

Defiance, Deference and Diligence: Three Views of Convicts in New South Wales Road Gangs

GRACE KARSKENS

Until recently, both popular and learned views of convicts in colonial New South Wales alternated between the image of the ruthless, worthless and irredeemable criminal, on the one hand, and the passive recipient of dreadful, inhumane punishment, on the other. Both stereotypes deny the convict a contributory role in the development of the colony. The Great North Road, built by convict road gangs between 1826 and 1836, presents a direct material record of convict labour which challenges the historians' long-held views about men in road gangs, and demands a fresh examination of the subject. The author, a consultant historical archaeologist in Sydney, draws on a wide range of information in order to build up a picture of the world of road-gang convicts, and the rules by which it operated, as a context for understanding the archaeological record. The information encoded in the shape, quality and distribution of the extensive retaining walls is then used to give a new angle of perception on the working patterns and conditions of convicts in road gangs, and the various ways in which they responded to the opportunities and restrictions of their situation.

I

Lieutenant Jonathon Warner faced many frustrating difficulties as Assistant Surveyor posted at the lonely road station at Lower Portland Head. He was not particularly skilled, nor even interested, in road making, but because of the scarcity of engineers, he had been appointed nonetheless to direct the construction of the new North Road linking Sydney with the flourishing Hunter Valley (Fig. 1).¹ As a military man, he expected order and obedience from the twice-convicted prisoners in his charge and their convict overseers; and also a measure of deference from the local ex-convict settler, Solomon Wiseman. Instead, both his charges and Wiseman displayed an infuriating defiance of his authority. The problems of sullen, unwilling workers, difficult and tedious road work, lack of water, savage heat, and irregular supplies of rations and clothing, were magnified by a flagrant disregard of his orders. He wrote in exasperation to the Colonial Secretary Alexander MacLeay on 11 February 1828, after a particularly trying incident:

‘... in consequence of a long continued nuisance of upwards of one hundred [of Wiseman’s] pigs daily rolling themselves in the salt water mud and then running into a fresh water creek that I have had much trouble in securing ... for the gangs ... [I] ordered Joseph Anderson, life (scourger to the gangs) to attend at the said creek and assist Mr. Wiseman’s stock man in preventing the pigs from further impregnating the water, when he immediately replied [*sic*] that he would not do it for me ... he would sooner be sent to an iron gang, and that he came here to be a scourger and was not to do any other duty.’²

Warner had waited months to get this scourger, so that some measure of discipline might be enforceable in his gangs, and now the man himself had shown gross insubordination. He put Anderson in the lockup, threatened to discontinue his daily gratuity of six pence and demanded of MacLeay to know whether it was true that:

‘... a scourger (a government servant) is only to do the duty of punishing men; which seldom occupies more than half an hour’s labour during the week, or whether he is to assist in doing other duties.’³

He was reassured by a reply stating that Anderson was obliged to undertake other tasks besides flogging,⁴ but this probably did not allay his uneasy feeling about the hollowness of his authority as Lieutenant, Assistant Surveyor and Honorary Magistrate. Another scourger was subsequently sent to the station, so that no convict would be immune from a flogging, but by August 1828 Warner had had enough. He handed the post over to Lieutenant Percy Simpson, a man with more knowledge and experience in both road building and managing convicts than himself.⁵

II

On 8 June 1830, one of Percy Simpson’s overseers made an unusual request:

‘I beg leave to state that I do not like the place I am at present stationed ... I hold a ticket of leave and I don’t think myself safe there with it should it meet your approbation to remove me to any other part of the Department which you may think proper, and if not your Honour should deem meet I would wish to resign on the first day of July next.

Henry
Martineer,
Overseer, No 9
Iron Gang’⁶

The garbled urgency of the message left Simpson curious as to why the man suddenly wanted so desperately to be removed somewhere, anywhere, far away from his station at Mt Manning. During a subsequent investigation, Martineer made a statement under oath, and presumably in safety, that Solomon Wiseman had threatened:

‘. . . that he [Wiseman] would take his [Martineer’s] horse, ride off, and have his ticket taken, because he, Martineer, objected to taking a greater quantity of meat upon account for the gang he has charge of than had been required for three days in conformity with the Commissariat regulations.’⁷

Wiseman’s abuse of his contract to supply the gangs with rations in his attempt to blackmail Martineer did not surprise Simpson. He had several times complained to his superiors of Wiseman’s numerous illegal or irresponsible actions but it had been to no avail. The government in Sydney, and Simpson himself, were dependent on the scoundrel for the gangs’ rations, rotten and weevilly as they were, for the essential ferry link across the Hawkesbury River, for the use of several buildings at Lower Portland Head, and for the important public service Wiseman’s inn provided at the isolated crossing place. In accordance with his request, the trembling Martineer was removed, and that was the end of the matter.⁸

III

By 1830, Percy Simpson’s vision of his Great Road was materializing. His ‘lofty and massive side walls’ were rising steadily, defying nature and distance; handsome stone bridges spanned the craggy gullies; extensive and elaborate stone drainage systems ensured the road’s protection against the ravages of water.

One of the means by which Simpson achieved his engineering feats with only unskilled convicts was to appoint capable men as their overseers. Martineer’s departure after the incident with Wiseman was not really inconvenient, because Simpson was pleased to replace him with:

‘Senior Assistant Overseer C. Castles . . . an active and intelligent man well-acquainted with the system established here of constructing the roads and possessing the ability to execute orders he receives as well as being a good disciplinarian.’⁹

The fact that such overseers were convicts selected from the road gangs or held tickets-of-leave, had no bearing on the fact that they were invaluable and essential to the grand project. Several in particular were valued and praised by Simpson and his successors, Heneage Finch and Lawrence Dulhunty, for their work on the roads and bridges. Today, the massive structures are a striking, rich and direct record of the work of these overseers and the gangs they supervised.

INTRODUCTION: CONVICT STEREOTYPES

When Governor Ralph Darling described the convicts in the road gangs as the ‘refuse of the whole convict population’, he cast the mould for the popular image of these men over the next 150-odd years.¹⁰ This description was reinforced by the fact that the men were at least twice-convicted, and some gangs were made up of men who had run from other gangs. Upper class observers and important government officials saw the convicts in the same way and rejoiced in the fact that any work could be extracted from the scoundrels at all. Contemporary travellers’ accounts supplemented the view with lurid passages (guaranteed to sell many books) describing the gangs’ inhumane living and working conditions and cruel treatment.¹¹

Later in the nineteenth century, while government officials and polite society were busily trying to shake off any memory of the colony’s tainted convict origins, popular writers were equally busily manufacturing accounts of the convict past. Men such as Charles White simply plagiarized early records of convict road-gang administration and embroidered them with tales of the horrors of life in the road gangs and the bad character of the overseers who supervised them. He concurred with Judge Burton’s conclusion:

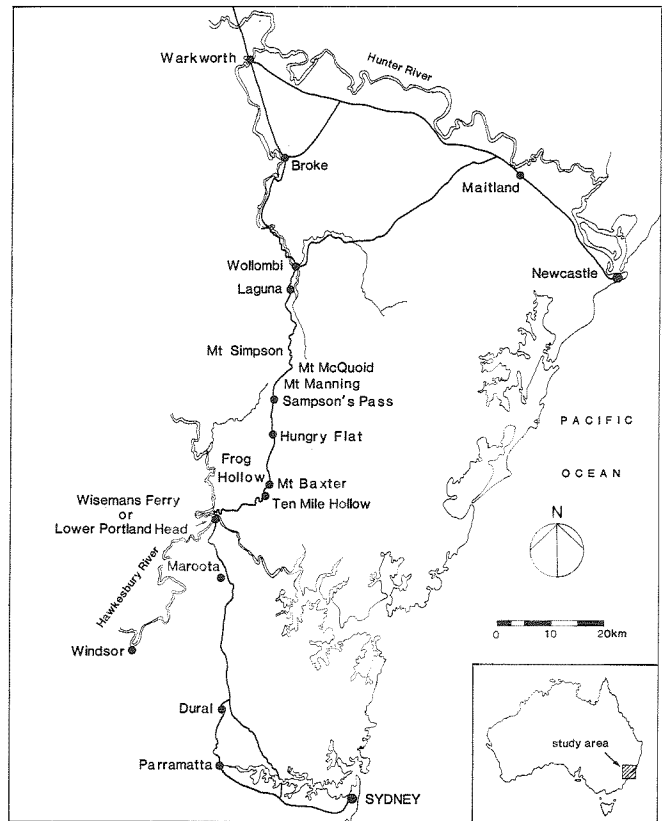


Fig. 1: Original line of the Great North Road.

