Canterbury Provincial gaols in the 1870s
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ABSTRACT: In 1874 Charles H Curtin, in a letter to the *New Zealand Herald*, noted the disparity between the availability of free prison labour and the building materials and the poor state of the Auckland Prison as a public building. He wrote "your wooden gaol, with a string stone wall around it, is something that I cannot make out, - so much material for making a stone gaol and free labour all at a hand." He suggests a certain illogical approach to the structures of incarceration.

A patchwork nature to the prison system is also apparent in the smattering of its evidence in government reports such as the *Appendix to the Journal of the House of Representatives*. Rather than an image of the comprehensive or the systematic, the impression gained is one of *ad hoc* commissions and piecemeal reports. These were the days during which the Gaols Committee formed and Māori prisoners from Parihaka were detained without trial, but prior to the appointment of Arthur Hume, the first Inspector of Prisons (1880-1909). The abolition of the provinces also shifted the burden of responsibility back to central government, transferring the administrative paper trail. This paper examines the architecture of the New Zealand penal system early in this decade through a particular examination of gaols built by the Canterbury Provincial government.

Introduction
The provincial system of government commenced in New Zealand in 1853. By the 1870s the provinces’ autonomy and independence were compromised because the financial success experienced by the provinces was variable, with Southland and Marlborough becoming bankrupt and only Otago and Canterbury being financially viable.¹ The colonial government, via Julius Vogel’s public works programme (and associated borrowing), increasingly took over public works, such as railways and immigration barracks. In 1874, Vogel proposed the abolition of the North Island provinces, and by 1875 this was in train.² Provincial abolition came into effect on 1 November 1876.³

The differing effectiveness of the provinces in the early 1870s impacted the colony’s criminal justice infrastructure. The relative wealth of Otago and Canterbury enabled significantly greater renewal of their prison buildings. For example, just prior to the abolition of the provinces, the Otago Province built new gaols in Lawrence (1874), Arrowtown (1875-76), Clyde (1876), and Naseby (1876), while Canterbury built Addington (1870-71), Timaru (1871-72) and Lyttelton gaols (1873). Taranaki and Westland Provinces appear to be the only other gaol-building provinces at this time.

¹ McKinnon "Colonial and Provincial government" np.
² McKinnon "Colonial and Provincial government" np.
³ McKinnon "Colonial and Provincial government" np.
⁴ McCarthy "The Sincerest Form of Flattery" p 395.
corrugated iron.5 It was "the eastern portion, which includes the women's and debtors' wards, and the officers' quarters, also a part of the men's prison, being built of iron."6 The initially broader research for this paper identified the Canterbury Province, and more specifically the work of architect Benjamin Mountfort, with specifying galvanised and corrugated iron for the construction of prison architecture. Iron was a material used in the construction of all three gaols he was involved in designing in the 1870s. Consequently, this paper has acquired a narrower geographic focus than initially intended, but also aims to explore aspects of each gaol beyond that of materiality and building construction.

Canterbury Province
Benjamin Woolfield Mountfort (1825-98) was the Canterbury Provincial architect, and in the 1870s he was responsible for at least three, very different, gaol designs in Addington, Lyttelton and Timaru.7 The earliest building, Addington gaol is perhaps the best known given a large part of its later stage survives, though the high, thick concrete gaol wall of Lyttelton gaol has also been retained and is an important part of Lyttelton's historic townscape.

Addington Gaol (1870-71)
The first Addington Gaol (Lincoln Road, Addington, Christchurch) replaced the Market Place lock-up,8 and was intended as a gaol and reformatory for female prisoners.9 The NZHPT registration report speculates that this decision may have been "in direct response to the Contagious Diseases Act of 1869," which aimed to suppress the "social evil" of prostitution by jailing prostitutes and "treating" them in prison.10 The report notes that Christchurch was the first district to be proclaimed a Contagious Diseases Area under the Act.11 Female-only prisons appear to have been a novelty, with contemporary newspapers reporting cynically that a new Canadian prison "'exclusively for ladies'"12 commended itself "to the advocates of women's rights in England."13

The gaol plan appears to have been based on the Pentonville Model Prison in London. The history of this cell block interior dates from at least Carlo Fontana's Rome House of Correction, built under Pope Clement XI (1704/5).14 It was popularised by John de Haviland at Eastern State Penitentiary (Cherry Hill), in Pennsylvania (1821-36), and Joshua Jebb's consequent Pentonville Model Prison (1838-42) in London,15 which would become one of the most successful colonial architectural exports of the British Empire. Even today this type of prison interior continues to frequent a large number of prison feature films.

