

Acknowledgements

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1 Introduction

This report was completed for project PR180502 'Heritage in Ruins: protecting Melbourne's most significant archaeological sites' commissioned by the Heritage Council of Victoria, and conducted in partnership with Heritage Victoria.

The research for this project aimed to identify, assess and rank specific locations within the Melbourne CBD that are likely to contain extensive, well-preserved archaeological sites of state significance 'that may have been preserved as a result of the City Council's program of raising ground levels in flood prone areas' (HCV Project Brief: 2), as described in the project brief:

Historical evidence and recent archaeological excavation have revealed that the block bounded by Lonsdale, Exhibition, Russell and Little Lonsdale Streets underwent a significant transformation in the mid-1850s when the Melbourne City Council raised street and ground levels to address flooding issues in this part of town. The demolition of buildings and burial of their remains as part of this process has resulted in the preservation of a remarkable and possibly unique archaeological landscape of significance to Victoria.

Under the *Heritage Act 2017*, the VHR is the mechanism by which historical buildings, landscapes, objects and archaeological sites of state significance are protected. Given current development pressures in the city, any archaeological sites of state-level significance – if not proactively identified and protected in advance of development – are at risk of disturbance and loss. This project aims to ensure the identification and assessment of possible sites for their inclusion on the VHR.

It is not the intent of this project to identify archaeological sites in the CBD that are routinely uncovered and found to be in a good to excellent condition.

Instead, the aim of this project is to identify archaeological sites relating to Melbourne's earliest historic occupation that are extraordinary in their condition – most likely as a result of the City of Melbourne's civic works programmes in the early to mid-1850s – and thus potentially of state-level significance so they can be nominated for inclusion on the VHR and be proactively protected. This will enable appropriate conservation and interpretation plans to form part of site development plans, as is common in some overseas cities, rather than their existence being a 'surprise' and thus leading to their wholesale destruction (after archaeological investigation and recording) which is currently the case (Project Brief).

1.1 Research undertaken for this report

Research for this project focused on four main areas:

- Early Melbourne City Council records available in the Public Record Office Victoria;
- Nineteenth-century newspaper reports, available online via the National Library of Australia's Trove website;
- Available archaeological reports concerning excavations undertaken in the Melbourne CBD; and
- Mapping of information drawn from the above sources.

During the course of the research undertaken for this project, it became clear that there is a vast amount of interrelated information concerning street formation and the fixing of permanent levels, Council land filling orders, complaints from residents to Council, records concerning 'nuisances' associated with rubbish and nightsoil disposal, drainage and the general cleanliness of the city CBD and surrounding parts, not to mention issues concerning the sourcing and use of fill that are all relevant to this project.

The information presented in this report is in effect only scratching the surface of the available resources. It should be noted that the Melbourne City Council (the Council) Records available at the Public Record Office Victoria were by no means thoroughly examined during the course of this research. Limited time meant that some useful records could not be exhaustively examined. For example, the minutes of the Public Works Committee (PROV VPRS 4037), which is probably the prime source of information on Council ordered filling events, were only checked fully for the years 1856, 1857 and up to October 1858 – these records contain very detailed hand-written meeting records concerning a variety of subjects other than land filling orders and quite simply take a good deal of time to read through in order to extract relevant material.

A number of the Town Clerks Correspondence files were examined (PROV VPRS 3181) in the course of this project. These files are divided into subject areas and those subject files consulted are listed in the references (Section 8). There are several other subject files that were not consulted and, given the apparent fluidity or crossover between some of the files, it may be worth inspecting some of those for subjects less clearly relevant to the issues of land filling and street levels in order to ensure that all pertinent material has been collected.

There is likely to be material as yet unidentified that would be of use to this project. For example, City Surveyor specification records (PROV VPRS 9441) occasionally make reference to plans which apparently showed detail concerning levels, cross-sections, etc. for street formation and other contracts. If these still exist they have the potential to provide useful information concerning changing street and land levels. Other sources of information concerning alterations in street levels would similarly be of use, as, possibly, would any other files containing records generated by the City Surveyor and it became clear in the course of the project that any data that provides an indication of the alteration of the street levels in the city would be particularly helpful.

The findings of this report may not been as clear or concrete as was conceived in the project brief – while some locations of possible deep filling have been identified, the information gathered to date does not allow for the identification of specific locations or address details to give the level of accuracy that Heritage Victoria would require in order to consider progressing to a nomination for the Victorian Heritage Register.

It is hoped, however, that the results of the research undertaken to date shed some light on the previously not-well understood process of private land filling in the Melbourne CBD and inner city¹, and the reasons for the filling having occurred. The results obtained so far also indicate that further research would be profitable in terms of increasing our understanding of the archaeology of early Melbourne as it reveals that while land filling was widespread across the city, individual filling events varied enormously in terms of the depth and filling required and also in terms of the impact that filling orders or requirements had on individual landholders (Sections 2 and 3).

The report also considers the archaeological implications of land filling events, noting that historical filling events, even those of moderate depth, may have a significance impact on the preservation and interpretation of early archaeological material, and increased knowledge of the filling events that took place across the city in the mid to late nineteenth century may assist future interpretation of the results of archaeological excavation in Melbourne, even in those instances when filling was relatively shallow (Section 4).