‘To the carelessness or worse conduct of the overseers did he attribute a vast proportion of the burglaries and robberies that were committed in country districts.’¹²

Most accounts of the road gangs since then have alternated between the refuse-of-the-colony image, on the one hand, and the perception of the convict as the passive recipient of cruel and inhumane treatment, on the other. Neither view gives the convict in the road gang a face or a mentality, nor allows an assessment of his contribution to the colony’s development. Shaw reiterates the stereotype:

‘In New South Wales the chain gangs were employed on the roads. They were controlled by the Surveyors and regularly visited by magistrates; but they had only convict overseers. This made them cheap to superintend but it led to inefficiency, favouritism and brutality.’¹³

At the same time, he concludes that ‘. . . no one who knew the facts could say that the convict under punishment in Australia did not suffer a terrible fate.’¹⁴ Similar accounts are found in books dealing with road building, convicts and local history. In popular ‘historical’ literature, convicts generally are also shrouded in a mantle of picturesque romance, along with pioneers and bushrangers.¹⁵ In more recent years, Kerr’s *Design for convicts* contains a wealth of information about the buildings and complexes erected for the housing of convicts but the use of this data to reconstruct the world of the convicts is limited.¹⁶

In his innovative and lively book, *Convict society and its enemies*, John Hirst has turned the traditional view of early New South Wales society on its head. Far from being unwilling, irredeemable, mute slaves, toiling in dreadful conditions at the bottom of society, the convicts were treated ‘not according to their crimes, but to their usefulness for private gain and comfort or public works and services.’¹⁷ The skilled man, no

matter what his background, was highly valued and in great demand, and settlers 'clamoured for more labour', particularly during Darling's period of Governorship. Convicts were therefore able, to some extent, to 'control their own destiny' by supplying or withholding their labour as they pleased and encouraging a system of incentives which included payment, extra rations and taskwork which left them with their own time. Hirst also develops a corollary argument explaining the widespread use of flogging and other punishments, as an inevitable outcome in a penal colony where there were no walls or warders, but instead constant temptation to shirk tasks, to abscond, to drink and to commit more crimes.¹⁸

Hirst's historical reinterpretation of the role of convicts in colonial society, provides a relevant and most useful model for understanding the road gangs and the way they worked. Ironically, Hirst himself falls back on the old stereotypes of gangs and overseers. The distinction is drawn between the hardworking, highly motivated free settler, interested in extracting work from assigned convicts by whatever means necessary, and the superintendents and overseers of the road gangs and penal settlements, 'who had no personal interest in their work'. The road gangs, he claims, lacked incentive, were 'notorious for their laxity', comprised men who were 'free to wander and rob' and achieved little. The overseers themselves were 'unrestrained by the interests and concerns of private masters' and 'tended to the extremes of harshness and laxity'.¹⁹

THE ARCHAEOLOGICAL PERSPECTIVE

The opening stories about the three convict men and their contrasting stances, open windows onto this closed room. How was it that such disparate behaviour could arise from men who on the surface appear to be of the same background and character, and who were all involved in the same system? What were the conditions which allowed them to behave in this way and why did they do so?

Accounts of their words and actions come to us filtered through the reports of their superiors, whose writings are also 'expressions of their maker's mind',²⁰ containing clues to the rules governing the world of the road engineers and the men they supervised. The convicts for the main part did not express themselves in writing but their life and work is recorded by the extensive and often monumental road structures they built. Evidence about the organisation, skills and progress of the men in the gangs is encoded in the size, shape and arrangement of stones and the distribution of structures over a 100-kilometre stretch of road.

The anomaly arising between the traditional view of road gangs as inefficient and non-productive and the dramatic material evidence of their skill and perseverance, demands a closer examination and a fresh interpretation. In the absence of written records, archaeological evidence becomes an essential analytical tool in exploring the nature of convict labour. Historical archaeology is thus so much more than simply the 'investigation of the material remains of historically documented sites',²¹ because it is only by the careful examination of the integrated written and material sources (including written and spoken words, actions, demeanor, dress, and artefacts²²) that the vanished world of these three men and their supervisors can be reconstructed, and the stereotyped figures banished.

THE DEFIANT SCOURGER: THE ESTABLISHMENT AND STRUCTURE OF THE ROAD GANG SYSTEM

The origins of Darling's road gangs lay in the fact that men under sentence in New South Wales frequently committed fresh crimes after their arrival. The road gangs and penal settlements may be seen as small-scale versions of the whole transportation system: they were relatively cheap, particularly

the gangs, and they got rid of 'unsavoury characters'. There was also the added bonus that useful work might be extracted from the incorrigibles banished from 1826 to the 'distant road gangs'. These were men whom settlers, in spite of their desperate need for labour, could not coax to work for them. When Darling was charged with keeping too many convicts in government hands, he pointed out that this was '... from necessity, the settlers finding it impossible from the badness of their character to retain them'. He constantly defended the system by stressing the value of the gangs' work and the relatively low cost at which this was achieved.²³

The earliest gangs were administered by the Roads and Bridges Department, formed in 1826 at Parramatta under Captain William Dumaresq. The Royal Staff Corps initially served to supervise the gangs but this soon proved unsuccessful. As McNicoll points out, the failure of the scheme was not surprising:

'... the soldiers had no incentive to keep convicts working, unlike civilian supervisors with prospects of promotion in the convict service, and they were in danger of being corrupted by the men in the road gangs'²⁴

The soldiers were replaced by convict overseers about May 1827 and, in the same year, each major road was allocated one Assistant Surveyor (usually a military man with at least some engineering experience) and each gang was allocated one overseer.²⁵ At this stage the gangs contained widely varying numbers of men but in the following year the Surveyor of Roads and Bridges, Edmund Lockyer, remodelled the gangs along hierarchical lines and introduced stricter regulations. He directed that each Iron Gang should contain up to sixty men in irons, and be supervised by one principal overseer and three assistants; and each Road Party of fifty unironed men be supervised by one principal and two assistant overseers. He also established the Bridge Parties, each comprising twenty-five of the better-behaved and more skilled convicts, including 'rough carpenters, quarrymen and stone masons', which were to be supervised by one overseer. Significantly, the men in these gangs were given better treatment and more discretion than those in other gangs, and transferral to a Bridge Party was, in a sense, a 'promotion'. Meanwhile, the Iron Gangs received the worst and least trustworthy characters, together with the strictest security measures.²⁶

By 1829 the Roads and Bridges Department had evolved from simple, fairly haphazard origins to a complex organisation supervising and monitoring over forty gangs, spread over hundreds of kilometres in the most isolated parts of the colony. The office duties of an Assistant Surveyor posted on the road included: 'Entry of Records, Road Department Correspondence, Weekly and Monthly Returns, Victualling Ledgers, Ration Tickets, [recording of] teamsters, runaways and other business'. Most of these reports, particularly the Weekly and Monthly Road Gang Reports, required immense and precise detail.²⁷

When Lieutenant Jonathon Warner arrived at Wisemans Ferry, however, the Department was still operating in a primitive fashion. Warner's main concern at the time was to get a scourger to keep the men in the gangs in line. He had only arrived in the colony a year before and felt an awful sense of vulnerability and powerlessness, stationed so far from the seat of government and the source of his authority over the twice and thrice convicted men in his four gangs, three of which were iron gangs. Much of his time was taken up with the difficulties of feeding, clothing, establishing stations, securing water and chasing runaways, let alone the massive task of road building itself. To a man whose military training meant that his world was made up of fixed hierarchy and unquestioning subordination, the most unsettling problem was the defiance of the lowly convicts. His request for a scourger for 'any of the gangs ... found guilty of drunkenness,



Disobedience of orders, neglect of work, etc. etc.²⁸ in March 1827 went unheeded but upon more urgent insistence in April, the government capitulated. He had written:

‘... it will be necessary for me to have a scourger here forthwith as only a few days back one of the gang was very insolent to the overseers and as they are well aware I have no means of Punishing in the course of their being less intimidated knowing the nearest place of punishment is Windsor.’²⁹

However, the long-awaited scourger proved to be worse than the ganged convicts. Joseph Anderson, serving a life sentence, knew his role as scourger to the gangs was essential to Warner’s ability to maintain some sort of discipline. He had little to lose in his defiance of Warner’s orders to round up Wiseman’s pigs, and his claim that he would ‘sooner be sent to an iron gang’ was false bravado, since he knew that such a thing was unlikely to happen to so useful a man. For Warner it was an infuriating incident, highlighting his impotence in difficult and frustrating circumstances, for even the dreaded iron gangs held no threat for this impertinent wretch. All he could do was lock Anderson up, threaten to stop his gratuity, and write another fuming letter to the Colonial Secretary.

