

Chapter Four

Construction of the Western Road

This chapter documents and explains the distribution and the organisation of work on the road. It demonstrates the ‘on ground’ manifestations of the tensions and conflicts, discussed in Chapters Two and Three, which were confronted by the assistant surveyors in the course of fulfilling their responsibilities. It facilitates the identification of factors which caused construction of the Western Road to extend far longer than expected and throws light on questions surrounding the competency of the road builders.

Distribution and Organisation of the Workforce

In April 1830, the focus of work on a western descent from the mountains was still Mt York. No.6 Iron Gang was at the top of the mount while at the bottom, No. 2 Iron Gang had left off forming the road to repair that near Collit’s Inn. Further west, a bridge party was rebuilding the washed away River Lett bridge. Repairs, such as these to relatively recent work, constantly retarded the general progress of the road during the entire construction period.¹ **[Figure 4.1]**

After the discovery of the Mt Victoria descent, Mitchell planned new convict stations for sites where cutting was required or bridges needed construction. These were to be given initial priority in the road building program. Seventy men were to be stationed at Cox’s River, near Mt Walker, where the No. 2 Stockade was later established. Twenty were to construct the road around Honeysuckle Hill under an assistant overseer with the principal overseer visiting every couple of days. The remainder

1 SRNSW: Surv. Gen., Road Gang Reports, 1827-1830, CGS 13792, 9/2689, R.590.

were to work on constructing the road on either side of the Cox's River crossing. The 30 strong Bridge Party on the River Lett was to be strengthened to 50 and part employed in making the road while the remainder constructed the bridge. Another gang of 50 was to be placed under Stoney Range about 12 miles from Bathurst. In total, 190 additional men were required. While the River Lett bridge was to be of timber, at Farmer's Creek and Cox's River Mitchell initially proposed that stone piers be erected over which wooden beams could be placed until it was possible to construct stone arches.² [Figures 4.2, 4.3 and 4.4]

This distribution of works was aimed at efficiently deploying and managing the workforce. However, variations of numbers in gangs throughout the 1830s ensured that it was rarely at full strength or deployed with optimal efficiency. Prisoners moved in and out of the gangs according to sentencing provisions or through transfers to reward behaviour as part of penal policy. Simultaneously, task and labour requirements arising from the road building task were constantly variable. Adding further to the difficulties, penal classification provisions, in the separation of classes of prisoners, frequently ran counter to their most effective deployment. In many instances the most efficient utilisation of these gangs was in a complementary capacity in close proximity. For example, the less mobile ironed gangs could have been more productive if supported by the freer moving road parties, but the requirement to maintain the separation of these two classes of prisoners prohibited the arrangement. Unhelpfully, the security provisions of an inflexible military guard were another invariable and, as will be discussed below, further impeded efficiency.³

In the course of Mitchell's realignment of the route from Mt York, No.1 Iron Gang was moved from O'Connell's Plains to Mt York and then to Mt Victoria. With an average strength of 50 men, No.1 Iron Gang was often well below the maximum

2 Mitchell to Alexander Macleay, 23 June 1830, *HRA*, Series I, Vol. XVI, Library Committee of the Commonwealth Parliament, Sydney, 1923, pp.135-137; SRNSW: Surv. Gen., Road Gang Reports, 1827-1830, CGS 13792, 9/2689. R.590.

3 SRNSW: Surv. Gen., Road Gang Reports, 1827-1830, CGS 13792, 9/2689. R.590.

strength of 60 men specified under Lockyer's regulations of 1828, referred to in Chapter Three. It was eventually merged with No. 2 Iron Gang under Overseer George Plumley and joined No.6 Gang at Mt Victoria when work finally settled there. Throughout 1830 the No. 20 Road Party, under Overseer George Williamson and from September, Michael Hartney, was stationed at Pulpit Hill, on the plateau, prior to the descent from the mountains. Its average strength over the year was 75 men, but between February and May had a complement of 107.⁴ This was significantly higher than the 50 men recommended by Lockyer, further complicating the supervisory and construction process. Variations occurred as men's sentences expired or were extended, or illness or promotion resulted in transfers. When operating as intended the system allowed convicts to improve their position.

Assistant Surveyor Elliot had taken over the supervision of road works, from Lieutenant Kirkley in January 1830, when responsibility was removed from the military. However, after a mere eight months without military supervision, he was instructed by the Governor in late September to assemble Nos.1, 2 and 6 Gangs at the foot of Mt Victoria:

...as a Military Guard is on the march to take charge of them - this may probably interfere with their working, but this cannot be remedied under present circumstances.⁵

This instruction coincided with a general increase in regulations concerned with securing prisoners working on the roads and occurred within the context of Governor Darling's capitulation to Mitchell on the Mt Victoria descent discussed in Chapter Three. The decision was part of the Governor's strategy to curb Mitchell's power. Yet, despite the urgency of this instruction, in what came to typify decisions on the

4 SRNSW: Surv. Gen., Road Gang Reports, 1827-1830, CGS 13792, 9/2689. R.590.

5 SRNSW: Col. Sec., Copies of Letters Sent to Surv. Gen., 20 May 1830 - 7 Oct 1830, 4/3908, p.483. R.3015; Surv. Gen., Copies of Letters Sent to Governor, Private Individuals, Col. Sec. & Surveyors, 4/6909, p.240. R.2821.

road, the detachment did not arrive to take up guard duties at Mt Victoria until March 1831, some six months later.⁶

In March 1832, while the first huts were under construction at Cox's River, a bridge party of 83 men under Overseer Charles Hewitt was at Hassan's Walls. West of the stockade site, toward Bathurst, No.45 Road Party, consisting of 55 men under Patrick Casey was situated at Stoney Range and No.44 Road Party, made up of 47 men under George Emmerton was at Honeysuckle Hill. The iron gangs, under John Barker, George Morley and William Bruton, were still at Mt Victoria. **[Figure 4.5]** These ranged in size from 65 to 97 men with un-ironed support of seven per gang. With completing Victoria Pass being Mitchell's first priority, work did not begin on the line of road above Cox's River until September 1832, more than two years after first directed. Work on the road was interrupted continuously by the need to construct and maintain facilities associated with the policing and welfare of the convict gangs. The men had to be apportioned according to the demands of the road work, the requirements of the accommodation sites and security provisions.

