarie is just one convict landscape within NSW, it is hoped that this case study may shed light on similar establishments and be used as a point of comparison when studying social dynamics and cultural landscapes of convict and colonial settlements. Further research to locate some of the sites more precisely and investigate the

surviving archaeological remains is planned for the future. So too is additional documentary research to better quantify the nature and extent of industrial production and deployment of convict labor throughout the settlement, as well as mapping of offences and absconding associated with different labor situations (Tuffin and Gibbs 2019). These investigations would parallel the explorations of transformed urban convict landscapes and convict-settlement industrial hinterlands already undertaken by the Landscapes of Production and Punishment Project elsewhere (Tuffin, Gibbs, Clark et al. 2020; Tuffin, Roe et al. 2020; Shanahan and Gibbs 2022).

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