For the sake of expedience, Warner had been made a Magistrate so that sentences of punishment could be meted out on the spot but the remoteness of Windsor, where the punishments were actually inflicted, diluted the immediacy and potency of the threat.³⁰ A parallel case is the three-mile-long tunnel cut by convict labour between 1827 and 1837, under the direction of John Busby, to supply Sydney with water from the Lachlan Swamp. Hirst, citing the case of the convicts employed on Busby’s Bore, as it became known, points out that the threat of flogging, stretches in prison cells

Fig. 2: ‘North view of Mr Wiseman’s Villa New South Wales’, a primitive watercolour, c. 1830, depicting Wiseman’s Georgian-style house and its associated buildings. In the foreground can be seen the wealthy emancipist Solomon Wiseman, dressed in fine clothes, imperiously directing his stockman to work. (Reproduced with permission, National Trust of Australia [N.S.W.].)

or on the treadwheel, although only partly effective, were ‘necessary to keep men at work not because tyrants were demanding that men work to excess, but because the openness of the colony made it easy to evade work’.³¹ The road gang system was, for various reasons, particularly open to abscondings and laziness, and Warner, like Busby, found himself dependent on the scourger for the floggings which ‘did no more than hold the line and kept the absences from becoming completely crippling to the enterprise.’³²

THE DEFERENTIAL OVERSEER: LIVING CONDITIONS AND DAILY ROUTINE

Wiseman’s errant pigs, rolling themselves with porcine perversity day after day in the scarce water supply, were indicative of another of Warner’s bothersome problems: Wiseman himself. Solomon Wiseman had arrived in the colony in 1806, convicted of stealing timber, and received his ticket-of-leave in 1812. He was an enterprising man and ran hotels and shipping businesses before he settled on land at Lower Portland Head in 1819.³³ There he built a fine, grand house, Cobham Hall, the ultimate symbol of the successful settler (Fig. 2). After the Great North Road was marked through his property in 1825, he applied for a hotel licence, a ferry licence, and for contracts to supply the gangs with rations. He also leased buildings for the use of the gangs and their



Fig. 3: 'A Government Jail Gang, Sydney N.S. Wales', from A. Earle's Views in New South Wales and Van Diemen's Land, London, 1830, showing the apparel of the ganged convicts. (Reproduced with permission, Mitchell Library.)

supervisors. The government responded to these and many other requests with generosity and co-operation. Such activities, after all, lessened the burden of its responsibilities, hastened the 'civilisation' of the country and broke down the barriers of isolation.³⁴ Wiseman became wealthy and respectable but he was also an abrasive and dishonest character, and both Warner and Simpson found it difficult to deal with him. He repeatedly flouted the regulations they tried to enforce concerning stock, his ferry service was irregular and unreliable, his virtual monopoly on the supply of food in the area meant that it was 'decidedly the dearest in the colony', and the rations he supplied to the gangs were often of poor quality or rotten.³⁵ Nevertheless, the Surveyors' stream of complaints to the Colonial Secretary had little effect; the government either turned a blind eye or exercised indulgent leniency, much to their disgust. It was, simply, the way of the colony.

When Wiseman confronted the overseer Henry Martineer, No. 9 Iron Gang was stationed on an isolated section of the road at Mt Manning, about midway between Wisemans Ferry and the embryonic settlement at Wollombi. The year, 1830, marked the peak of construction activity on the section of the road between these two points and gangs were scattered along it at Sampson's Pass, Frog Hollow, south of Ten Mile Hollow, and at Mt McQuoid, Mt Simpson and Laguna to the north. A total of ten road gangs containing about 500 men were employed on the road at this stage (Fig. 12).

The stationing of so many men at isolated points in the bush brought enormous problems of security and administration. As part of his 1828 efforts to regulate the work and conditions of road gangs, Edmund Lockyer set out a daily routine to which they were to adhere. During the summer months the overseers were to muster their convicts at 5 o'clock in the morning, '... as they have frequently to go some distance', breakfasting before they were marched from their huts to the construction site, a distance of up to seven

miles (11.26km) away. They returned to their station at 12 noon for dinner and marched back to work at 1 o'clock, remaining there until the last march back for the evening meal at 6 o'clock, after which they retired. During the winter months the hours were slightly shorter (7 a.m. to 5 p.m.) and from October 1828 they were only worked until 2 p.m. on Saturdays, and then '... conducted to a pond or river in the neighbourhood to bathe and wash their clothes.' This regime was frequently interrupted by rain and by the lack of tools, gunpowder or food.³⁶

Clothing was an important means by which the road gang convict could be identified as such, and it was used to prevent escapees from immediately 'vanishing', or becoming indistinguishable in the scattered population of settlers, assigned convicts and itinerant free men. Two suits of clothing or 'slops' were provided annually to each convict, comprising:

- '2 Parramatta Frocks
- 2 Parramatta Trousers
- 3 Striped Shirts
- 3 Pairs Shoes
- 1 Straw hat or cap' (Fig. 3)³⁷

The clothing and shoes wore out quickly, and there were numerous reports of the Commissariat's failure to deliver the articles when they were due. In October 1827, Wilford, the Surveyor of Roads and Bridges, received:

'... constant complaints from various prisoners who do not receive their slop clothing ... at present that which ought to have been issued on the first day of last month has not yet been supplied.'³⁸

By December the gangs had still not received their clothing and were 'quite destitute'.³⁹ But its eventual delivery posed another problem, because those contemplating escapes seized their opportunity to take a new set of clothing to protect them. Ensign Reynolds of the military guard at Wisemans Ferry remarked that the receipt of slop clothing was a '... great incentive to their running away.'⁴⁰ In the wake of the increasing abscondings of the late 1820s and 1830s, the slops were made even more unmistakable by the use of half yellow and half grey fabric. Road gang convicts were thus branded by their clothing; it was a direct sign of their status and another means of separating them from the rest of the community.⁴¹

The victualling of the gangs also posed considerable problems. The contracting system, whereby a local settler supplied gangs in his area for a fixed fee, was established early in the period, and the government continually issued directives, provided weights and measures, and even appointed delegates from each gang in its attempts to ensure that the food was adequate and of reasonable quality.⁴²

The rations themselves comprised mainly meat and carbohydrate foods, and the amount received by each man varied little over the period 1826–1832, although they were reduced slightly during Bourke's harsher period of government.⁴³ The heat of summer produced particular problems for the provision of meat. By 1829 government instructions ordered that salt or preserved meat was to be delivered once a week in summer, or alternatively, that fresh meat be provided three times a week. Lockyer maintained that this was still too infrequent and suggested that slaughteryards be set up near the stations to ensure the freshness of meat. Wiseman built stone store huts at Frog Hollow (stone structures there today are thought to be the foundations) and also stockyards at Hungry Flat for keeping and slaughtering bullocks.⁴⁴

The actual distribution and preparation of the food became closely regulated in 1829. Until then, each man had received his rations once a week and meals were cooked in the separate slab or bark huts. Lockyer found this system to be unsatisfactory, reporting in 1828:

'The rations are drawn and issued weekly in advance, and great loss is thereby incurred to the government . . . many of the prisoners by Tuesday, where the rations have been issued to them on Saturday previous, have either consumed, exchanged or wasted the whole of the weeks ration, the consequence is an inducement . . . to commit fresh crimes of plunder to satisfy the cravings of hunger.'⁴⁵

At his suggestion, the individual's responsibility for receiving, cooking and choosing the time for consuming his food was withdrawn, and rations were handed over to a cook from each gang to prepare every day. This system allowed '... a certain meal regularly every day and also prevents the precarious mode of their procuring one.'⁴⁶ That the men in the gangs should be adequately fed was a high priority, as the failure of the contractor to deliver rations led inevitably to 'a spirit of disobedience and insubordination among the men.'⁴⁷ No surveyor wanted to contend with gangs of fifty hungry, rebellious men. The diet itself was simple and monotonous. Breakfast each morning was a porridge of 1 pound of maize meal and 1 ounce of sugar boiled in a quart of water; the midday meal was a stew of 1 pound of fresh or salt meat and 1½ ounces of salt, with damper or puddings made of 1 pound of flour. Part of the latter meal was to be kept for supper. Officially, the prisoners ate no fruit or vegetables.⁴⁸