There is a short discussion on the results of other methods of investigation that were tested as potential approaches to identifying filled areas during the course of the work undertaken for this report, and a discussion of other avenues that may be worth pursuing – these primarily involved further analysis of levels on historical and, potentially modern, plans and an analysis of the process of alteration of street levels in Melbourne (Section 5). In Section 6 there is a discussion that considers whether sites containing deep filling (other than those already excavated) exist in the Melbourne CBD or elsewhere.

Section 7 summarises the results of the report, outlines suggestions for further work and provides some recommendations concerning the potential management of Heritage Inventory sites in light of the potential for filling events to exist in various parts of the Melbourne CBD.

¹ While the study area boundary for this project was the area bounded by Flinders, Spring, Victoria and Spencer Streets, historical research revealed that land filling was common outside of the CBD in present-day Carlton, East Melbourne, West Melbourne and Fitzroy/Collingwood.

2 Background to the need for allotment filling – street levels, drainage and sanitation in early Melbourne

2.1 Street formation and levels

Though some of the highways dedicated to the public were marked out, the street intersections, gullies or quagmires were almost inextricable for man or beast once glued into them, whilst the principal thoroughfares were so incommoded with tree stumps that it took years, even after the incorporation of the town, to thoroughly eradicate them... during winter, the streets were chains of water-holes, and the traffic had to be suspended in places... Elizabeth and Swanston Streets were shallow gullies, with deep and dangerous ruts every twenty yards. Flinders Street was a swamp, and even Collins Street was so slushy and sticky, that often to cross over from any portion of the now well-flagged and fashionable 'Block' one required to be equipped in a pair of leggings or long mud-boots... 'boggings' of the cumbersome vehicles of the time happened at the intersections of Collins and Queen, and Elizabeth and Bourke Streets. In two of the localities of greatest traffic now, there were then two fissures running towards and discharging into the Yarra, which for some years were known as the Rivers Townend and Enscoe. The former starting from near the junction of Collins and Elizabeth Streets... the other propelled its waters along near the north-west corner of William and Flinders Streets...' ('Garryowen' (E. Finn) 1888 in Weidenhofer (ed) 1967: 41–42).

The formation of the streets within the Hoddle Grid, the provision of adequate surface drainage for Melbourne, and funding for the maintenance of both, was an early concern in the life of what was to become the City of Melbourne. Although certainly flatter than many cities in the world, the land that was to become the Melbourne CBD was undulating open woodland (Figure 1) and had a system of natural drainage that was to be disrupted by the creation of the settlement there. Garryowen's description of the early days of Melbourne (above) makes clear that surface water and drainage was a problem in the new settlement.

The 'fixing' of the levels of the streets within the original Hoddle Grid was discussed in 1837 when Governor Bourke made a trip to the settlement during the laying out of the grid (Bourke 23, 25/3/1837 in Jones 1981: 106). A series of section drawings created by Assistant Surveyor William Wedge Darke in 1837 (PROV VPRS 8168/P05 – SYDNEY M45A-H) show the then proposed changes to street levels (see Figures 4 and 5). They included the excavation or cutting down of some locations, for example of Collins Street between King and Queen Streets, and the filling of other locations, such as Collins between Queen and Swanston Streets.



Figure 1 One version of Hoddle's 1837 plan (PROV VPRS 8168/P05 – SYDNEY M8) of the grid layout that was to become the Melbourne CBD. Note the original shading that indicates elevated land/hills in sections 19 and 6 and sloping land along the rough alignment of Queen Street and south of Collins Street.

Figure 2 shows the streets for which Darke's sections are available, and provides an indication of the locations in which fill was required according to those section drawings.

The earliest detailed contour plan of the Melbourne CBD is that drawn by surveyor Clement Hodgkinson and dated 12th April 1853 (PROV VPRS 8168/P05, MELBRL-15-1). While Hodgkinson's plan provides the earliest detailed contour data for Melbourne, the contour data is clearly not of a landscape untouched by the early development of the city. It shows street alignments and contours (with an interval of 4 feet/1.22m) as far north as the central part of Franklin Street, the complete outline of some buildings, and the street frontages of others.² Hodgkinson noted a number of difficulties in undertaking the survey work in late 1852. These included:

² Hodgkinson was instructed to carry out a detailed survey of Melbourne to assist with the planning of the city water supply. The whole-city plan referred to here appears to have been completed while Hodgkinson was also actively working on block plans of parts of the city that

the very numerous subdivisions, the irregularities of back buildings and fences, the obstructions caused by shallow cess-pools, and the difficulties of gaining access to some of the private premises (Hodgkinson 16/11/1852 in Lloyd-Smith 1971: 10).

Hodgkinson's plan clearly shows that the levels of some of the city streets had been altered by the early 1850s. For example, the level of the portion of Collins Street between Russell and Swanston Street had been cut down, part of King Street south of Collins Street had been filled up and a portion of the eastern part of Lonsdale street had been built up. The level of Little Bourke Street east of William Street also appears to have been cut down and the level of the southern end of Elizabeth Street may have been raised (Figure 2).



Figure 2 Plan of the Melbourne CBD, showing the streets for which surveyor Darke's 1837 proposed levels are available, and showing those locations where filling was considered to be required (in orange).