Evans has described the Model Prison as "not only the most advanced prison, but the most advanced building of its time."16 If this was the case, it would no doubt have interested London architects in the early 1840s, and possibly Addington's future architect, given

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5 "The Dunedin Gaol" p 2.
6 "The Dunedin Gaol" p 2.
7 "To Carpenters [Tender Notice]" p 4; "Miscellaneous" p 3; "To Builders [Tender Notice]" p 1; Lochhead A Dream of Spires p 118.
8 "The Press" p 2; "The New Female Gaol" p 2.
9 "To Carpenters [Tender Notice]" p 4; "The Otago Daily Times" p 2.
10 "Addington Prison" np.
11 "Addington Prison" np.
12 "Miscellaneous" p 2.
13 "Miscellaneous" p 2.
14 Evans The Fabrication of Virtue p 342; Johnston Forms of Constraint pp 35-36.
15 Evans The Fabrication of Virtue p 346.
16 Evans The Fabrication of Virtue p 367.
that Mountfort moved to London circa 1844.\textsuperscript{17} It may also be relevant to note the building of a cruciform prison in Mountfort's hometown of Birmingham, which was completed in 1849, just prior to Mountfort's departure for Canterbury on 7 September 1850.\textsuperscript{18}

Addington Gaol was intended to be a cruciform spoke and hub plan with cell blocks effectively being shoebox basilica; their interiors having bi-axial symmetry and double height spaces, with two lateral rows of facing tiers of replicated cells. Tenders were advertised November 1870,\textsuperscript{19} and, as construction begun (circa December 1870),\textsuperscript{20} the \textit{Star} described Addington as:

\begin{quote}
[a] covered passage, five feet wide, attached to the warder's house, [it] thus affords an excellent point of observation, from which a single warder, by means of windows and doors looking down the passages, into which the rows of cells looking down the passages, into which the rows of cells opening on to any section of the corridor that he may desire.\textsuperscript{21}
\end{quote}

The outside yards were also intended to be seen through "windows at the end of very short corridors."\textsuperscript{22} This language follows an eighteenth-century interest in surveillance as a means of security. Robin Evans credits the first use of this "inspection principle" to William Blackburn (d 1790), and credits Jeremy Bentham's Panopticon with bringing surveillance "to a new perfection."\textsuperscript{23} He states that "in the Panopticon it [surveillance] became the very source of morality."\textsuperscript{24} While Mountfort's design, like Pentonville, was not a panopticon, its radial plan is a development of the ideas of surveillance which Bentham articulated in his Panopticon.\textsuperscript{25} In Mountfort's design the central hub was circumscribed by:

\begin{quote}
[a] covered passage, five feet wide, attached to the warder's house, [it] thus affords an excellent point of observation, from which a single warder, by means of windows and doors looking down the passages, into which the rows of cells opening on to any section of the corridor that he may desire.\textsuperscript{21}
\end{quote}

The reference to a covered passage might suggest a design that included aspects of early nineteenth-century designs, such as the William Wilkins, John Orridge and Thomas Buxton's prison design for the Emperor of Russia,\textsuperscript{27} rather than the more refined design of Pentonville. Regardless all indications are that the design largely materialised the Separate System, which anticipated inmates sleeping, eating and working in isolation, deriving from a theory of internal contemplation and penitence as being reformative. A drawback of the Separate System was the inability to provide isolated individual exercise spaces when gaols were greater than a single storey, that and the tendency for inmates' mental health to be adversely affected due to the extreme social isolation.\textsuperscript{28} At Addington, associate, rather than segregate, exercise yards were formed by creating triangular yards between the