Competing Objectives - Penal Welfare Concerns vs Road Making

The construction of the Western Road was a balancing act, mediated by cost, which compromised construction, welfare and penal outcomes. A cycle of numerous re-workings of sections of road previously thought complete and constant maintenance of penal housing and security typified the works. The expenditure of labour on penal infrastructure was necessary due to their location in an area that was sparsely and only recently settled by Europeans. By comparison, in Great Britain, roads were often constructed over those built by the Romans, through populated landscapes dotted with villages and towns that had seen the use of wheeled transport for at least 2,000 years. Compounding the conflict between the road making and penal ideologies on the Western Road there were problems of isolation and, in European

6 SRNSW: Col. Sec., Copies of Letters to Surveyor of Roads and Bridges, 3 Jan 1831 - 31 Mar, 1832, , pp. 40; 43. R.3002.

terms, a raw, rugged terrain. The substantial investment in penal welfare infrastructure is evident at Site A2 of the archaeological investigation at No. 2 Stockade Cox's River. This site consists of extensive artificial terraces behind a stone retaining wall, created to support the construction of the hospital, discussed more fully in Chapter Five. The construction of these substantial structures was undertaken by convict labour, intended to be employed on road works.[**Figures 4.6, 4.7 and 5.8**]

It is not surprising that such large investments of labour prompted complaints by Mitchell, who was anxious to see the road constructed. Further adding to his irritation, he found that No. 2 Stockade had '...been placed precisely on the line of road as it would approach the bridge to be made over Cox's River, so that it must be removed before the work there can be completed'.⁷ Invariably the assistant surveyor, the authority 'on the ground', was held responsible for any shortcomings either in the road building process or penal infrastructure development.

In an April 1832 submission to reform work practices, Surveyor General Mitchell drew on issues that were part of the broader transportation debate in Britain. If a sentence to work on the roads was, in effect, a sentence condemning a prisoner to hard labour, then it was hardly just, argued Mitchell, that some should be allowed to do nothing while others were worked hard. In his opinion, the superintendence of the system was extremely defective in certainty and equity in punishment. At the time, gangs were placed under an overseer who had an assistant overseer and three unpaid second assistants under him. As the principal overseer was frequently absent from the gang because he had to attend court, take a prisoner to hospital, collect tools or gunpowder from headquarters, or arrange the slaughtering and salting of meat, the place of the assistant overseer was frequently filled by a second or unpaid assistant who was a prisoner enjoying an exemption from work. The second assistants were

7 SRNSW: Col. Sec., Report Relative to the Road to Bathurst, 21 October 1833, Papers Regarding Bathurst and Southern Roads, 1827-1849, SZ 854, p.112. COD 207.

prisoners who, in Mitchell's view, used the position to avoid work and acted as sentries to warn the parties and gangs of the arrival of an officer. Inequities were also evident in the number of prisoners exempted from hard labour who worked as delegates, watchmen, stockkeepers, bullock drivers, hut keepers, cooks and messengers. There was the counter penal argument, however, that such positions offered the opportunity to reward good behaviour and provided an incentive to prisoners to reform.⁸

At the time there were 1200 men out of irons and 400 in irons working on the roads of New South Wales. These were intended to be distributed among 26 road parties with an average of 43 men, five bridge parties with 15 members and seven ironed gangs of 57 men each. [Table 4.1] Mitchell recommended increasing the size of road parties to 66, but reducing their overall number to 15, and establishing six bridge parties of 33 and five iron gangs of 80. Mitchell made a case for the permanent allocation of a core of good workers to the gangs through payment or the offer of early release arguing that '... the general efficiency of the whole would be much increased'. He also mooted the implementation of exactly measured task work related to time on the road. As each task was completed it could be credited against the sentence. He lamented, however, that while more was likely to be achieved at less cost it would '... require an efficiency in the superintendence which I am sorry to say cannot be counted on at present.'⁹

Mitchell wished to increase productivity by increasing the pay of the overseers and by reducing the necessity of their being away from the gangs to get rations and escort prisoners to attend court or hospital. He proposed the establishment of hospital huts at camps and more frequent supervisory visits by surveyors. The provision of supplies and tools to all out-gangs was to be the sole responsibility of an overseer and bullock driver, who would distribute them from a central location. At this time,

8 SRNSW: Surv. Gen. Copies of Letters Sent to Col. Sec., 7 Jun 1831- 17 Nov 1832 , 4/5398, pp.367-372. R.2839.

9 Ibid.

two cooks were part of each gang and delegates from the gang inspected meat supplied by a contractor and accepted or refused it depending on its quality. Another delegate watched the cooks prepare food to ensure that rations were not pilfered. Mitchell recommended that contractors supplying meat should be required to deliver it to the camps, rather than the existing situation where there was a constant movement of prisoners on the roads. He recommended incentives for good behaviour, with time off and the issuance of tickets of leave to motivate work.¹⁰

Mitchell was attempting to organise supervision in the road gang system more effectively and it was within this political and administrative context that No. 2 Stockade Cox's River was established. The implementation of some of these recommendations is evident in the stockades and informed the administration of the facility. For example, Overseers James Thorpe, John Powell, Edward Hawkins and George Doyle took up the option to stay on, after the receipt of their ticket-of-leave, when Mitchell's incentive program for skilled workers was implemented. At No. 2 Stockade, an extensive commissariat area, equipped with a blacksmith shop for the repair and supply of equipment, was established in addition to a hospital, butchery and bakery. There was still considerable movement between the work stations and No. 2 Stockade.¹¹

In 1832 the Bathurst area was the largest road branch department. It comprised seven overseers, 15 assistant overseers, seven messengers and stockmen, 14 cooks and delegates, a clerk, seven water carriers, seven toolmen, two watchmen, two attending on the military, and three attached to the commissariat stores. With ten in the hospital, there were 420 actually working on the road out of a total of 495 convicts. At Lower Portland Head there was a total of 226, at Newcastle 223, Argyle 250 and

¹⁰ Ibid.