While Hodgkinson's 1853 plans are not those of a completely undeveloped landscape, they do offer some indication of the surface drainage of the city prior to the complete formation of streets and drains and the

provide impressive detail of buildings, fencelines, and other structures (including vineyards and gardens). Unfortunately, these block plans, which are labelled 'working plans of Melbourne' are available only for ten of the CBD blocks (PROV VPRS 8609/P35, unit 520; Lloyd-Smith 1971).

modern city environment. On the city-wide 1853 contour plan notations indicate that there were 'rain courses' to the west of Spencer Street and south west of the Flinders and Swanston Street intersection. A formed open drain also appears to have carried water from the southern end of Elizabeth Street to the Yarra. Standing water (in the form of two 'impenetrable sloughs') are shown on the Hodgkinson's 1853 working plan of the block bounded by Flinders, King, William and Collins Streets.³

The contours on that plan also offer an opportunity to speculate on the probable drainage patterns in the CBD – certainly the gully that carried water down the course of Elizabeth Street can easily be made out, as can small depressions that probably carried water during rain or wetter periods, such as that along part of the course of Little Bourke Street (Figure 3).

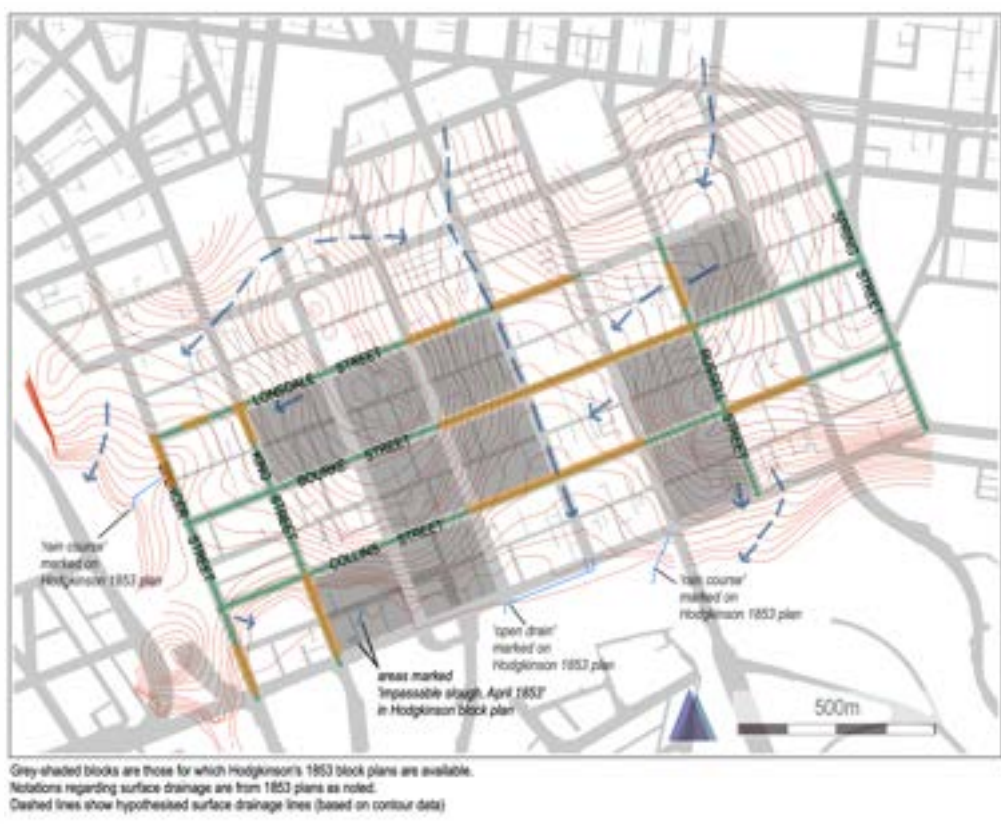


Figure 3 Probable intermittent water courses/drainage lines in the Melbourne CBD, based on Hodgkinson's 1853 contour data.

³ Hodgkinson appears to have been working on the survey predominantly over the 1852/1853 summer and the following autumn and this timing may have limited the amount of surface water and ephemeral drainage lines shown on these plans. Notations on the block plans indicate that they were surveyed between March and June 1853, although it is known that he had commenced work on the detailed survey of Melbourne by November 1852 (Lloyd-Smith 1971: 10).