\textsuperscript{17} Lochhead \textit{A Dream of Spires} p 24.
\textsuperscript{18} Lochhead \textit{A Dream of Spires} p 50.
\textsuperscript{19} "To Carpenters [Tender Notice]" p 4.
\textsuperscript{20} "Local and General" (15 December 1870) p 2.
\textsuperscript{21} "Local and General" (5 December 1870) p 2.
\textsuperscript{22} "Local and General" (5 December 1870) p 2.
\textsuperscript{23} Evans \textit{The Fabrication of Virtue} p 211.
\textsuperscript{24} Evans \textit{The Fabrication of Virtue} p 211.
\textsuperscript{25} The central domed area of these later radial plans was often called a "panopticon," consequently causing erroneous attribution in some descriptions of the design, e.g. "The building is significant, as it is NZ's only prison built on the radial or 'panopticon' Model." "Addington Prison" np. NZHPT notes that "The noted architect, B.W. Mountfort, called the plan a 'Panopticon' and said it was "based on the most efficient system and after the latest and most approved examples". Inmates were monitored from the "hub" and three classifications of inmates were kept separate to avoid "contamination." "Addington Prison" np.
\textsuperscript{26} "The New Female Gaol" \textit{Star} (26 October 1871) p 2.
\textsuperscript{27} Evans \textit{The Fabrication of Virtue} p 263, Fig 138.
\textsuperscript{28} Pratt \textit{Punishment in a Perfect Society} p 17.
cellblocks of the cruciform plan which, while they did not enable segregation of the prisoners, did provide a means of classification, where "the first offenders will have cells and a yard entirely separate from the old offenders, and therefore will not be known by them."29

While the lineage of the plan is clear, the construction of the building was something of an experiment, being an early use of concrete block construction30 that, by February 1871, had been declared "highly satisfactory." The Star newspaper concluded that "there is every probability that such material will continue to be used."31 The blocks were built "inside the woodwork," rather than being plastered intercell partitions as initially intended.32 This reference to concrete block infill of a timber frame recalls an earlier Mountfort project using brick noggin construction. This was Mountfort’s notorious structural failure at Lyttelton’s Church of the Most Holy Trinity Church where innovative architecture met a more hesitant and conservative church-building committee.33 Lochhead describes Mountfort’s aim "to re-create ... a structure that in scale and architectural ambition far exceeded any timber churches surviving from the Middle Ages," using an English vernacular construction predominately used for residential buildings;34 "[t]he structural frame was exposed on the exterior, and the brick infill, or noggins, were covered in plaster."35 High winds and timber shrinkage appear to have been the cause of bricks falling from one wall into the church,36 and, while lining the interior was proposed to remediate the issue, the church was instead demolished.37 Lochhead writes that "Mountfort never re-used the structural system at Holy Trinity,"38 however, the use of concrete block noggin construction at Addington might suggest that Mountfort’s thinking about this concept of construction continued.

The 1870-71 initial stage provided 40 cells intended to have later additions resulting 100 cells,39 possibly indicating different cellblocks lengths, cell sizes, or number of storeys. These alternatives, or a combination of them, had been present in previous gaol designs,40 and in some early nineteenth-century prisons some wings were shorter than others reflecting prisoner categorisation (e.g. gender).41 Fencing was to be made from pūriri posts and heart rimu,42 and built by prison hard labour,43 and contemporary newspaper reports estimated completion in March/April 1871.44

A second stage of construction commenced circa January 1875 when tender notices for roofing and flooring work, and stonework were published.45 Lochhead’s description of Addington prison as being "built of

30 "Local and General" (5 December 1870) p 2.
31 e.g. Thomas le Breton’s Design for a county prison (1822), and GT Bullar’s A gaol or house of correction for 200 prisoners (1826), Evans The Fabrication of Virtue pp 280, 284.
32 e.g. George Byfield’s Worcester County Gaol (1802-14), Evans The Fabrication of Virtue p 272.
33 "The New Female Gaol" p 2.
34 "Local and General" (5 December 1870) p 2.
35 "The Lunatic Asylum" p 4; also "Criminal Sittings" p 2.
36 "Local and General" (29 April 1871) p 2.
37 "The New Female Gaol" p 2.
38 "Local and General" (7 February 1871) p 2; "Criminal Sittings" p 2; "The Press" p 2; "The Otago Times, Dunedin" p 2.
39 "To Builders and Carpenters [Tender Notice]" p 4; "To Builders and Stonemasons" p 3.
monolithic concrete with stone dressings ... with two levels of cells flanking a high central hall,” and his conclusion, that Mountfort “allowed primitive Gothic details and the simple masses of his concrete walls to speak for themselves,” appears to belong to this later stage. Despite this, Mountfort’s interest in material-appropriate detailing was apparent during the early stages of the building. In a letter written mid-1872 he noted his objection to “running cement moulding as unreal and contemptible,” advocating instead an ornamental strategy that “would not be an imitation of any other construction, and would be perfectly legitimate as a moulded surface decoration.”