¹¹ SRNSW: Col. Sec., Copies of Letters Sent to Surv. Gen., Jan 1835 - Apr 1836, 4/3917, p. 505. R.3018; Register of Letters Received from Roads Branch, 1833-1836, 1846-1850, 2/1417. R.2804.

Parramatta 447. The Western Road between the mountains and Bathurst was clearly the priority.¹²

The Role and Duties of the Surveyors

The construction of a viable road from Sydney to the western plains occupied some of the best engineering and surveying minds in the colony in the 1830s. However, the work marred the careers of the intrepid and multi-skilled surveyors, who, in tackling the task, were expected to serve as engineers, magistrates, architects, managers and accountants. The exigencies of the administration, of security and military requirements and of convict resistance together with conflict between the surveying department and Governors Darling and Bourke, all conspired to thwart endeavours to expedite construction. The work of the assistant surveyors was all-consuming, exhausting and likely to have provided little satisfaction as they suffered the criticism of all and sundry from the Governor down.

John Nicholson held the position of Surveyor of Roads and Bridges for almost two years from July 1830 when Darling removed this responsibility from Mitchell. He was based at Parramatta and had overall responsibility for the welfare of the assistant surveyors as well as particulars at convict work sites throughout the entire New South Wales road network. In this capacity Nicholson undertook lengthy tours of inspection on horseback, working and sleeping en route under canvas. His reports written from the road provide a first hand account of the realities of his own responsibilities, and an impression of life on the road. For example, in September 1831, he was called to explain to the Governor why lamps had not been erected at the corners and in the centre of the square of huts at Mt Victoria. This neglect had led, according to the senior military officer there, to the escape of two prisoners. On another tour in April 1832, he prepared drawings for the repair of the wall at Mt Victoria, which had partly collapsed because of neglect of the upper drainage, and

12 SRNSW: Surv. Gen., Letters Received from Surveyors, Nicholson, 14 Feb 1832 - 22 Dec 1824, 2/1562, p.25. R. 3080.

instructed Assistant Surveyor Lambie and the overseer on how to reconstruct it. Nicholson also accompanied Lambie, who was in poor health, to Bathurst to see a doctor and en route examined the progress of works and provisions of the Bridge Party at the River Lett, of the No.45 and No. 20 Road Parties at No. 2 Stockade and of the No.44 Road Party at Honeysuckle Hill.¹³ With the return of administrative responsibility for roads to Surveyor General Mitchell and the abolition of the position of Surveyor of Roads, Nicholson became an Assistant Surveyor. He replaced Lambie and took up his post at the surveyor's depot at Mt Clarence in mid 1832.¹⁴ **[Figure 3.8]**

In July 1832, Assistant Surveyor Nicholson took levels and decided to alter the cutting at Mt Victoria. A jack of all trades, he also spent time fixing and adjusting the theodolite and in his capacity as magistrate held court on five separate days across the month. Lambie was still in the region and Nicholson again accompanied him to the doctor at Bathurst, inspecting the Nos.44 and 45 Road Parties and the Bridge Party over three days while en route. On his return to Mt Clarence his attention was re-focussed on Mt Victoria, directing the construction of timber work to secure the bank where the wall had given way. He later visited the No. 20 Road Party and the Bridge Party.¹⁵ It is a routine of almost constant movement up and down the line of road, camping where necessary for as long as necessary.

In mid August, Nicholson reported that bad weather had delayed the completion of the Mt Victoria descent, but that it was soon expected to be passable. A portion of a cutting on the Sydney side was reported to have been 14 feet wide but in reality, parts were less than 12 feet wide and had to be reworked. Nicholson expected that a move to the new focus of work at Cox's River was imminent, but shortages of tools and equipment made accurate estimates for a completion date difficult. With the

13 SRNSW: Surv. Gen., Letters Received from Surveyors, Nicholson, 14 Feb 1832 - 22 Dec 1824, 2/1562, p.48. R. 3080.

14 SRNSW: Assistant Surveyor Nicholson to Surv. Gen. 16 July 1832, Surv. Gen., Letters Received from Surveyors, Nicholson, 14 Feb 1832 - 22 Dec 1834, 2/1562, pp.152-154, R. 3080.

15 SRNSW: Surv. Gen., Letters Received from Surveyors, Nicholson, 14 Feb 1832 - 22 Dec 1834, 2/1562, p.164. R.3080.

military requiring the ironed gangs to be worked in groups of 25, construction of a culvert which required only six men, left 19 unemployed, and kept progress to a snail-like pace. He intended to adapt to this requirement by using un-ironed men to work in association with the ironed gangs.¹⁶ However, this mixing of ironed and un-ironed men, was entirely undesirable from a penal reform perspective; the separation of various classes of prisoners had to be strictly maintained. This tension between the ideal and the “on ground” necessity was a constant of the Western Road system and was a practical impediment to the works.