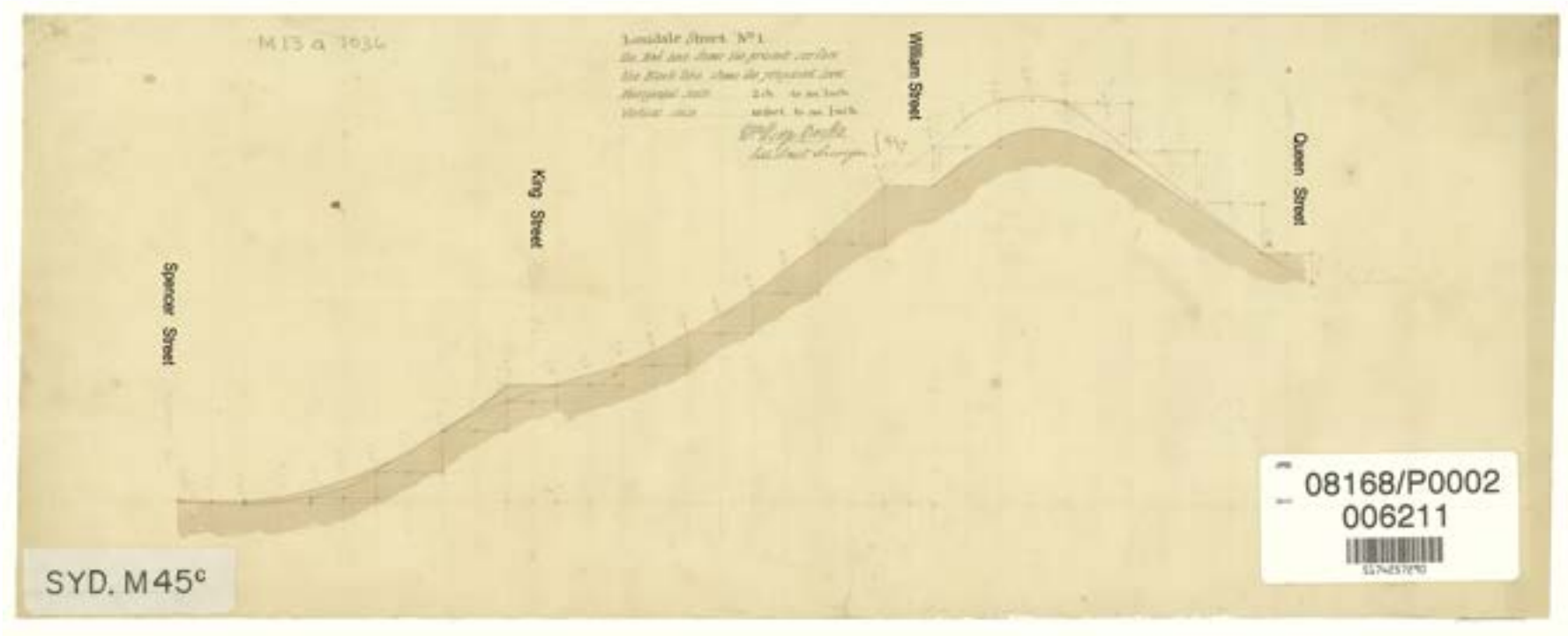


Figure 4 Surveyor Darke's proposed levels (1837) for the western portion of Lonsdale Street. The notations on the plan indicate that the red line shows the then present surface and the black line shows the proposed level. Note that the vertical scale is exaggerated (PROV VPRS 8168/P05 – SYDNEY M45C).

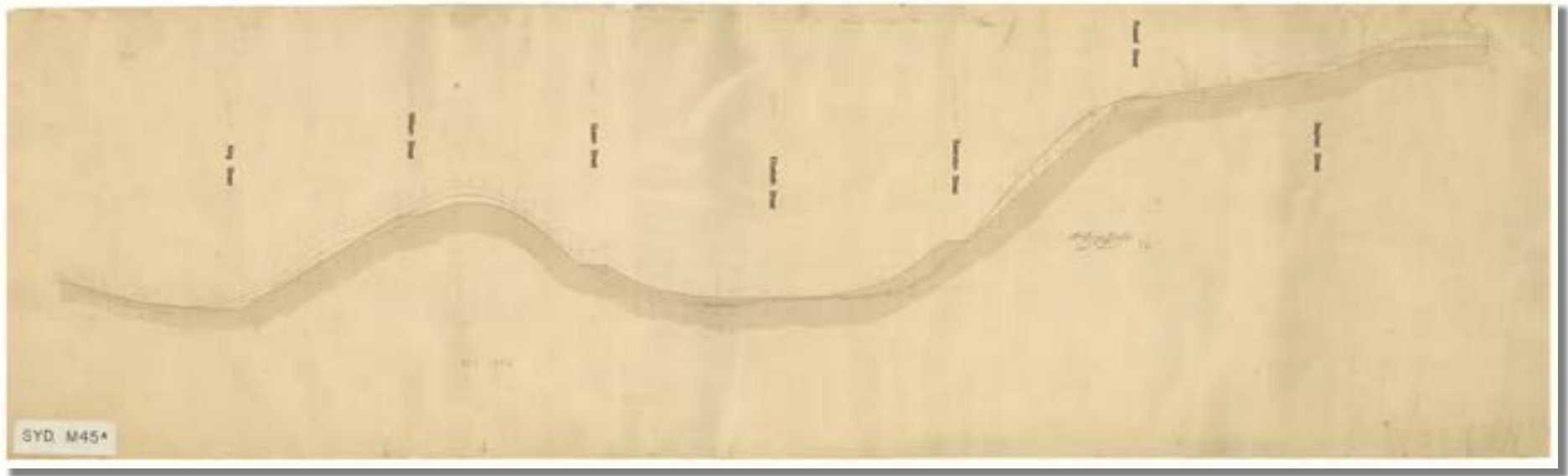


Figure 5 Surveyor Darke's proposed levels for the length of Collins Street. Again, the red line indicates the then land surface and black lines indicate proposed levels. Vertical scale is exaggerated (PROV VPRS 8168/P05 – SYDNEY M45A).

Though clearly some alteration to street levels had taken place by 1853, whether all of Darke's proposed levels for street formation were immediately acted on is unclear. Given Garryowen's description of the settlement in late 1830s and early 1840s (above) it would seem unlikely that much work was done on Melbourne streets in that time. Certainly from at least the mid 1840s the Town Council made several requests for funding 'toward improving the streets of Melbourne' to the Governor in Sydney via Superintendent La Trobe. In 1845, for example La Trobe relayed a request from the Town Council that 'such portions of the proceeds of all sales of the Crown Lands within the town...be appropriated and applied to the public service of the Colony' specifically 'to the formation of the streets and the general improvement of the town' (La Trobe 30/6/1845, in PROV VPRS 3621). This request was denied on the grounds that such funding was for main lines of communication only (Col Secretary 11/7/1845, in PROV VPRS 3621). A request for £5,000 to be placed on the estimates for 1847 'towards improving the streets of Melbourne' was similarly denied to 'his Excellency's great regret' (Col Secretary 30/6/1846 in PROV VPRS 3621).