In spite of attempts to regulate strictly the provision and quality of rations, contractors like Wiseman found it easy to abuse the system. Complaints about him were, in any case, always overshadowed by the much larger problem of feeding so many men at the numerous isolated stations. Wiseman was obliged to supply up to 700 men within a radius of 20 miles (32km) of his house at Wisemans Ferry. He was provided with four bullocks in 1828 'for the purpose of carrying provisions

to the iron gangs who cannot leave their stations.'⁴⁹ When Roger Therry met him in 1830, he poked fun at Wiseman's lack of education and of genteel manners but at the same time described him as 'a person of great natural shrewdness and of considerable prosperity', who had boasted of an income of 3000–4000 pounds per year for the rationing contract.⁵⁰ At the same time, the quality of the food was poor. At one stage Percy Simpson actually sent a sample of bad flour to the Colonial Secretary to demonstrate his complaint. When it was pointed out that the convicts themselves had made no objections, he replied:

'... the prisoners are so completely under the surveillance of the overseers that they dare not avow their resentment on the subject of rations without *their* [the overseers'] approbation, all of whom are in the interest of the contractor (Wiseman) and receive more abundant and superior quality of rations.'⁵¹

It was, in fact, a meticulously planned racket based on deference and bribery, operating efficiently in the isolated wastelands along the road. For some reason Martineer was either not offered or would not take the bribe of more and better rations. When he refused to take more than the officially allotted rations for the gang, Wiseman was enraged and threatened to remove his two most vital assets, his horse and his ticket-of-leave. These were frightening and powerful threats, because one would leave him stranded at lonely Mt Manning, while the other would jeopardize his career and future in the colony. That Martineer should believe that Wiseman had the authority to do either of these things is a further sign of the prevailing order of deference. He believed himself subject to Wiseman's superior standing, and in the end he deferred by having himself quickly removed to a 'safer' post.

THE DILIGENT OVERSEER: GANG ORGANIZATION AND WORKING PATTERNS

Contrary to what historians tell us, some overseers were highly skilled builders and supervisors, and were consequently prized by the Assistant Surveyors who were forced to delegate authority in order to build the road at the various points. The juxtaposition of the traditional view of the unskilled, unwilling 'refuse of the colony', which formed the labour force, with the grand works those men accomplished, forms an anomaly whose exploration is the key to understanding the workings of the road gang system and gives insight into the motivation of the convict road builders themselves.

The extant stone retaining walls are the most extensive and visible record of the gangs' work, and when read in conjunction with the Weekly and Monthly Road Gang Reports on the gangs' progress, actually allow the pattern of each gang's movements, its skills and its composition, to emerge. The walls are also manifestations of the approaches of successive surveyors and the supervisory work of their subordinate overseers.

The many walls scattered intermittently over a 100-kilometre stretch of the road, were the subject of field studies carried out between 1980 and 1983.⁵² They range widely in type from the crudest possible rubble construction to fine ashlar work of great durability and pleasing appearance. It was necessary to construct a typology which would cover the spectrum of styles and allow accurate, simple identification and description of each section of wall. The typology was based on the simple schemes given by the nineteenth-century writers Dobson and Tomlinson, who divided masonry into three categories: rubble, coursed, and ashlar work.⁵³ However, the disparate nature of the colonial walls required that each of these categories be subdivided according to the standard of dressing, jointing and coursing, in order to classify them accurately.

Type 1a

The most primitive rubble work comprises field stones (which are sometimes broken) sorted into roughly similar sizes and stacked. There is thus no attempt at coursing or jointing the stones. Examples are relatively rare, partly because of subsequent collapse and also probably because such low quality work was not considered suitable for road construction. Sections survive in the abandoned loop of road 40.4km north of Baulkham Hills, where the wall comprises relatively small (20–30-cm-length) stones, and at the summit of Devine's Hill, where a row of irregular broken boulders (40–60cm diameter) lines the edge of a shallow embankment (Fig. 4). Another example occurs at Sampson's Pass. In all cases the embankment is slight and the walls no more than 60cm high.

Type 1b

This type of rubble work comprises stones which are roughly shaped and stacked, with no attempt at coursing or jointing, though slightly less haphazard than Type 1a. Examples are more common, though in poor condition. The abandoned loop of road 40.4km north of Baulkham Hills has a section 25m in length and up to 1.5m in height, which comprises both subrectangular and rectangular stones. Other examples occur at 3.6, 4.8 and 8.1km north of Wisemans Ferry and also in the Sampson's Pass area, 35.2km north. In the latter case, the stones are better shaped but irregular in size, allowing some stack bonding but no coursing (Fig. 5). The most extensive and interesting examples occur on the 2km first ascent from the north bank of the Hawkesbury River opposite Wisemans Ferry. This section was built under Warner's supervision in 1828 and abandoned in 1832, and its structures encapsulate his modest style of construction.

Type 2a

The walls of this type comprise stones which were roughly squared with an axe or hammer and arranged with some attempt at coursing and jointing. The abandoned loop at 40.4km north of Baulkham Hills also features this type, around the mouth of a culvert. The attempt at coursing is interrupted by irregularly shaped and sized stones, although the work is more substantial than Type 1b. Another good example occurs at the base of the descent south of Wisemans Ferry. The retaining wall supporting much of the road at Mitchell's Loop (5.7–6.0km north of Wisemans Ferry) is a well-preserved example. The stones are roughly rectangular and coursing is intermittent. Similar examples occur further north, 7.9 and 9.9km from Wisemans Ferry (Fig. 6).

Type 2b

Walls of better prepared stones, allowing rough jointing, more definite coursing and sometimes with tooled faces, occur more frequently on the road and are occasionally quite substantial. The retaining wall supporting an embankment approximately 1.0–1.5m in height near the junction of the two ascents north of the Hawkesbury, has a smooth, tooled face. Although the stones are not of a standard shape or size, some effort has gone into fitting them together as closely as possible and several instances of snecking⁵⁴ interrupt the courses. Similar work is found 11.1km and 12.4km north of Wisemans Ferry (Fig. 7) and on the ascent of Mt Baxter a substantial Type 2b wall rises to approximately 2.5–3.0m in height, comprising up to nine courses of fairly regularly shaped stones.

Type 3a

These walls are rough approximations of ashlar work. The stones are evenly dressed, faced and matched; the coursing is consistent and usually of even height, although not always horizontal; and the joints are fairly tight. The walls are battered and laid mainly in consistent random bonding. Like Type 3b walls, this type was mainly employed for individual, more ambitious projects such as short sections in particularly steep locations, or for ramps or bridges. The example 51km



Fig. 4: Type 1a stonework on a low embankment, at the summit of Devine's Hill, 2.95km north of Wisemans Ferry. The stone-sizes vary around 30×50×30cm. (Photograph by G. Karskens.)



Fig. 5: Type 1b stonework in the Sampson's Pass area, 35.2km north of Wisemans Ferry. The stones are approximately 30×30–90×30cm. (Photograph by G. Karskens.)



Fig. 6: Type 2a stonework, showing rough shaping and intermittent coursing, 7.9km north of Wisemans Ferry. The stones are approximately 15×30×15cm. (Photograph by G. Karskens.)

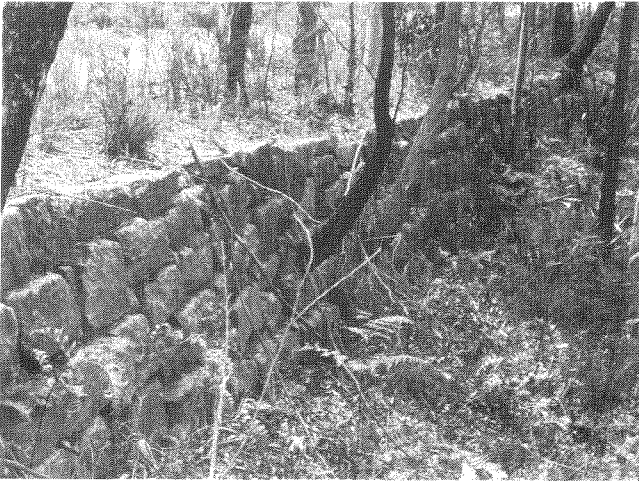


Fig. 7: Type 2b stonework, showing definite coursing with the stones given a rough face, 11.1km north of Wisemans Ferry. The stones are approximately 20×30×30cm and each course is stepped back from the last to provide a batter. (Photograph by G. Karskens.)