From September 1832, Nicholson’s focus shifted to Cox’s River, where he commenced work on the line of road beyond the river. Following an inspection of the marked line of trees, he spent the next five days levelling and calculating descents and cuttings. This very practical, ‘hands on’ road design work was interspersed with inspections of the Bridge Party and the No. 20 and No.44 Road Parties along the line of road and at Mt Victoria where he also held court. He returned every few days to Cox’s River to examine the descents by level, set out the side cuttings and issue directions on the preparation of the stockade. Other duties included preparing the accounts, paying the overseers and overseeing the commissariat rations.¹⁷

Nicholson’s daily journal for the months of October and November 1832 indicates a similar routine, with the focus of his attention varying from Cox’s River to Mt Victoria. He directed and inspected the work and associated convict camps as he travelled the line of road.¹⁸ He also accompanied Governor Bourke on a tour of inspection along the new line, along Major Lockyer’s line, of the new No. 2 Stockade, and potential sites for a bridge over the Macquarie River at Bathurst. Mt Victoria pass was officially opened. However, despite the planned imminent transfer

16 SRNSW: Surv. Gen., Letters Received from Surveyors, Nicholson, 14 Feb 1832 - 22 Dec 1834, 2/1562, pp.170-171. R. 3080.

17 SRNSW: Surv. Gen., Letters Received from Surveyors, Nicholson, 14 Feb 1832 - 22 Dec 1834, 2/1562, p.176. R. 3080.

18 By this time the road parties had been renamed to No.9, No.10 and No.11 from No. 20, No.43 and No.44.

of the ironed gangs to Cox's River, from Nicholson's point of view, Mt Victoria was still a demanding work site. A recent robbery in the area required an investigation and necessitated a review of security at the stockade and at the temporary hospital there. After extensive preparations, Nicholson finally moved the iron gangs to Cox's River on Saturday the 17th November 1832. The following week tools and stores were transferred across and from then on court hearings were conducted on average twice a week at Cox's River.¹⁹ [Figure 4.8 and 4.9]

Further Impediments to Progress on the Western Road

A major impediment to progress on the road was the continued work on No. 2 Stockade after its occupation by the ironed gangs. Nicholson complained that the 'accommodation and discipline of convicts ... has engaged so much of his attention since the removal of the stockade to Cox's River' that his other duties were being neglected.²⁰ Further delays were annually experienced when, for six weeks in December and January, men from the road parties assisted with the harvest.²¹ Nicholson also had to contend with more mundane intervention such as the Commissariat Clerk at Cox's River commandeering the bullock teams whether it was convenient or disruptive to the road works or not.²²

Early in January 1833 Nicholson was planning the bridge for Bathurst, reporting on the proposed site and locating materials and a quarry with suitable stone. Two special enquiries, one into the escape of a prisoner and another into the behaviour of No.10 Road Party and the Bridge Party, were held. In response to official complaints regarding convict welfare and the accommodation situation, Nicholson also spent time at the stockade 'enacting regulations'. As prisoners returned from assisting with the harvest later in the month, he was responsible for their deployment and the re-

19 SRNSW: Surv. Gen., Letters Received from Surveyors, Nicholson, 14 Feb 1832 - 22 Dec 1834, 2/1562, p.179. R. 3080.

20 SRNSW: Surv. Gen., Copies of Letters Sent to the Col. Sec., 25 Nov 1833-21 Feb 1835, 4/5400, p.38. R.2839

21 SRNSW: Surv. Gen., Letters Received from Surveyors, Nicholson, 14 Feb 1832 - 22 Dec 1834, 2/1562, pp.356-358. R. 3080.

22 SRNSW: Surv. Gen., Copies of Letters Sent to Col. Sec., 20 Nov 1832-23 Nov 1833, 4/5399, p.262. R.2839.

ordering of work to accommodate them. Nicholson reported that temporary, but strong, bridges were required over Cox's River, Farmer's Creek and elsewhere along the line westward during the construction process. He complained that he was so hampered by the lack of tools, carts and bullocks that he could not see any possibility of releasing men for the construction of the new bridge at Bathurst.²³ Despite the extended work at Mt Victoria, part of the wall again gave way and in mid January 1833 Mitchell proposed that an ironed gang from the stockade be moved back to Mt Victoria to 'perfect' the work. As discussed in Chapter Three, Nicholson was indeed dismayed, as he had partly dismantled the Mt Victoria Stockade to repair the one at Cox's River.

It was not until the end of March 1833, that Nicholson could report that No.11 Road Party, after extensive work on No. 2 Stockade, was again engaged on the road, building an ascent to the bridge across Farmer's Creek. As the weather cooled, he supervised the change-over from summer to winter clothing and blanket allocations for the gangs. In March 1833 there was an iron gang beyond the stockade where extensive cutting was required. **[Figure 3.4]** Early in the month Nicholson was engaged taking levels in that area so that the line could be extended. Work was also continuing near the River Lett Bridge, as were repairs to the stockade. Later in the month he undertook the levelling of the descent to the bridge at Bowen's Hollow.²⁴ In April 1833 Perry, the Deputy Surveyor General, on instructions from a frustrated Governor Bourke was on a tour of inspection to set matters right at the No. 2 Stockade, where facilities were sub-standard. This will be discussed more fully in Chapter Five. Nicholson attended him inspecting and ordering work along the line. It was at this time that the new hospital was constructed under Perry's orders and probably under Nicholson's direct supervision.²⁵

23 SRNSW: Surv. Gen., Letters Received from Surveyors, Nicholson, 14 Feb 1832 - 22 Dec 1834, 2/1562, pp.207-208. R. 3080.

24 SRNSW: Surv. Gen., Letters Received from Surveyors, Nicholson, 14 Feb 1832 - 22 Dec 1834, 2/1562, pp.213; 241. R. 3080.