2.1.1 Early street formation and the alteration of levels – controversy and push-back from landowners

Despite these issues with funding, it is clear that some basic street formation had commenced in the mid 1840s. Newspaper reports from 1846 highlight a controversy around levels in the portion of Collins Streets between Elizabeth and Swanston Streets, noting that this location is 'naturally the lowest part of the town...and...in rainy weather, a swamp' (*Port Phillip Gazette and Settler's Journal* 2/9/1846).

According to the report, the original government survey proposed a level for Collins Street (presumably Darke's levels shown in Figure 5) some 6 feet, 6 inches above natural ground 'contemplating the probability of this swamp being filled up', and the earliest house in that portion of the street, owned by a Mr. McNeil, was built to that proposed level prior to the street itself being formed. This appears to have been the expectation in the early decades of Melbourne – that landowners, who were often building houses or other structures on their purchased property prior to the streets proper being formed, were expected to ascertain the proposed street level from the appropriate authority and build according to that level. This meant that in many cases either cutting down or filling up their property would have been required prior to construction in order for the level of the structure and surrounding yard to match that of the streets on to which they fronted.

By 1846 when the town Council came to form a footpath and kerb along the north side of that portion of Collins Street situated between Elizabeth and Swanston Streets, several other structures had been completed and built not to the proposed level but 'according to the natural order of the ground'. By this

stage it appears that the original proposed 'government levels' of the street had been revised to new 'corporation levels'⁴. In this case, the new level was 2.5 feet lower than the government level, but still several feet above the natural ground. The formation of the street and kerb to a level that was neither that of the natural ground, nor that of the originally-proposed street level provoked a predictable outcry from landowners in that portion of Collins Street. The *Port Phillip Gazette and Settler's Journal* noted that:

It will appear evident that had this locality been raised four feet at first or even six or seven feet it would have been much healthier, and now with Little Collins Street nearly two feet higher and a fall both east and west, it must be damp, and it must also be evident that if the streets should be raised four or five feet and the back yards filled in, it would be healthier for the inhabitants, and very much improve the town. On the other hand, with private property at stake to the amount of some £15,000 or £20,000, the Council would not have been justified in altering the level unless the majority of the inhabitants were anxious for it.

As the street will remain at its present level, so far as we can ascertain, it will require to be far more carefully drained than in times past, as from the evidence of some of the inhabitants, we ascertain they are almost flooded in the rainy season (Port Phillip Gazette and Settlers Journal 2/09/1846).

The *Argus*, in discussing the issue of the Collins Street levels that same year, made reference to a similar controversy in 'the upper end of Elizabeth Street' when the Town Council commenced work on the formation of that street:

Then, as now, the inhabitants complained that their property was to be injured...The levels were at once altered, and that too after £800 worth of street had been made (The Argus 4/9/1846).

This, and other street level controversies were no doubt what prompted the Francis Stephen (solicitor to the City of Melbourne) on behalf of the Corporation of Melbourne to seek legal opinion from barrister Edward Williams in 1847 on the Corporation's ability to alter the government levels proposed at the original laying out of the town, and on matters of liability stemming from the alteration of the levels. Specifically, the Corporation wished to know:

1st Whether they have the power of raising and lowering the Streets of Melbourne as they may deem meet and thereby altering and deviating from the original Government levels?

⁴ The Town of Melbourne was incorporated in August of 1842 by Act 6 Victoria No 7. This Act 'made provision for the creation of a Town Council to administer the affairs of the town.' (City of Melbourne 1997: 14).

2ndly If the Corporation has no such power under its Act of Incorporation what would be the measure of damages which the owners of divers buildings injured by the Corporation alterations might alterations might recover against the corporation? (Stephen 8/1847 in PROV VPRS 9309/P01, item 17)

Williams replied that

I am of opinion that the Corporation under the 6th Vic No 7 have the power of raising and lowering the Streets of Melbourne as they may deem meet and of thereby altering and deviating from the original Government levels - provide the Corporation do not act arbitrarily oppressively or carelessly... Some individuals suffer an inconvenient under all acts of Council of a like nature but the interests of individuals must give way to the accommodation of the public... Their power must have a reasonable construction - their discretion is not arbitrary but must be limited by reason and law... The corporation have a public duty to perform and they are not liable for damage resulting to an individual from an act done by them in the discharge of that public duty (Williams 24/8/1847 in PROV VPRS 9309/P01, item 17).

Pressure, however, remained on the Council to consider the impact of street level changes on residents and landowners:

Notice of Motion

By Alderman Johnstone. – That the system of street levels recently adopted by the Council being found in many places to involve extensive and costly excavations or embankments, to the great detriment of private property, without sufficient countervailing public advantage, the Public Works Committee be requested to visit in person the different localities in which any serious deviations from the natural surface of the ground are proposed, and report to this Council as early as possible what alteration in each system of Levels are advisable (Melbourne Daily News 6/12/1848).