Timaru Gaol (1871-72)
The construction of Timaru gaol followed the completion of the first stage of Addington and began in November 1871. The contractor was Mr P. D. McRae. In mid-January 1872 the Timaru Herald reported “the outside framework of both gaol and warder’s house [was] being erected, and on the prison part of the building the corrugated iron is attached to the sides, and the roof is nearly covered in.” The newspaper detailed the construction as follows:

The whole of the sides and roof of the building will be covered with corrugated iron, and the framework of the walls will be filled in with concrete, into which the studs battens, and braces will all be imbedded.

This echoes the earlier description of Addington’s warder’s house which appears to have been located in the central hub of the cruciform plan, and was "composed of galvanised iron outside and lathed and plastered inside." It also maybe consistent with the description of Addington’s construction of concrete blocks built "inside the woodwork." Lochhead observes a similar material construction for the Lyttelton Gaoler’s house, stating that: "Concrete was also employed in the Gaoler’s house, but as infill for a timber-framed structure with an outer shell of galvanised iron." Given Mountfort’s proposed remediation of the Holy Trinity was focussed on lining the brick and timber construction, the wrapping with galvanised iron might have been a further adaptation derived from his Lyttelton experience. It is not however completely clear whether concrete block, rather than poured in-situ concrete, was used in all instances of Mountfort’s gaol building. Regardless, the construction of these three gaols using galvanised and corrugated iron appears unlikely to be a coincidence. Mountfort was an advocate of concrete “to economise the use of stone,” and he had used “temporary erections of iron filled with the concrete” due to insufficient funds in the Canterbury Provincial Government Buildings project. He also used concrete for reasons of economy at Timaru Gaol. He wrote:

Externally, it appears as a building of corrugated iron, but the framework is very slight, and is entirely bedded in the concrete, which is about eight inches thick. This produces a good wall.

Mountfort observed that:

The concrete system is well adapted for the environment of prisoners, as it requires only labour of an unskilled kind, ... this puts them [prisoners] to much better use

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46 Lochhead A Dream of Spires p 119.
47 Lochhead A Dream of Spires p 119.
48 Mountfort “Concrete Buildings” p 3.
49 “News of the Day” (7 November 1871) p 2.
50 “Wanted [Tenders]” 3; “News of the Day” (7 November 1871) p 2; “Miscellaneous Telegrams” p 2.
52 “Miscellaneous Telegrams” p 2.
53 “The New Female Gaol” p 2.
54 “Local and General” (29 April 1871) p 2.
55 Lochhead A Dream of Spires pp 118-119.
56 Mountfort “Concrete Buildings” p 3.
57 Mountfort “Concrete Buildings” p 3.
than stone breaking, and teaches them the process of concrete construction; by which they may be enabled to support themselves when again at liberty.\footnote{Mountfort "Concrete Buildings" p 3.}

Timaru gaol, in contrast to Addington, was smaller, included both associate and segregate cells, and was asymmetrical - being a single row of cells and utility rooms lining a corridor that was immediately adjacent to the triangular exercise yard formed by the sides of the gaol and the gaoler's house, which was disposed 45 degrees to the cell block. In this form the plan recalls William Blackburn's polygonal gaols such as Northleach Bridewell (1785)\footnote{Evans The Fabrication of Virtue p 144, Fig 65; p 147, 67.} where a single row of cells opened onto an open-air corridor overlooking the airing yard, a typology later used by Mountfort in the Lyttelton gaol courtyards. This departure from Pentonville-type aspirations might suggest familiarity with other, possibly, less imposing, local gaols in England. Lochhead identifies Birmingham, Ramsgate and Northampton as areas that Mountfort was likely familiar with. John Howard's eighteenth-century survey of English gaols describes prisons in Birmingham and Northampton as follows:

\begin{quote}

The [Birmingham Town] Gaol ... is called the Dungeon. The court-yard is only about twenty-four feet square. Keeper's house in front and under it two cells down eight steps: the straw is on bedsteads. On the right hand of the court two small night-rooms for women; and some rooms over them: - on the left hand is the Gaoler's stable, and one small day-room for men and women; no windows.\footnote{Howard The State of the Prisons p 274.}

This [Northamptonshire] Gaol is also the County Bridewell; but Petty Offenders are kept separate from Felons. ... Two court-yards; but that for Felons is too close. No straw. The County have lately built seven commodious rooms, for one Felon each: yet there is still a dungeon eleven steps under ground, which might have been disused if they had doubled the number of new rooms. There is ground enough in the Keeper's yard or garden. The Chapel is the upper room in the Gaoler's house - It is painful for Prisoners loaded with irons to go up and down the stairs.\footnote{Howard The State of the Prisons p 309.}

While both of these English local gaols had dungeons, it appears that the above ground cells may have been aligned with exterior spaces.

The Timaru gaol design however also needs to be understood with the anticipation of its further completion, the Lyttelton Times stating that: "[t]he part erecting is only a portion of a large plan, which can be carried out in its entirety should circumstances require. As it is, it will be sufficient for twenty-five prisoners."\footnote{"Town and Country" p 2.}

Understood in this way, it becomes possible to consider Timaru gaol as designed as a fragment of a radial plan, such as Addington, with William Blackburn's Lawford's Gate Bridewell (1785)\footnote{Evans The Fabrication of Virtue p 164, fig 82.} being another possible model.

Timaru gaol was completed mid 1872\footnote{Mountfort's July 1872 letter published in the Wellington Independent stated that the gaol at Timaru had just been completed, though other newspaper reports indicate the building was near completion in late August and early September 1872. Mountfort "Concrete Buildings" p 3; "Local and General" (23 August 1872) p 2; "Miscellaneous" p 3.} and it was used as a prison for at least 60 years until the 1930s.\footnote{e.g. "Magistrate's Court" p 5.} A map of Timaru in 1948 renames the earlier designated "Gaol Ground" site as "Recreation Reserve (ANZAC),"\footnote{Borough of Timaru, South Canterbury [map].} suggesting demolition of the building occurred in the 1930s or 1940s.

**Lyttelton Gaol (1873)**

With respect to Lyttleton Gaol, Lochhead states that a "paucity of visual and
documentary evidence makes it difficult to reconstruct its history with any precision." Likewise an account of the gaol from the 1870s stated that "[w]ithout a plan it would be quite impossible to describe the internal arrangements." There is however an undated axonometric of the site that was published in Charles E Matthews’ 1923 *Evolution of the New Zealand Prison System* which clearly shows that, in contrast to both Addington and Timaru Gaols, Lyttleton Gaol was a courtyard prison, with similarities to Blackburn’s Gloucester County Gaol (1785-91), or George Moneypenny’s Leicester County Gaol (1789). Any knowledge Mountfort had of Birmingham and Northamptonshire gaols might also be relevant. This courtyard plan may also have resulted from site contraints as much as contemporaneous penology advocating categorisation of prisoners, as the courtyards effect a topographical stepping up and down across the site, as well as clearly defining spatial zones.

The Matthews’ axonometric, as well as nineteenth-century photographs, show that the Lyttelton Gaol buildings made a conscientious effort to address the street, despite much of the site being perimetered by a large blank wall. Lochhead notes that:

> [t]he entrance to the gaol on Oxford Street was flanked by the Gaoler’s house on one side and the Chief Warder’s house on the other. The latter, still under construction in 1875, was a two-storey dwelling of concrete with stone dressings.