25 SRNSW: Report of the Daily Occupation of Assistant Surveyor John Nicholson in Charge of Road Parties in the Central District from 1st to 30th of April 1833, Surv. Gen., Letters Received from Surveyors, Nicholson, 14 Feb 1832 - 22 Dec 1834, 2/1562. R. 3080.

In response to pressures regarding the rate of progress of the road works Nicholson devised complex accounting procedures to be administered by the overseers in June 1833. These included counting barrow loads of materials and generally required them to measure the amount of work performed. The changes had no discernible impact on productivity and no records have survived of the system's implementation.²⁶

By October little progress had been made on the descent to Bowen's Hollow. The line had not been marked out by Mitchell and no work had been done between there and the Cox's River, where the iron gangs continued to work west of the river. Nicholson anticipated that on the imminent completion of that work, they would commence on the extensive wall formations required on the eastern side of the river. [Figure 4.10] No preparation had been made for the construction of the stone bridges for the Cox or Farmer's Creek, but Nicholson had been directed to proceed immediately with the bridge at Bathurst.²⁷

The End in Sight?

With the road far from completed, Nicholson continued to defend his performance into 1834. In mid January, the imminent construction of the bridges at "The Junction", ie., Cox's River and Farmer's Creek, was under consideration, but sawyers and bullocks were needed and suitable timber was only obtainable 'at a greater distance from the Stockade than it would be advantageous to send Men in irons' and the road parties were still at the harvest.²⁸ However, by 20 January 1834, while the new line of road was still not officially open for the mail cart, wool carts had passed through the cut at the Cox and the supply contractor was travelling between the Stockade and Bathurst weekly. The work between Cox's River and Solitary Creek was reputedly almost complete. Nicholson was expecting to place an

26 SRNSW: Surv. Gen., Letters Received from Surveyors, Nicholson, 14 Feb 1832 - 22 Dec 1834, 2/1562, pp.264-267. R. 3080.

27 SRNSW: Col. Sec., Papers Regarding Bathurst and Southern Roads, 1827-1849, SZ 854, pp.110-112. COD 207.

28 SRNSW: Surv. Gen., 18 Jan 1834 Letters Received from Surveyors, Nicholson, 14 Feb 1832 - 22 Dec 1834, 2/1562, pp.356-358. R. 3080.

iron gang on each of the bridges at the end of February and another iron gang to work eastward from Farmer's Creek to the old line. The remaining gang, after finishing between Farmer's Creek and the Cox's River, could pass up the entire line putting in cross drains and perfecting the banks.²⁹ Typifying the false hopes and expectations of the works, on 29 April 1834 the *Sydney Gazette* reported that:

No. 2 Stockade, at Cox's River is expected to be broken up in about six weeks. The chain-gangs will be escorted by the detachment of the 17th, now in charge of them, down to Parramatta where the latter will be relieved of such charge by the 4th, who will accompany the men to their projected quarters in the new country.

The reason for this grossly premature optimism is impossible to fathom. Iron gangs were still working from the stockade in late 1836 when responsibility for works was handed over to the Royal Engineers. The stockade also continued to provide hospital and commissariat facilities during this period and beyond.

In June 1834 Nicholson claimed that cutting through the necks at Cox's River, under orders from Mitchell, had delayed progress by four months but the road between Farmer's Creek and the stockade would be completed by the end of the month.³⁰ In August 1834, while little had been done on the descent to Farmer's Creek, the road between there and the stockade had indeed been completed. This line involved extensive buttressing similar to that at Mt Victoria. As usual there was a 'hitch'. In this instance a small watercourse had given way and repairs were required. **[Figure 4.11 and 4.12]** Stone for the two bridges was located some 2½ miles from the stockade and a pile engine needed to be sent from Parramatta for construction of the timber bridge over the Macquarie River at Bathurst. A small party detached from the River Lett had been taking up tree roots and filling ruts but nothing had been done on a new portion commencing about two miles beyond the River Lett. The gang based

29 SRNSW: Surv. Gen., Letters Received from Surveyors, Feb 1832-22 Dec 1834, Nicholson, pp.346-347.R. 3080.

30 SRNSW: Surv. Gen., Letters Received from Surveyors, Feb 1832-22 Dec 1834, 2/1526, pp.414-419. R. 3080.

there was forming the ascent from the river and repairing other portions damaged during wet weather. While the ascent was very good, a portion of very hard rock half way up still required 'a good deal of labour'. Another unfinished section was a platform located a mile further on. The descent to Bowen's Hollow had been satisfactorily formed, making the route easier to negotiate than 'the long heavy pull' which had been the alternative. Although the road from the Cox to Solitary Creek had been passable since January 1834, work on the 'neck' beyond the Cox was ongoing, despite earlier predictions of imminent completion. The banks were lowered on each side to prevent loose material falling on the road and this was used to metal and level the road at the turn. Further along, the road was 'excellent' except for occasional portions left unfinished. From the flat west of Honeysuckle Hill, toward Bathurst, little had been done in the formation of the road, although two substantial platforms made by the Bridge Party at Diamond Swamp were due to be completed. Mitchell planned to use three road parties to form this section. Drains had to be cut, gravel spread and Brown's Hill had to be tackled, with the road parties starting in different locations and converging on Badger Brush as the work was completed.³¹

About this time, the Austrian traveller and scholar, Baron Charles von Hugel gave a caustic description of the line of road from Mt Victoria. He found the descent to be good, but the road rapidly deteriorated to a wretched unsigned road with old and new tracks intersecting in all directions. He travelled 'expecting the carriage to be smashed to bits' as it negotiated the rocks, swamps and steep slippery slopes.³²

Mitchell's findings of April 1835 lend support to von Hugel's assessment. To Mitchell's chagrin, the road formed by the iron gangs had been rounded or barrelled in so unusual a manner and was so narrow that carriages were in danger of