It was not until the mid-1850s that street formation in Melbourne ‘kept pace with development’, and according to Dunstan ‘not until 1849, when James Blackburn was appointed as City Surveyor, that the Corporation obtained a man with any talent as a water engineer’ (Dunstan 1984: 127).

2.1.2 Drainage and Sanitation – the 1848 Sanatory Committee and ‘Lake Lonsdale’

Probably the main issues that bolstered the case for the continued alteration of the levels, and of the subsequent 1853 Act which allowed the Council to enforce the filling of private property, were those of health and sanitation.

In the late 1840s a Sanatory Committee, chaired by Thomas McCombie,⁵ was appointed ‘to inquire and report upon the best means of improving the sanatory condition of Melbourne’ (PROV VPRS 3181/P0, unit 364). The resulting report highlighted a number of issues relevant to this project. They noted, for example, that ‘the dwellings of the humble classes are huddled up in the lowest portions of [the city]’, that the lack of surface drainage and sewerage, and that the ‘filthy conditions of the narrow streets, courts, alleys and backyards’ and the slaughtering of sheep and pigs that took place within the city all counteracted the naturally ‘healthy situation’ of Melbourne.

One of the committee’s correspondents, the Reverend A. C. Thomson,⁶ focused on the presence of stagnant water and inadequate drainage in private yards. He thought that sickness in the hot months of the year was due to ‘the stagnant pools’ that were present ‘in many of the back yards, and even below some of the wooden hovels’ and suggested that ‘the exhalations from Lonsdale Swamp are likely to be hurtful as from the water being fresh there will be much decomposing vegetable matter when the swamp dries up in the hot weather’. Amongst the suggestions made by Thomson to the committee was the recommendation that some sort of provision be made for ‘the filling up of back yards to the level of the streets, or at least to above the level of the gutters, with means to carry the surface water off, as it fills’ (Thomson 30/6/1848 in VPRS 3181/P0, unit 364).

The Reverend James Forbes⁷ also noted that disease was ‘much more virulent in the low parts of the city’ as between Swanston Street and the Royal Hotel⁸ (Forbes 30/6/1848 in VPRS 3181/P0, unit 364) and Dr Black was of the opinion that ‘most if not all of the disease generally met with in Melbourne are decidedly influenced by the want of sufficient drainage and the filthy condition of the numerous narrow courts and alleys and by the exhalations of Lonsdale Swamp and the lagoon which bounds the city to the west’ (Black 30/6/1848 in VPRS 3181/P0, unit 364).

Amongst other issues, the committee report identified:

⁵ At the time that this committee was in operation McCrombie represented Bourke Ward on the Melbourne Town Council (Australian Dictionary of Biography online, accessed 6th February 2019).

⁶ Adam Compton Thomson was a Church of England clergyman, and was the sole Anglican priest for Melbourne and district between 1842 and early 1848. He remained in Melbourne until 1850 (Australian Dictionary of Biography online, accessed 6th February 2019).

⁷ James Forbes was a Presbyterian clergyman, present in Melbourne/Port Phillip from 1838 until his death in 1851 (Australian Dictionary of Biography online, accessed 6th February 2019). Forbes has been described as ‘the first permanent minister in Melbourne, the first minister of the Scot’s Church and Melbourne’s first great educationist’ (Freeland 1963: 100).

⁸ There was a Royal Hotel in Collins Street in the 1840s. It was clearly a well-known venue, being used, for example, as the polling booth for the Lonsdale Ward in the first town Council elections (City of Melbourne 1997: 16) and as the location of the first election of Aldermen shortly after the 1842 *Act to Incorporate the Inhabitants of the Town of Melbourne* was passed (‘Garryowen’ (E. Finn) in Weidenhofer 1967: 54–55). Presumably it was located in the lower-lying portion of Collins Street, somewhere between Queen and Swanston Streets (Figure 3).

the large swamp on the eastern side of the city known as Lake Lonsdale...to be the most injurious to the health of the citizens from the noxious vapours it emits in warm weather, and those resident in the quarter complain loudly of the injurious effects of the miasma upon the health of their families (VPRS 3181/P0, unit 364).

and noted that a lack of surface drainage across the city was a health concern:

It is, moreover, obvious that in addition to the want of sewerage, surface drainage is imperfect; and that in many parts of the city pools of stagnant water in a state often of putrefaction, which the adjoining or lanes will not allow of being drained except by extensive filling are abundant... (VPRS 3181/P0, unit 364).

'Lake Lonsdale,' and 'Lonsdale Swamp,' appear to have been terms in use through the 1840s for a location towards the eastern end of Lonsdale Street – there is passing reference, for example, to it as a source of 'miasma' in a brief discussion of the then proposed location of the Melbourne Hospital (on Lonsdale Street, between Swanston and Russell Streets) (*Port Phillip Patriot and Melbourne Advertiser* 16/7/1845) with the obvious implication that the 'lake' was nearby. Given the known issues surrounding the block of land bounded by the north side of Lonsdale Street and by Russell and Stephen (later Exhibition) Streets, which is discussed further in Section 3.1, it would seem likely that this is the location of the notorious 'lake'. This supposition is supported by an 1855 reference to a school near Lake Lonsdale (Section 3.1) which also accords with the characteristics of the Lonsdale, Russell, Little Lonsdale and Stephen Streets block.