These two houses were distinct in form and materiality, and as noted earlier, the gaoler’s house was clad and carefully articulated in corrugated iron. Lochhead observes that "the Gaoler’s House resembled the early sections of the Provincial Council Buildings," strongly relating the form of gaoler accommodation with that of Provincial politicians. Lochhead attributes this to a kind of Provincial government “house style.” I prefer to speculate on Mountfort’s capacity for architectural satire; provincial politicians described by his architecture as akin to gaolers.

This street front entrance is spatially consistent with Robin Evans’ observation of pre-reform prisons, when gaolers profited from both inmates and their visitors to earn their keep, that:

> the key position from which to guard the prison ... was not the centre but if anything the edge, at the point of egress and entry, where he [the gaoler] could monitor traffic to and from prisoners rather than monitor the transactions between prisoners, which were not customarily subject to fees.

Typical of eighteenth-century courtyard prisons, such as Shrewbury County Gaol, the Governor’s House was immediately proximate to or conflated with the prison entrance. By the mid-nineteenth century, the gaolers’ houses were increasingly found centrally-located, as anticipated at Addington, able to survey exercise yards and the central galleries of cell blocks.

The Lyttelton Gaol entrance led to two, if not three, zones of cells, which were built progressively, Mountfort, for example, in 1872, referring to building one two-storey tier of cells, but by the time the Matthews’

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67 Lochhead *A Dream of Spires* p 119.
68 “In Gaol” (3 June 1879) p 6.
69 Evans *The Fabrication of Virtue* p 154, fig 74 (plan); fig 79 p. 160 (perspective).
70 Evans *The Fabrication of Virtue* p 186, fig 97.
71 Lochhead *A Dream of Spires* pp 118-119.
72 Lochhead *A Dream of Spires* pp 118-119.
73 Lochhead *A Dream of Spires* p 119.
74 Evans *The Fabrication of Virtue* p 30.
75 Evans *The Fabrication of Virtue* p 156 fig 76.
76 Mountfort “Concrete Buildings” p 3.
axonometric was drawn, there were two. The 1879 Lyttelton Times refers to

83 separate cells in the north wing and 48 in the south. Besides these there will be 11 solitary cells in the south wing; and in the north wing nine separate cells on the silent system.77

The Matthews' axonometric has two courtyards onto which cell blocks lookout on to. The northern one (at the mid-left of the drawing) appears to have 44 cells by counting the doors, and there are 45-48 cells in the southern courtyard using a similar method. The missing 40 or so cells in the northern wing could be accommodated inside the triple-gabled building near the north-west edge of the site, the skylights indicating a central circulation corridor. This range of cell configurations possibly supported different inmate classifications and degrees of security, the seemingly more open, lower security cells positioned closer to the street. The complex includes buildings with cells opening directly on to the external courtyard, or exercise yard, reminiscent of Blackburn's Northleach. In addition to the Matthew's axonometric, Lochhead refers to the cells having: "concrete walls and floors, although the latter were "boarded over for the prisoners to sleep on"."78

The 11 solitary cells in the south wing were perhaps accommodated in the structure immediately behind the gaoler's house. The Lyttelton Times reporter further describes these "silent cells" as:

[t]errible places ... I had a minute or two of one, and it was quite enough. ... it seemed as though no greater degree of utter blackness could be possible. Next moment, however, there was a dull, heavy thud, that at first I could not account for, accompanied by a thickening, a thickening palpable to feeling ... The thud was caused by the closing of the thick outer door, and with its close the horrors of the most intense silence were added to those of utter solitude, and the gloom of Erebus. The minutes seemed hours ... These silent cells are terrible places for men.79

The report also located the gaol's execution platform. Since 1858, with the enactment of the Execution of Criminals Act, public executions had been illegal in New Zealand. This was 10 years before public executions ceased in England.80 At Lyttelton gaol, executions were "[h]alf way down the broad concrete stairs leading from the upper to the lower row of cells," and:

80 "In Gaol" (3 June 1879) p 6.
81 "In Gaol" (3 June 1879) p 6.
82 "In Gaol" (3 June 1879) p 6.
83 "In Gaol" (27 May 1879) p 6.
84 "In Gaol" (27 May 1879) p 6.
85 "Latest Telegrams" p 2.
making bricks or roads,86 or excavating sites in the town belt for the new Wellington College,87 the hospital,88 and the Asylum,89 though this hard labour was constrained and made more difficult by prisoners having to work while wearing leg-irons weighing 8lbs until at least 1877.90 Pratt attributes this to the need for labour for public works to develop the cities of the colony and "a seeming lack of public sensitivity towards the sight of the convicts" in public places.91