31 SRNSW: Col. Sec., Special Bundles, Great Western Road, 1834-1845, 9/2686. Surv. Gen to Col. Sec, 12 August 1834.

32 Baron Charles von Hugel, *New Holland Journal*, November 1833- October 1834, Dymphna Clark (trans. and ed.) Melbourne University Press at the Miegunyah Press in Assoc. With the State Library of New South Wales, 1994, p.341.

overturning when passing. Stone had still not been quarried in preparation for the construction of bridges over Cox's River or Farmer's Creek as the quarries were found to be further from the stockade than the four iron gangs stationed there were allowed to walk. Mitchell had previously estimated that the distance was 2½ miles, well within the 3 mile limit.³³ A party of masons had been at Mt Victoria for nine months, during which time only the foundation of a buttress had been laid as 'the party there have been employed in erecting depot huts and cutting and preparing timber for wooden houses'.³⁴ Mitchell proposed that works proceed in the following manner:

- An ironed gang at a new station near the River Lett to make the road west under Hassan's Walls and also toward the stream.
- A separate quarry gang was to quarry stone for the two bridges with an ironed gang at the stockade to set and quarry the stone. Each gang was to consist of 75 men.
- The road party stationed just beyond Honeysuckle Hill (Thorp's) to form the road each way from that station.³⁵

As there was still a shortage of bullocks and the parties were diminished, he recommended their replenishment to at least 60 men each. At last, on 29 May 1835, Assistant Surveyor Lawrence Dulhunty, who was taking up Nicholson's position, reported that:

... the Ironed Gangs have performed all the work upon which they can be employed in the neighbourhood of the old stockade at Cox's River that is within the distance they are allowed to work from their station ... I know of no work that the Party retained at the old Stockade could

33 SRNSW: Surv. Gen., Copies of Letters Sent to Col. Sec., 21 Feb 1835-31 Dec 1835, 4/5401, pp. 69-72. R.2840.

34 Ibid.

35 Ibid.

with any advantage be employed upon unless the erection of the Bridges over Farmer's Creek and Cox's River.³⁶

David Lennox had inspected the sites at Cox's River and Farmer's Creek and reported that the plan for the bridge then under construction at Berrima would be suitable for both. Plans for the machinery required for the erection of these bridges were submitted by Lennox in July. Dulhunty suggested that the men in irons be moved to the recently completed stockade at Hassan's Walls.³⁷ This was a move that had been originally proposed in September 1834. In another example of an extraordinary inability to estimate the duration of the works, Hassan's Walls Stockade was not occupied until early 1836.³⁸

On 8 December 1835 Alexander Binning, the newly appointed Sub-Inspector of Bridges, Western Division, requested materials and men to build the two stone bridges over Farmer's Creek and Cox's River and reported (again) that the road at Cox's River was almost completed. He suggested moving 70 men from Cox's River stockade to Hassan's Walls as soon as possible, although some men were still required at Cox's River to work on the approaches to the bridges.³⁹ Bastard free stone, suitable for piers and side walls and parts where neatly squared stone was not required, was found within half a mile of Farmer's Creek. Stone for the arch and parapet walls was obtainable from the freestone quarry, some 2½ miles from the bridges. Typically, Mitchell promoted the use of stone over timber, but the Governor was less enthusiastic, presumably because of cost.⁴⁰ In 1859 the bridge over the River Cox was described as a 'Queen truss bridge on piers with stone bases and

36 SRNSW: Surv. Gen., Register of Letters Received from Roads Branch, 1833-1836, 1846-1850, 2/1417. R.2804.

37 SRNSW: Dulhunty to Deputy Surveyor General, Surv. Gen., Letters from Surveyors, Dulhunty, 1832-1837, 2/1532, R. 3063.

38 SRNSW: Surv. Gen., Letters Received from Surveyors 10 September 1834. R. 3080; Surv. Gen., Register of Letters Received from Roads Branch, 1833-1836, 1846-1850, 2/1417. R.2804.

39 SRNSW: Surv. Gen. Letters Received from Assistant Engineer and Sub-Inspector of Roads, 2/1720; Col. Sec., Special Bundles, Roads and Bridges 1835-1851, 2/1855.

40 SRNSW: Col. Sec. Special Bundle, Roads and Bridges, 1835-185, 2/1855.

wooden superstructure of two spans of 63 feet and two of 20 feet each the road is 12 feet wide and six feet above flood level. Total length 170 feet'.⁴¹

At the end of 1835 the 'boxes'⁴² to accommodate the gangs at Bowen's Hollow were also in place. The Surveyor General recommended that the men be employed on constructing a bridge there and forming the road on the higher level under the supervision of Alexander Binning, who was stationed there. Remnants of this bridge are still evident beside the old line of road as it ascends the hill above Bowen's Hollow. The centring was ready for the bridge at Farmer's Creek. Further along, beyond Solitary Creek, Mitchell thought the road around Honeysuckle Hill required widening. Beyond the hill, side cutting was required for some miles. A road party at Badger Brush was proceeding toward the hill, but a coat of broken stone was needed, to prevent it deteriorating in wet weather. Another road party was at Livingstone's engaged in forming the ascent and descent of two long hills. One Bridge Party was at Bathurst Bridge and another was just beyond Diamond Swamp. The road was far from complete and a number of other works were also necessary. Work continued at Mt Victoria.⁴³

The Royal Engineers Takeover Road and Bridge Construction

Works were on-going over the following year and in August 1836, Dulhunty requested that the depleted iron gangs at Bowen's Hollow and Hassan's Wall be brought up to strength from the iron gang at Cox's River, where the road was 'tolerably good'.⁴⁴ No details are provided of the works the ironed gangs at Cox's River were involved in. Yet, in January 1834, 2½ years earlier, it had been pronounced that work there was 'almost' completed. It clearly was not. In late 1836 Bourke transferred responsibility for construction of roads and bridges from the Surveyor General to the Royal Engineer and announced that the only road gangs to