The Sanatory Committee report included several recommendations for alleviating the identified health hazards then present in Melbourne. They were divided into two divisions, with the first being those that 'are not within the present ability of the Council to carry out from lack of pecuniary resources, the inefficiency of the law, or from other causes.' These were as follows:

- 1. Of the first division is a proper system of sewerage upon some comprehensive plan, such as may recommend itself to the Council.*
- 2. An Act to levy the Sewerage rate.*
- 3. A sufficient supply of water.*
- 4. Preventing the erection of any new slaughtering establishments.*
- 5. The framing of a Building Act.*

The second division of recommendations consisted of the following:

1. *To request the Legislative Committee to frame a Bye-Law for the prevention of slaughtering stock of any description within the inhabited portions of the City of Melbourne.*
2. *To request the Mayor of Melbourne to enforce as stringently as possible the various provisions of the Town's Police Act; and use every precaution to remove the masses of filth and offal which disgrace many portions of the city.*
3. *To carry out so far as practicable, a system of surface drainage by rendering the water channels in the several lanes and streets in the city free from obstructions.*
4. *To apply to the Executive for authority to clear the space between Melbourne and the beach, so that the obstruction to the free access of pure sea air may be removed.*
5. *To point out to the Government the danger to the public health from the system of laying out a narrow lane alternately with a wide street, and urging the propriety of forming the streets henceforward of a uniform width (VPRS 3181/P0, unit 364).*

Although not adopted as one of the final committee recommendations, one of the solutions proposed by Rev Thomson to alleviate the problem of poor surface drainage was 'the filling up of back yards to the level of the streets, or at least to above the level of the gutters, with means to carry the surface water off as it fills' (Thomson 30/6/1848 in VPRS 3181/P0, unit 364). Interestingly, the committee's recommendations went only so far as to recommend improvements to drainage in streets and lanes, without mention of improving the situation on private property, despite having acknowledged that pooling stagnant water on private property was a serious health concern.

As Dunstan has noted, many of the issues identified in the 1848 report continued to plague the town for some time. In 1849 an observer remarked that 'on every street corner one meets with something offensive...One cannot pass a butcher's shop without being half poisoned, and the whole city reeks with unsavoury odours' (Howitt 1849, in Dunstan 1984: 122). The odours were associated not only with the butchers' shops and slaughtered animal, but also to the cesspits present 'low-lying and poorly drained areas' (Dunstan 1984: 122). An 1852 report on the sewerage and supply of water for Melbourne noted that the backyards and enclosures of many Melbourne properties contained

astounding accumulations of putrescent substances and rubbish of all kinds...Many of the foundations of buildings are greatly injured owing to the saturation of the subsoil by liquid excrementitious matter. In the block bounded by Great and Little Bourke Street, Elizabeth Street, and Swanston Street, there is a space of upwards of one hundred square yards hitherto occupied by a green putrid semi-liquid mass, partly formed by the outpourings of surrounding privies; and

in the blocks north and south of this one, the very passages and rights-of-way are similarly saturated (Hodgkinson 1852, quoted in Grant and Serle 1978: 100-101).

2.1.3 Acts to improve the surface drainage of Melbourne

The response to the Sanatory Committee report, particularly in respect to the surface drainage of the city, was slow to eventuate. At an 1850 public meeting of the ratepayers of Melbourne reported in the *Geelong Advertiser* there appears to have been common agreement that the main problem lay with the lack of power vested in the City of Melbourne to enable the Council to address the issues identified in the 1848 report, although one speaker did suggest that the complacency of the local population was also to blame, noting that ‘the people care not for drainage and cleanliness, they are so full of meat, bread and brandy and water’. McCombie, who had chaired the Sanatory Committee asserted that subsurface drainage was required and also noted that ‘many of the streets has been raised, which tended to dam back the water and flood behind the houses, in other places it lay in pools, exhalations from which by the action of solar rays, vitiated the atmosphere’. Other speakers noted that subsurface drainage could not properly operate or be cleaned until a reservoir and supply of water had been established (*Geelong Advertiser* 9/5/1850).

Presumably at least partially in response to the findings of the Sanatory Committee, and the lobbying carried out in 1850, and certainly in response to the worsening conditions in Melbourne, two Acts were passed in the early 1850s which were intended to alleviate some of the drainage problems in the City of Melbourne. The first (Act 14, Victoria No 20), in 1850, provided the City Council with the ability to order private landowners to adequately control the drainage in private lanes, alleys, courts or other access ways that serviced their properties.

The second (Act 16, Victoria No 38), assented to in 1853, went further and allowed the Council to order private landowners to fill their land to the level of adjacent streets or lanes so as to enable proper surface drainage across the city – this Act would directly address the issue and the recommendation made by the Rev A.C. Thomson some five years earlier.

Act 14 Victoria No 20 (1850) – An Act for regulating the formation, drainage, and repair of Streets, Courts, and Alleys on private property within the City of Melbourne

This Act, assented in September 1850, provided the City Council with the ability to order the paving, levelling and draining of the several private streets, courts and alleys which then existed within the City of Melbourne, and the further ability to take action to ‘remove all obstructions, and to pave, flag, macadamise, level, drain, sewer and otherwise complete or repair the same...pursuant to the said order; and to ascertain, determine, and charge such respective owners with their several proportionate parts of the costs, charges,

and expenses thereof, according to and co-extensive with their respective tenements adjoining or abutting on such street...'

Act 16 Victoria No 38 (1853) – An Act to amend in certain respects An Act intituled 'An Act to Incorporate the inhabitants of the Town of Melbourne,' and to make further provision for the cleansing and improvement of the City of Melbourne.