While the form of the Lyttelton gaol appears to have eighteenth-century precedents, the spatial philosophy underpinning its design results from New Zealand’s proactive use of penal labour, because of the scarcity of labour in the colony,92 and its shunning of the "useless" hard labour typical of England from the 1860s, which relied on the crank and the treadwheel rather than public works projects.93 As noted above, Mountfort had similarly identified the benefits of both making productive labour and the reintegrative potential of trade training.94

The location of trades training within the prison was, however, also a characteristic of at least one English prison designed in the 1870s: Wormwood Scrub (1874-91) by Edmund Du Cane whose prodigee, Arthur Hume (1840-1918), would become New Zealand’s first prison inspector in 1880.95 Du Cane was a former Royal Engineer involved in the construction of the Crystal Palace.96 He designed Wormwood Scrubs, one of the first telegraph pole prisons, with "[work]shops, a chapel, hospital and other service facilities"97 external to the cells. The new aspect of the design was the use of "a roofed passageway or arcade" to connect these functions,98 and facilitate prisoners moving "about the prison on their way to school, workshops, outdoor exercise, and other destinations."99 Activities that used to be accommodated inside the Pentonville cell, now took place outside it. The innovations in the Wormwood Scrubs plan were hence derived from the need to move prisoners around the site and to accommodate them in associate activities in workshops and in communal facilities, such as the dining room and exercise yards. This resulted in "a plan that relinquished central inspection."100

An examination of the Matthews' axonometric also indicates a commitment to circulation routes which pass through the site. Although many of these appear to also transgress the site perimeter, they would also enable movement of prisoners from their cells to workshops and other associate functions, as well as carving the site into functional zones. The Lyttelton plan consequently appears to be influenced by the philosophy which informed the contemporary design of Wormwoods Scrubs (1874-91) - built a year later than Lyttelton, rather than being consistent with the usual narrative of the dominance of Pentonville through the mid-nineteenth century. This speculation appears to be supported by newspaper descriptions of Lyttelton Gaol which reference "the Separate

86 "A Visit to the Wellington Gaol" p 5.
87 "Wellington Independent" p 2; "New Zealand Times" (23 June 1874) p 2.
89 "New Zealand Times" (11 March 1880) p 2.
90 Ward Early Wellington p 306.
91 Pratt Punishment in a Perfect Society pp 88-89.
92 Pratt Punishment in a Perfect Society p 88.
93 Pratt Punishment in a Perfect Society pp 17, 89 Table 3.1.
94 Mountfort "Concrete Buildings" p 3.
95 Crawford "Hume, Arthur" pp 233-235.
96 Johnston Forms of Constraint p 95.
97 Johnston Forms of Constraint p 95.
98 Johnston Forms of Constraint p 95.
99 Johnston Forms of Constraint p 96.
100 Evans The Fabrication of Virtue p 398.
System in the modified form that circumstances will permit of"\textsuperscript{101} and the acknowledgement of "the prisoners being more or less in association."\textsuperscript{102}

Conclusion

These three Canterbury provincial gaols demonstrate significant diversity in what a gaol might be like despite having a common architect and provincial administration. While much of the literature on New Zealand prison architecture in the nineteenth-century stresses the significance of Pentonville as a model, it is clear that there were limits to its applicability, resulting in recourse to both earlier eighteenth-century models of gaol-building and more contemporary prison thinking materialised in structures such as Wormwood Scrubs. The persistence of corrugated iron-clad gaols and prisons appears to be a departure from the English model of prison construction. Mountfort's earlier experience with Lyttelton's Holy Trinity may provide some answers to the attractiveness of this construction technique, as well as insinuating another layer of theological premise into prison architecture, but, of course, further research regarding its scope and practice in New Zealand is still needed.

\textsuperscript{101} "In Gaol" (27 May 1879) p 6.
\textsuperscript{102} "In Gaol" (27 May 1879) p 6.
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