41 Captain Martindale, Report ... Western Road ... 1859. ML SLNSW: Q 339.5/N

42 Specifics of housing will be explained in Chapter Five.

43 SRNSW: Surv. Gen., Copies of Letters Sent to Col. Sec., 21 Feb 1835 - 31 Dec 1835, 4/5401, pp.451-453. R.2840.

44 SRNSW: Surv. Gen., Letters Rec. From Surveyors, Dulhunty, 1832-1837, 2/1532, p. 350. R.3063.

be used in the future would be those in irons. He reported to Lord Glenelg, Secretary at the Colonial Office, that:

... there are now about one thousand convicts in irons divided into sixteen gangs working under the control of military officers under sentences to labour varying from one to three years. Their labour is as efficient as any forced labour can ever be and without tyranny or cruelty their discipline, submission and safe custody are fully secured. ... I have determined to reduce the road parties from the 1 proximo leaving no gangs on the roads but those under military superintendence ... I thought it expedient at once to reduce along with the road parties the overseers and inspectors and to transfer the charge of constructing and repairing roads and bridges from the Surveyor General to the Royal Engineer.⁴⁵

With the loss of the records of the Royal Engineers in the Garden Palace fire of 1882 there is little surviving evidence of management policies on the road from that date. It is known, however, that the Cox's River Stockade was being wound down. Although the Commissariat Department was still located there and the lock up was still in use, the court moved, after the construction of Hartley Courthouse in 1837, to the Vale of Clwydd.⁴⁶ At the beginning of 1837, only 32 gang members remained at Cox's River; of these 12 were out of irons working as servants. The remainder had been transferred to Hassan's Walls, Bathurst and Bowen's Hollow, which had become the largest establishment, with 81 men in irons.⁴⁷

Conclusion

Surveyor General Mitchell to whom the Assistant Surveyors were answerable had a vision for the Western Road and the engineering skills to see it implemented. But he was unable to grasp the significance of pressures emanating from Great Britain. As

45 Sir Richard Bourke to Lord Glenelg, 29 December 1836, *HRA*, Vol. XVIII, The Library Committee of the Commonwealth Parliament, Sydney, 1923, pp.624-625.

46 SRNSW: Letters Received from Surveyors, Dulhunty, 1832-1837, 2/1532, pp.321-322. R.3063; Courts of Petty Sessions, Vale of Clwydd Bench Book, 16 Feb 1836 - 2 Jun 1839, CGS, 3064, 4/5673.pp. 37-38. R.669.

47 SRNSW: Col. Engineer., Letters Sent, Jan. 1837 - Nov 1842, 4/457, p.81.

noted in Chapter Two and Chapter Three these arose from the penal reform and transportation debates and were augmented by the burden of heavy cost constraints. This failure led to his professional estrangement from the Governors and within the broader bureaucracy of New South Wales and precluded the more co-operative addressing of road construction issues.

Although the Royal Engineers did not suffer the disadvantages arising from Mitchell's alienation within the New South Wales government, no road making plan for the Western Road was able to be 'efficiently' implemented, in terms of speed and construction costs, in purely road making terms. This was because the 'on ground' reality of cost constraints arising from the penal reform and transportation debates and the necessity to appease the penal agenda of secure reform, punishment and deterrence were at odds. Leaving aside crucial workforce issues, which will be examined in Chapters Six and Seven, the contradictions in requirements for both efficient road making and penal practice, were insurmountable in the political circumstances pervading at the time.

Nevertheless, the road makers laboured under an expectation of efficiency on all fronts. These expectations loomed over the assistant surveyors managing the works for the duration of the enterprise. They coloured all aspects of the work and experience on the road, not only for the assistant surveyors, but for the convicts and the civil administration as well. The efficiency and costs of the enterprise were under constant critical scrutiny.

Ultimately the road took far, far longer to construct than was remotely contemplated in 1830. Yet, a case can be made that, if reasonable fiscal allowance was made for both the penal function and the infrastructure development function of the enterprise, then it was a good deal more efficient than was credited by its critics.

Tables

**Table 4.1 Strength of Road Gangs - the Average, the Reality and the Ideal,
April 1832⁴⁸**

Gang Type	Average Size NSW	Reality on Western Road	Recommended by Lockyer 1828	Recommended by Mitchell
Road Parties	43	37, 53, 57	50	66
Bridge Parties	15	67	25	33
Ironed Gangs	57	83, 88, 90, 97	60	80

48 SRNSW: Surv. Gen., Copies of Letters Sent to Col. Sec., 7 Jun 1831 - 17 Nov 1832 ,4/5398, pp.367-372. R.2839

Figures



Figure 4.1 This portion of the Old Bathurst Road ascending the Honeysuckle Range from Rydal, in March 2003, displays the effects of years of neglect, but also of a torrential downpour of the previous evening. The roads were particularly vulnerable in the earlier phases of construction, when adequate drainage had not been created and before the macadamising process had not been completed. [S. Rosen, 2003]



Figure 4.2 The bridge over the Cox's River, c. 1960s showing stone piers probably those prescribed by Mitchell in 1830 which never acquired the arches he hoped for. [Courtesy of Mrs Tulley, Lithgow]



Figure 4.3 Remnants of the stone buttresses to the bridge over the Cox's River exposed on the subsidence of Lake Lyell during the 2002 - 2003 drought. [S. Rosen, 2003]



Figure 4.4 The bridge over Farmers Creek in the 1960s, a less substantial structure than that over the Cox, the stone buttressing does not appear to have extended to the middle pier. [Courtesy of Mrs Tully, Lithgow]