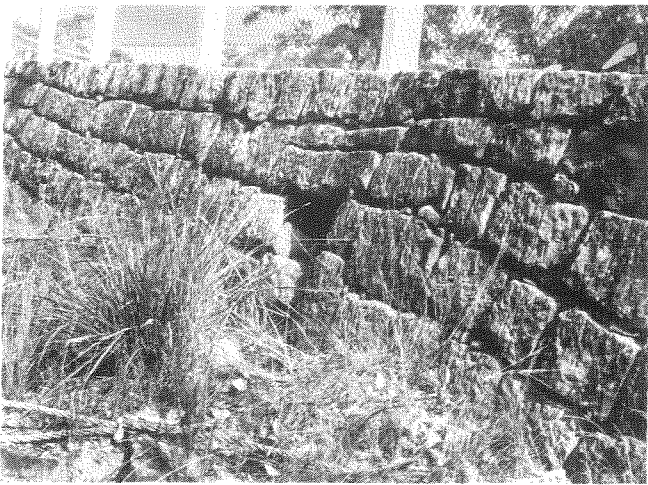


Fig. 8: Type 3a stonework around a culvert on the descent south of Wisemans Ferry. The wall is evenly battered and given a tooled face and an even coping course, but the courses are uneven. The stones average approximately 30×60–90×30cm. (Photograph by G. Karskens.)

north of Baulkham Hills has evenly matched, neatly finished stones with a smooth battered face. The courses are of even heights but dip to some extent. Similar well-built walls occur on the steep descent south of Wisemans Ferry (Fig. 8) and extensively on the ascent of Devine's Hill across the river to the north. Five of the seven bridges on the road are executed in this style of masonry, along with a heavy ramp 0.65km north of the Mt Manning junction.

Type 3b

This most sophisticated style of work answers the description of ashlar work given by Dobson and Tomlinson. The stones are dressed to given dimensions, forming a perfectly smooth face and tight bedding and perpendicular joints, with even and consistently horizontal coursing. The immense, heavily buttressed section on Devine's Hill is constructed in this fashion, with some of the stones up to a metre in breadth and depth, and the walls over 9m in height (Fig. 9). The large bridge at Ten Mile Hollow is also constructed of fine ashlar masonry, with the addition of specially shaped stones to form the V-shaped ends of the central pylon. The best quality



Fig. 9: Type 3b stonework on the first and most southerly of the four (originally five) buttresses on Devine's Hill, showing the mouth of the culvert with the race and part of the flume below. The work answers the description of ashlar masonry, with stones dressed to given dimensions (averaging 30×30–60×30cm), evenly coursed and tightly jointed. (Photograph by G. Karskens.)

masonry was also employed for the curved wing-walls of another bridge at Mt McQuoid, and at Ramsay's Leap, 7.3km north of the Mt Manning junction, where the gracefully curved retaining wall, fitted with a culvert and flume, runs for 100m and up to 4.5m in height. A small remnant of identical work occurs at the base of the mountain 1.6km further north, suggesting that the whole descent was perhaps originally supported by such work. Recent roadwork has, however, obliterated any further evidence.

The first broad pattern discernible in the above range and distribution of masonry types, is the correspondence with the methods and standards of the various Assistant Surveyors. Jonathon Warner's emphasis on quick, economical and consequently rough road building, with walls 'not more than four feet high', as he boasted,⁵⁵ is directly reflected in the crude quality of the stonework on the first ascent of the north bank of the Hawkesbury (Type 1b) and also in the loop of road 40.4km north of Baulkham Hills. Likewise, the retaining walls near the base of the descent south of Wisemans Ferry are roughly built, unevenly coursed rubble work, and they form a striking contrast to the 'lofty and massive side walls', as Simpson described work proceeding under his later supervision further up the same slope (Type 3a).⁵⁶ On Simpson's new ascent of Devine's Hill on the north side of the Hawkesbury, the walls are almost all of Types 3a or 3b quality. Bridges of masonry, avoided at all costs by Warner, were built under Simpson's direction, some of extravagant proportions and sophisticated design.⁵⁷ Further north, around Wollombi, the gangs under Heneage Finch constructed some very fine sections of masonry in the latter's effort to make his area 'equally secure with the other part'.⁵⁸

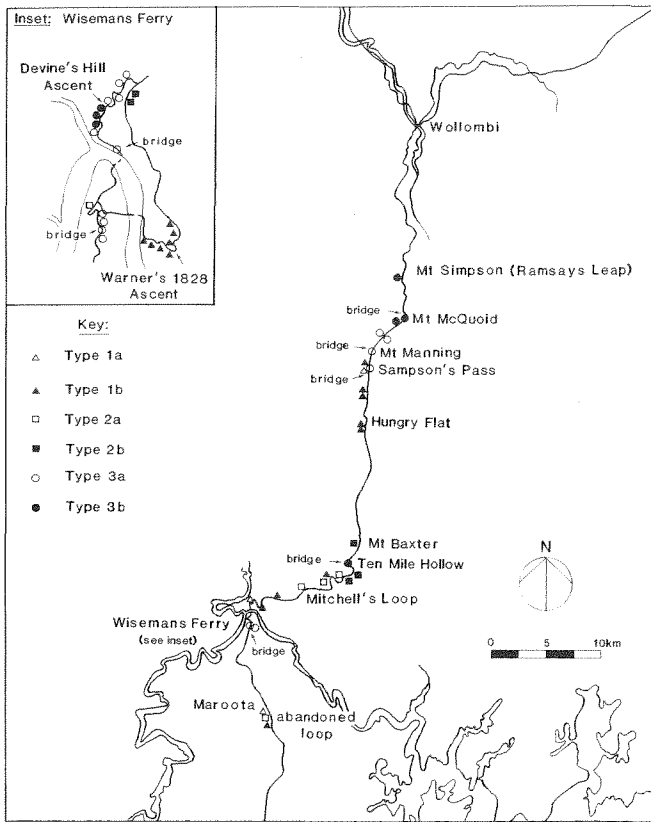


Fig. 10: Distribution of stonework types, Great North Road, 1983. The best quality work occurs mainly in clusters around Wisemans Ferry and at Mt McQuoid and Mt Simpson, while the walls of poorer standard are scattered along the road between Wisemans Ferry and Mt Manning. Between Mt Baxter and Hungry Flat, the originally poor quality work either has disintegrated or occurs only as small intermittent fragments which do not merit inclusion on this map.

This neat framework, while throwing light on the significance of the wide variety of masonry styles, does not fully explain their distribution. Some of the work completed under the ambitious Simpson's supervision is of the poorest quality found on the road: for example the Type 1a (Fig. 4) work at the summit of Devine's Hill, contrasting with the fine ashlar work only a few hundred metres to the south. The solution to this anomaly lies in the comparison of the written and material records. If the known distribution of the gangs between 1827 and 1832, as recorded in the Road Gang Reports and other official written records (see, for example, Figs 11 & 12), is juxtaposed with the location of different styles of surviving stonework (Fig. 10), a pattern of association between certain gangs and particular styles emerges. Thus Nos 3 and 4 Iron Gangs, confined during the whole construction period to the rugged area approaching the Hawkesbury at Wisemans Ferry on both sides, were responsible for the high quality work there (Types 3b and 3a respectively). No. 8 Iron Gang, however, was consistently stationed in areas which today feature only poor quality stonework: the area around Maroota (abandoned loop), the section between Devine's Hill and Ten Mile Hollow, and the vicinity of Hungry Flat and Sampson's Pass. Meanwhile, the men in No. 9 Iron Gang built the fine retaining wall in the Little Maroota Forest area (51km north of Baukham Hills, Type 3a), the ascent of Mt Baxter (Type 2b) and the stone ramp at Mt Manning (Type 3a).

It appears, therefore, that the gangs were organized according to skills; the least skilled and unskilled men allotted the task of wall-building were placed in No. 8 Iron Gang and assigned the construction of large stretches of road where no

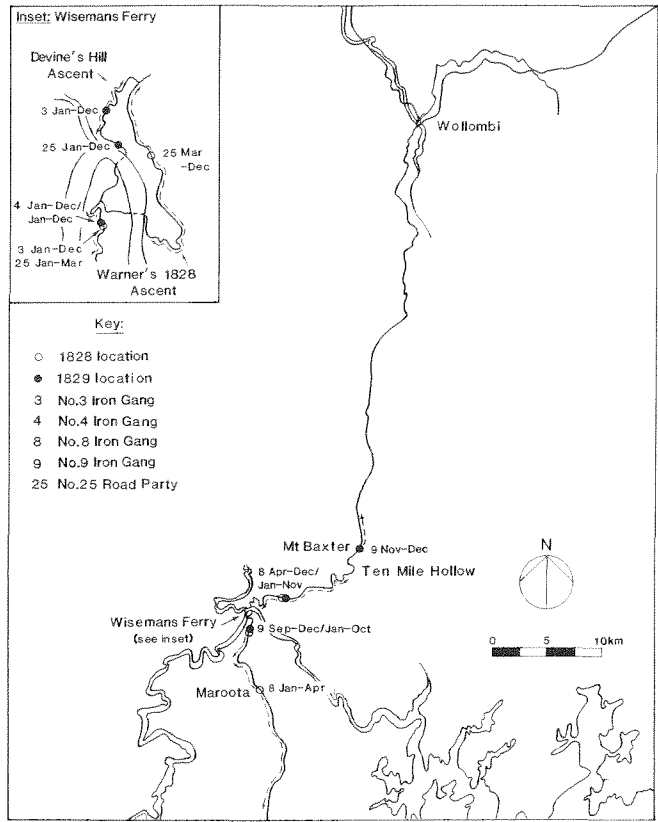


Fig. 11: Distribution of convict iron gangs and road parties on the Great North Road, 1828 and 1829.