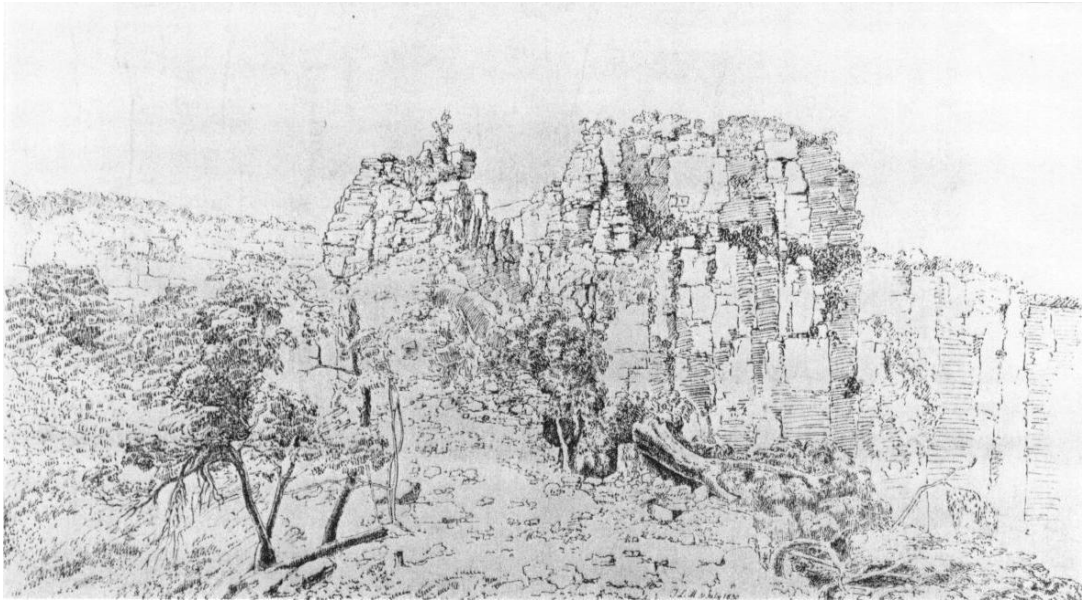


Figure 4.5 This illustration of 31st July 1830 shows the new line of road at Mount Victoria after being cleared of trees. This view should be compared with that in figures 4.8 and 4.9 to gain an idea of the extent of cutting and road work required to build the pass. [T.L. Mitchell, Report on the New Line of Road Toward Bathurst, 29 November 1827, in *Report upon The Progress Made In Roads and in the Construction of Public Works in New South Wales From the Year 1827 to June 1855* By Colonel Sir T.L. Mitchell, Surveyor General, Government Printer, Sydney, 1856.]



Figure 4.6 A general view over the building platform and foundations of the hospital building prior to its excavation. [M. Pearson, 1995]



Figure 4.7 A detailed view of the NW corner of the building platform with retaining wall running to the north, showing the depth of foundations. This view together with the sketch by Perry of the hospital he constructed there on a substantial platform in 1833 [Figure 5.8 and 5.9] is indicative of the level of infrastructure development associated with the stockade. [M. Pearson, 1995]

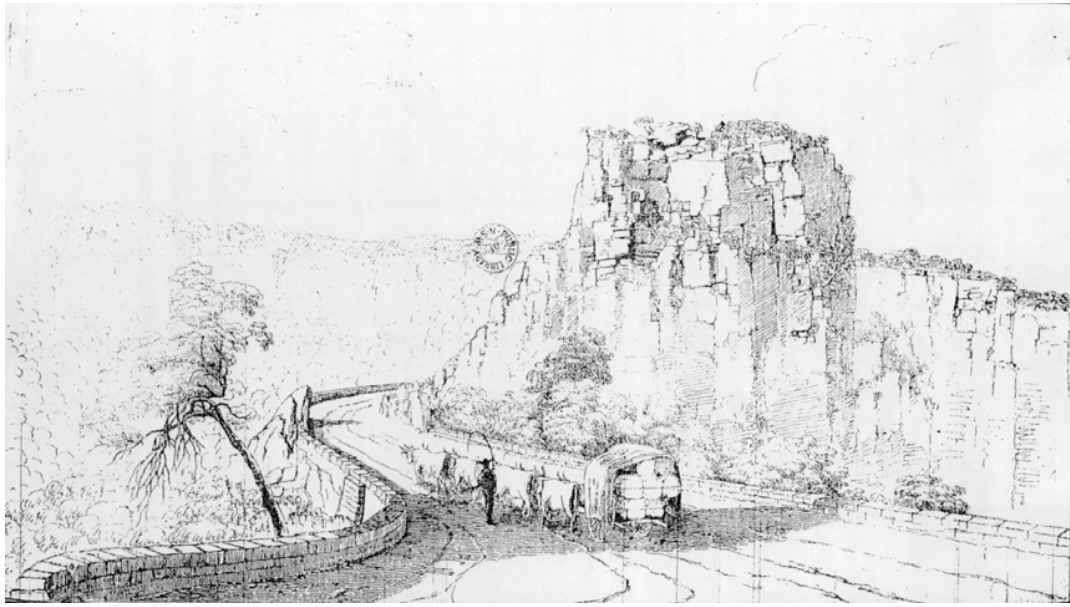


Figure 4.8 An idealised view of Mt Victoria Pass on completion drawn by Mitchell, c. mid 1830s. Despite the official opening this remained a work site as almost continuous repairs were made to the walls and approaches over the next few years.[T. L. Mitchell, *Report upon The Progress Made In Roads and in the Construction of Public Works in New South Wales From the Year 1827 to June 1855 By Colonel Sir T.L. Mitchell, Surveyor General*, Government Printer, Sydney, 1856]