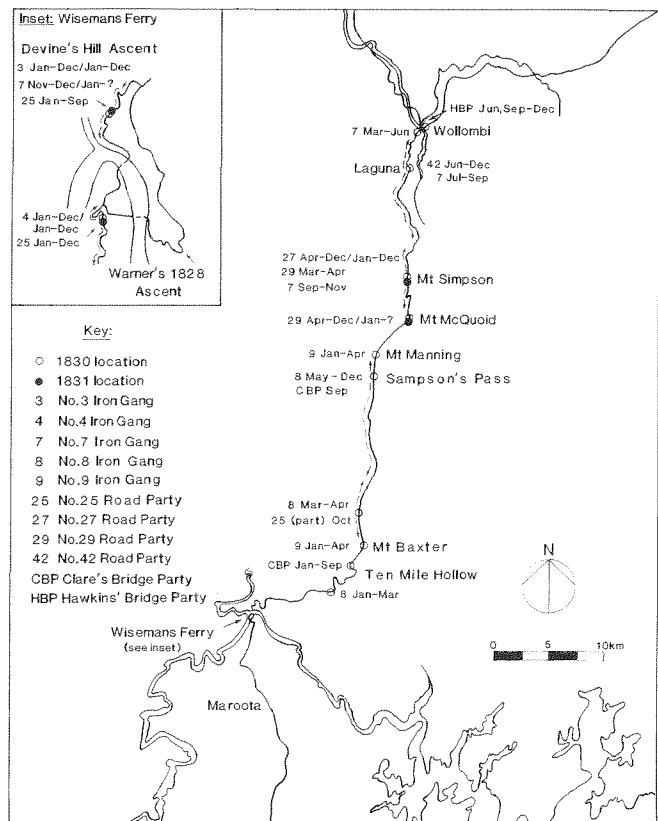


Fig. 12: Distribution of convict iron gangs, road parties and bridge parties on the Great North Road, 1830 and 1831.

difficult sections occurred. Men with more skills were placed in Nos 4 and 9 Iron Gangs; and the best masons available were recruited into No. 3 Iron Gang and No. 25 Road Party. The work of the latter gang between 1828 and 1831 presents a most interesting range of styles. The same gang which put up the rough rubble walls (Type 1b) on Warner's first zig-zag ascent north of the Hawkesbury in 1828, in the next two years under Simpson constructed the Type 3a bridge and retaining wall on the approach to Devine's Hill, and subsequently joined No. 3 Iron Gang in the construction of the remarkable walls of the Devine's Hill ascent. The poor workmen were either replaced by men with more skills after Simpson's arrival, or they were somehow persuaded to attain skills in stone masonry and encouraged to practise and perfect them.

This acquiring of relevant skills is another problem inviting investigation. How was it that these gangs, by all accounts unskilled and unwilling, in the end achieved some of the most ambitious and impressive engineering of the colonial period? These were men whom settlers, in spite of their desperate need for labour, could not coax to work for them, who had committed more crimes since their arrival in the colony, and who were unlikely to have been skilled and valued workmen. Moreover, the builders of the ascent of Devine's Hill, the most substantial section, were recaptured runaways from other gangs. The road gangs had no reformatory effect: Finch in 1830 complained of the assignment of ex-road gang convicts to his surveying party on the Wollombi, for they were '... always worse for being in a road gang.'⁵⁹ The floggings ordered by the Assistant Surveyors helped to prevent abscondings and neglect of work but could not be used to force men to build structures of high standards and aesthetically pleasing appearance. The nature of road construction precluded close supervision of work in any case, although official regulations repeatedly attempted to ensure that the men were kept together in a relatively small area.⁶⁰ Usually the work necessitated the distribution of the men 'for a mile along the road', engaged in a wide variety of tasks (Fig. 13). Ensign Reynolds pointed out the security difficulties:

... now if it be expected that two sentries can guard 140 prisoners they ought necessarily to work in a prescribed extent of road; and this, I presume, could not be effected, the road requiring a greater distribution of labour.⁶¹

Hirst's model of a private sector based on a range of incentives provides an interpretive tool in the examination of the gangs and their work. Both Percy Simpson and Heneage Finch were inspired by a vision of the Great Road, requiring the best engineering possible, and which they hoped would earn them substantial remuneration and acclaim. But it was the overseers who actually supervised the work. While Hirst and writers before him portray the convict overseers as lax and brutal, uninterested in the work and so on, there were some overseers on the Great North Road, like Castles, who were praised and valued for their ability to maintain discipline and for their skills in road and bridge building. It was, in fact, the original overseers, the men of the Royal Staff Corps, who had had no incentive to keep the men at work, and their assignment to such tasks was quickly abandoned.

The convicts who replaced them in 1827 were sometimes well-behaved men from the gangs, threatened with a return to them for inadequate work, or, after mid-1828, ticket-of-leave men who received two shillings per day and a ration. Lockyer reported that there was 'seldom a delinquency' among them.⁶² They had, after all, the chance of attaining their tickets or their freedom. Finch and Dulhunty described some of their overseers favourably: MacDougall was a 'very good and useful overseer', while the overseer of No. 7 Iron Gang was 'very intelligent'. Hawkins, the overseer of a Bridge Party, had skills in bridge building so much valued that Dulhunty urged that he be removed from a station where he was employed building huts, to the Long Bridge at Maitland.⁶³

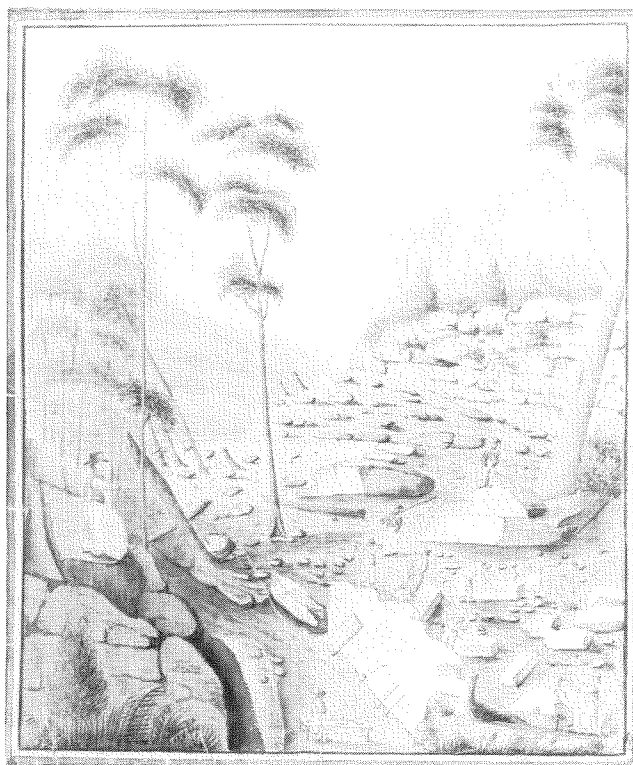


Fig. 13: 'View taken on Major's [sic] Mitchell's Pass to the Pilgrim [Inn]', artist unknown, 5 December 1832. This painting shows convicts working on another Great Road, the Great West Road over the Blue Mountains, at the same time that work was proceeding on the Great North Road. The overseer directs the work from a rocky platform above, while the convicts quarry and dress stone, pick the embankment and build a retaining wall, under the soldiers' guard. (Reproduced with permission, Mitchell Library.)

The Assistant Surveyors, who were interested in constructing durable and impressive roads, evidently spent some time instructing their overseers in the various methods of road building. The acquisition of such useful skills as rock blasting, stone masonry, embanking and draining, apparently in great demand in the colony and thus potentially valuable, was another incentive for the overseers to keep the men at work and maintain high standards.

Many of the convicts ran from their stations and in this sense, as Hirst points out, Darling's policy 'fostered disorder on a large scale'.⁶⁴ The number of escapes is not surprising in view of the living conditions and difficult work, and the absence of walls and constant direct supervision. However, the major works on the road each display a high degree of consistency in style and design of the retaining walls and drainage structures. The immense buttressed retaining wall of Types 3a and 3b masonry, supporting 2km of the road almost continuously at Devine's Hill, could not have been built by gangs comprising completely different men from week to week or month to month as a result of abscondings. The answer lies in the proportion of skilled to unskilled men. A careful and extensive study of the numerous Road Gang Reports, shows that the number of men actually employed in skilled work such as stone masonry, blasting, and drainage, was relatively small, ranging between two and ten men out of a gang of about fifty.⁶⁵ The rest were employed in clearing the line of trees and scrub, cutting through earth and rock, filling embankments and breaking and carting stone (Fig. 13), tasks which required little or no skills.⁶⁶ It is likely that the runaways came from the latter group, while the men employed in the more challenging and interesting skilled work chose to remain on the job. Perhaps they did not want to jeopardize their

prospects after the expiry of their sentences, prospects considerably improved by the acquisition of such valuable skills; or perhaps they were given preferential treatment, praise or a measure of discretion by overseers and Assistant Surveyors eager and anxious to avoid interruption to the work underway and to maintain the standard of workmanship. The walls they built thus reveal overlaid evidence of their remarkable perseverance and skills, of the diligent supervision of the overseers, and of the ambitious visions of the Assistant Surveyors.

CONCLUSION

Anderson, Martineer and Castles have served to focus our attention on the world of convicts sent to work in road gangs, set within the larger frame of colonial society. It was a world revolving about systems of threats and incentives, restrictions and opportunities, and these diverse but closely connected rules moulded the behaviour and relationships of convicts, emancipists and free men alike. It was a world where distance and isolation could easily overshadow authority and where official policy often gave way to expediency. It was a world where the government found itself flogging one man it had banished to an isolated outpost, while simultaneously ignoring the wrongdoings of another, on whom it depended, at the same outpost. Both measures stemmed ultimately from the same predicament: that of a gaol with no walls, warders or punishment cells,⁶⁷ where second offences were easy to commit, and where floggings and banishment to distant but equally open 'gaols' were thus a necessary and integral part of the colony's structure and processes.

NOTES

- Karskens 1982; Archives Office of N.S.W. (hereafter A.O.N.S.W.), Colonial Secretary's In Letters (hereafter C.S.I.L.), Warner to MacLeay, 25/1/1827, Box 4/1920.
- A.O.N.S.W., C.S.I.L., Warner to MacLeay, 11/2/1828, Box 4/1966.
- ibid.
- A.O.N.S.W., C.S.I.L., MacLeay to Warner, 20/2/1828, Box 4/1966.
- A.O.N.S.W., Colonial Secretary to Surveyor of Roads and Bridges, (hereafter C.S. to S.R.B.), MacLeay to Hughes, 28/6/1828, Box 4/3934.
- A.O.N.S.W., Surveyors to Surveyor General (hereafter S. to S.G.), Martineer to Simpson, 8/6/1830, Box 2/1579.
- A.O.N.S.W., S. to S.G., enclosed with Simpson to Mitchell, 20/6/1830, Box 2/1579.
- ibid.
- ibid.
- Historic Records of Australia*, (hereafter *H.R.A.*), 14: 69, Darling to Huskisson, 28/3/1828.
- ibid.; *H.R.A.*, 14: 303, Oxley to Darling, 20/9/1827; Mitchell 1839; Dumaresq 1827; Harris 1847; Backhouse 1843; Maclehorse 1839.
- White 1889: 254; cf. White 1889 with Royal Engineers Corps 1837.
- Shaw 1966: 214.
- ibid.: 216.
- Hutton-Neve 1978; Jervis 1930; Parkes 1968; Swancott 1965; Tucker 1933.
- Kerr 1984.
- Hirst 1983: 82 ff., 94.
- ibid.: 57-69.
- ibid.: 94.
- Glassie 1975: 10.
- Bairstow 1985: 70.
- Isaac 1982: 325; see also Deetz 1977: 23.
- Shaw 1966: 256; *H.R.A.*, 14: 69, Oxley to Darling, 20/7/1827.
- McNicol 1977: 4; 'Returns of the Colony', 1826.
- A.O.N.S.W., C.S. to S.R.B., Wilford to MacLeay, 'Instructions to the Assistant Surveyors of Roads and Bridges' and 'Instructions to the Overseers of Road Parties', 23/5/1827, Box 4/1952.
- A.O.N.S.W., C.S.I.L., Lockyer to MacLeay, 25/11/1828, Box 4/2036.
- A.O.N.S.W., C.S.I.L., Simpson to MacLeay, Memorial of Lieutenant Percy Simpson to Governor Darling, 3/10/1829, Box 4/2140; A.O.N.S.W., 'Weekly and monthly road-gang reports', 1 Volume, 1827-1830, Vol. 9/2689.
- A.O.N.S.W., C.S.I.L., Correspondence from Warner, 1827, Boxes 4/1920, 4/1925, 4/1927, 4/1928, 4/1935, 4/1951; Warner to MacLeay, 12/3/1827, Box 4/1925.
- A.O.N.S.W., C.S.I.L., Warner to MacLeay, 2/4/1827, Box 4/1928.
- ibid.; A.O.N.S.W., C.S.I.L., Warner to MacLeay, 25/1/1827, Box 4/1920.
- Hirst 1983: 66-8.
- ibid.: 68.
- Swancott 1965.
- A.O.N.S.W., C.S.I.L., Wiseman to MacLeay, 6/10/1826, Box 4/1904; Wiseman to MacLeay, 4/9/1827, Box 4/2210.2; MacLeay to Wiseman, 25/9/1827, Box 4/2210.2.
- A.O.N.S.W., C.S.I.L., Warner to MacLeay, 3/7/1827, Box 4/1935; Simpson to MacLeay, 30/1/1831, Box 4/2095; Simpson to MacLeay, Memorial of Lieutenant Percy Simpson . . . , 3/10/1829, Box 4/2140.
- A.O.N.S.W., C.S.I.L., Lockyer to MacLeay, 'Code of regulations for the guidance and conduct of the Road Department', 25/6/1828, Box 4/1984.
- Colonial Circular, Sydney, 10/9/1832 in *Convict discipline* 1977: 23.
- A.O.N.S.W., C.S.I.L., Wilford to MacLeay, 13/10/1827, Box 4/1950.
- A.O.N.S.W., C.S.I.L., Wilford to MacLeay, 1/12/1827, Box 4/1956.
- A.O.N.S.W., C.S.I.L., Ensign Henry Reynolds to MacLeay, 16/5/1831, Box 4/2108.
- Byrne 1848: 150.
- A.O.N.S.W., C.S.I.L., Lockyer to De la Condamine, 29/12/1828, and enclosure, 'Circular to overseers', 15/1/1829, Box 4/1984; C.S. to S.R.B., MacLeay to Lockyer, 2/1/1829, Box 4/3934; *H.R.A.*, 15: 647, Darling to Murray, 27/7/1830, sub-enclosure No. 4; 'Weekly and monthly road-gang reports'.
- H.R.A.*, 15: 318, Twiss to Darling, 6/1/1830; A.O.N.S.W., C.S.I.L., Lockyer to De la Condamine, 29/12/1828, and enclosure, 'Circular to overseers', 15/1/1829, Box 4/1984; *H.R.A.*, 15: 647, Darling to Murray, 27/7/1830, sub-enclosure No. 4; Colonial Circular, 10/7/1832, in *Convict discipline* 1977: 23.
- A.O.N.S.W., C.S.I.L., Lockyer to Deputy Commisary General, 24/9/1828, Box 4/1984; C.S. to S.R.B., MacLeay to Lockyer, 2/1/1829, Box 4/3934; C.S.I.L., Wiseman to MacLeay, 2/7/1829, Box 4/2037; Wiseman's huts are mentioned in the *New South Wales Calendar and Directory*, 1832, and shown on G.B. White's 'Survey of the New North Road from the Hawkesbury to the Reserve of Wollombi', April 1831, A.O.N.S.W. map 5036. An archaeological report on the remains appears in Karskens 1985: 536.
- A.O.N.S.W., C.S.I.L., Lockyer to MacLeay, 15/8/1828, Box 4/1989; an account of the huts in which the convicts were housed and of the development of road-gang accommodation, is given in Karskens 1984.
- ibid.
- A.O.N.S.W., C.S.I.L., Wilford to MacLeay, 17/5/1827, Box 4/1932.
- A.O.N.S.W., C.S.I.L., Lockyer to De la Condamine, 29/12/1828, enclosure, 'Circular to overseers', 15/1/1829, Box 4/1984.
- A.O.N.S.W., C.S.I.L., MacLeay to Lockyer, 20/11/1828, Box 4/2014; John Jenkins Peacock to MacLeay, 7/7/1829, marginal note re Wiseman's area of supply, Box 4/2037.
- Therry 1863: 120.
- A.O.N.S.W., S. to S.G., Simpson to Mitchell, 5/6/1830, Box 2/1579.

52. It has only been possible in this paper to give a very brief overview of the types of masonry, the methods of construction and the present location and dimensions of the retaining walls. Full details appear in Karskens 1985.
53. Dobson 1877: 287–94; Tomlinson c. 1880: Vol. 6, 239.
54. Snecking is the irregular shaping of stone, for example in an L-shape, to correct and straighten the courses.
55. A.O.N.S.W., C.S.I.L., Warner to Dumaresq, 28/4/1828, Box 4/2011.1.
56. A.O.N.S.W., 'Weekly and monthly road-gang reports', Simpson to Mitchell, 'Report of the Assistant Surveyor at Lower Portland Head for March 1830', Vol. 9/2689.
57. Extant bridges occur at 51.0km and 52.9km north of Baulkham Hills; 0.57km, 17.3km, 35.9km and 38.6km north of Wisemans Ferry; and 4.8km north of the Mt Manning junction.
58. A.O.N.S.W., S. to S.G., Finch to Mitchell, 23/6/1830, Box 2/1535.
59. A.O.N.S.W., S. to S.G., Finch to Mitchell, 6/10/1829, Box 2/1535.
60. A.O.N.S.W., C.S.I.L., Lockyer to MacLeay, 'Code of regulations for the guidance and conduct of the Road Department', 25/6/1828, Box 4/1984.
61. A.O.N.S.W., C.S.I.L., Reynolds to MacLeay, 16/5/1831, Box 4/2108.
62. A.O.N.S.W., C.S.I.L., Wilford to MacLeay, 22/5/1827, Box 4/1952; Lockyer to Deputy Commissary General, 24/9/1828, Box 4/1984; *H.R.A.*, 14: 69; Darling to Huskisson, 28/3/1828.
63. A.O.N.S.W., S. to S.G., Finch to Mitchell, 5/6/1830, Box 2/1535; Dulhunty to Mitchell, 1/3/1833, 9/5/1832, Box 2/1532.
64. Hirst 1983: 94.
65. A.O.N.S.W., Weekly and monthly road-gang reports, Vol. 9/2689.
66. An account of the various aspects of road construction is given in Karskens 1985b.
67. Hirst 1983: 69.

BIBLIOGRAPHY

Published sources and theses

- BACKHOUSE, J. 1843. *A narrative of a visit to the Australian colonies*, Hamilton, Adams and Co., London.
- BAIRSTOW, D. 1985. The Castlemaine and Great Northern Breweries, Newcastle, New South Wales, *Australian Journal of Historical Archaeology* 3: 70–78.
- BYRNE, J.C. 1848. *Twelve years wandering in the British colonies from 1835–1847*, 2 vols, London.
- Convict discipline 1833: A facsimile of the rare Colonial Circulars Nos 34–48 and other related documents*, 1977, Gryphon Books, Melbourne.
- DEETZ, J. 1977. *In small things forgotten: The archaeology of early American life*, Anchor Books, New York.
- DOBSON, E. 1877. *Pioneer engineering: A treatise on the engineering operations connected with the settlement of waste lands in new countries*, London.
- DUMARESQ, (CAPTAIN) W.J. 1827. 'A visit to Wollombi and Cummaroy', a series of eight letters published in the *Australian* under the pseudonym 'X.Y.Z.', 24 August to 17 October 1827.
- GLASSIE, H. 1975. *Folk housing in Middle Virginia: A structural analysis of historic artifacts*, University of Tennessee Press, Knoxville, Tennessee.
- HARRIS, A. 1847. *Settlers and convicts or recollections of sixteen years' labour in the Australian backwoods by an emigrant mechanic*, G. Cox, London.
- HIRST, J.B. 1983. *Convict society and its enemies: A history of early New South Wales*, George Allen & Unwin, Sydney.
- Historical Records of Australia*.
- HUTTON-NEVE, M. 1978. *The forgotten valley: A history of the MacDonald Valley and St Albans*, North Sydney.

ISAAC, R. 1982. *The transformation of Virginia 1740–1790*, University of North Carolina Press, Chapel Hill.

JERVIS, J. 1930. The Great North Road, *Journal of the Royal Australian Historical Society* 16: 102–11.

KARSKENS, G. 1982. 'As good as any in England': The background to the construction of the Great North Road, *Journal of the Royal Australian Historical Society* 68 (3): 193–204.

KARSKENS, G. 1984. The convict road station site at Wisemans Ferry: an historical and archaeological investigation, *Australian Journal of Historical Archaeology* 2: 17–26.

KARSKENS, G. 1985a. 'The grandest improvement in the country', an historical and archaeological study of the Great North Road, N.S.W., 1825–1836. M.A. thesis, University of Sydney.

KARSKENS, G. 1985b. The construction of the Great North Road, N.S.W., 1826–1836, *Journal of the Institution of Engineers—Multi-disciplinary*, GE9 (2): 102–110.

KERR, J.S. 1984. *Design for convicts: An account of design for convict establishments in the Australian colonies during the transportation era*, Library of Australian History, Sydney.

MACLEHOSE, J. 1839. *Picture of Sydney and strangers' guide in N.S.W. for 1839*, J. Maclehorse, Sydney.

McNICOLL, R.R. 1977. *The Royal Australian Engineers 1835–1902: The Colonial Engineers*, Canberra.

MITCHELL, (MAJOR SIR) T.L. 1839. *Three expeditions into the interior of Australia*, 2 vols, T. and W. Boone, London.

New South Wales Calendar and Directory, 1832.

PARKES, W.S. 1968. *Village on the Wollombi: Millfield 1825–1968*, Cessnock.

ROYAL ENGINEERS CORPS, 1837. *Instructions [A-D] for Assistant Engineers [re construction and repair of roads and bridges. Issued by command of the Governor of N.S.W. by the Commanding Royal Engineer. With memorandum re employment of convicts, 20 October 1837]*, Sydney.

SHAW, A.G.L. 1966. *Convicts and colonies: A study of penal transportation from Great Britain and Ireland to Australia and other parts of the British Empire*, Faber & Faber, London.

SWANCOTT, C. 1965. *Wiseman's Ferry*, Central Coast Printery.

THERRY, R. 1863. *Reminiscences of thirty years' residence in New South Wales and Victoria*, London.

TOMLINSON, C. n.d. [c. 1880]. *Cyclopaedia of useful arts and manufactures*, 9 vols, London.

TUCKER, J. 1933. 'Historic Paterson, an interesting retrospect, days of pioneers', *Maitland Mercury*, 7 January 1933.

WHITE, C. 1889. *Convict life in N.S.W. and Van Diemen's Land*, C. & G.S. White, Free Press Office, Bathurst.

Unpublished sources

1. *Manuscripts held by the Archives Office of New South Wales*

Colonial Secretary

Indexes to registers of letters received, 1826–1834.

Registers of letters received, 1826–1834.

In-letters, 1826–1834 and special bundles.

Copies of letters to Surveyor of Roads and Bridges, 1829–1832.

Copies of letters to the Surveyor General, 1826–1833.

Surveyor General

Copies of letters to Colonial Secretary, 1828–1835.

Copies of letters to private persons and officials (including surveyors), 1828–1836.

Register of letters to Surveyor General from private individuals and officials (including surveyors), 1822–1836.

Letters from private individuals and officials (including Assistant Surveyor L.V. Dulhunty; Assistant Surveyor H. Finch; the Surveyor of Road and Bridges, J. Nicholson; Assistant Surveyor P. Ogilvie; Assistant Surveyor P. Simpson).

Surveyor of Roads and Bridges

Letters received from the Colonial Secretary, 1826–1829.

Weekly and monthly road-gang reports, 1 volume, 1827–1830.

2. *Manuscripts held in the Mitchell Collection, Public Library of New South Wales*

N.S.W. Colonial Secretary—Returns of the Colony, 1826–1836.