This Act gave the city Council further ability to access private property for the purposes of constructing drainage, though compensation would be owned to the landowner, and the ability to order owners of private property to raise the level of their land to that of adjacent street. It is this latter part that is, of course, of most relevance to the current project. The most salient portions of the act are reproduced below. The full act is provided in Appendix 1.

Whenever it shall be made to appear to the Council of the said City upon the statement or complaint in writing of the Surveyor thereof that the surface of any yard or land situated in the said City and not being a street therein is lower than the level of the nearest street or of the street sewer or drain into which the water off the said yard or land should in the opinion of the said Surveyor flow or be made to flow it shall be lawful for the said Council at any time by writing...to order that the surface of such yard or land or any part thereof shall be raised to such a height in such manner and within such time as to the said Council may appear expedient and thereupon the occupier or owner of the said yard or land shall in such manner and within such time as shall be expressed in such order raise the surface thereof to the satisfaction of the said Surveyor.

If a landowner refused such an order or did not carry it out within the specified time, the Council was empowered to have the land raised and subsequently charge the owner for costs.

The upshot of these pieces of legislation is that the scene was set in 1853 for the City Council to commence ordering private landholders in the area under the Council's jurisdiction to fill their properties to the level of surrounding streets or lanes.

The progression from street forming and levelling, to private laneway formation, levelling and drainage to the filling of private yards is a logical one. The building up of streets (including private laneways, alleys and courts) over lower-lying ground resulted in the predictable interruption of the natural drainage of the CBD – in effect causing newly formed streets to act like dams and resulting in the pooling of surface water that may have once flowed away. The only viable solution to this was to build up adjacent land with the aim of directing all water into street drainage with the hope that it could be controlled in that manner - particularly in the absence of any proper sewerage system which was not to arrive for several decades (Dunstan 1984:

233). It was in the mid 1840s, when the City Surveyor recognised that Elizabeth Street was, in effect, the main sewer of the town, and according to Dunstan work commenced on ‘the formation of large two-foot deep concave channels that were to remain a feature of Melbourne streets for the rest of the century’ (Dunstan 1984: 127). It was the formation of the streets, and adjacent land to their ‘permanent level’ and the creation of street side drains that appear to have been the main focus of the effort to improve city drainage through the 1850s and into at least the 1860s.

3 Filling events – 1850s and 1860s

3.1 The nature of the historical evidence and the nature of the filling events

There is ample historical evidence for a number of filling events, provoked by orders from the Council, having taken place across Melbourne in the 1850s and 1860s, and most likely in the decades beyond⁹. These orders are recorded in such places as the minutes of the meetings of the Public Works Committee (VPRS 4037), and references to some may also be found in newspaper reports of committee meetings. For the most part, the records in these sources provide an indication as to the location of the property – though sometimes this can only be determined with additional historical research because in many situations the property is recorded as that belonging to a particular landowner in a particular street, rather than by any designation that would easily identify the property. Rarely do committee meeting minutes indicate the depth or type of filling required. Some of this information (for a small number of the filling events) has been found in other sources, such as in the Town Clerk's correspondence relating to streets. Letters concerning filling events found in these correspondence files tend, because of the nature of the communication, to provide more detailed information concerning the nature of the filling.

Appendix 2 provides examples of a sample of filling events, or correspondence concerning filling events, derived from historical sources, that took place in the 1850s and 1860s. The list is considered to be a sample on the basis that a) not all of the available records from the 1850s and 1860s that may contain data on filling events have been examined (see Section 1.1), b) that not all filling events will have been recorded in any government or public documents, and c) that not all references to filling events encountered for locations outside the CBD study area were recorded during the historical research. The approximate locations of each of these filling events (where known) is shown on Figure 6. Thirteen of these are located within the designated study area for this project (within the area bounded by Victoria, Spring, Flinders and Spencer Streets) an additional twelve mapped events are located outside the study area but are close to its border as shown on Figure 6 – these are clustered in either Carlton or West Melbourne, respectively. Other filling events listed in Appendix 2 but not shown on Figure 6 include probable filling events in locations more

⁹ Because the focus of this project initially was on early, deeply buried archaeological features, and because of limited funding and therefore time, historical research undertaken for this project has focused primarily on the decades leading up to 1870. There is evidence that filling orders and events took place in various parts of Melbourne well beyond 1870. For example, *The Argus* of 18th of June 1883 reported on correspondence from a resident to the Brunswick Council in which he stated that filling up the land that he had been ordered to fill would simply direct water into his neighbour's land, in 1892 Thomas Bates of Port Melbourne was ordered to 'fill up his land in Stokes Street (*Standard* 18/6/1892) and an 1890 *Report on the Sanitary Condition and Sanitary Administration of Melbourne and Suburbs* noted the on-going construction of houses on low-lying ground (particularly in South Melbourne) which became the receptacle for stagnant water when streets or footpaths were raised to a higher level (Gresswell 1890: 6).

removed from the study area, for example further north in Carlton (near the intersection of Palmerston and Station Streets) and in East Melbourne.

The list provided in Appendix 2, which totals 35 known or inferred¹⁰ filling events, is by no means exhaustive – it is likely that additional, undiscovered, filling events occurred both inside and outside the CBD study area in the 1850s and 1860s, and it is known that additional filling events occurred in later decades, certainly outside, and possibly inside the study area. Additional research would be required in order to complete a more detailed and extensive inventory of filling events.

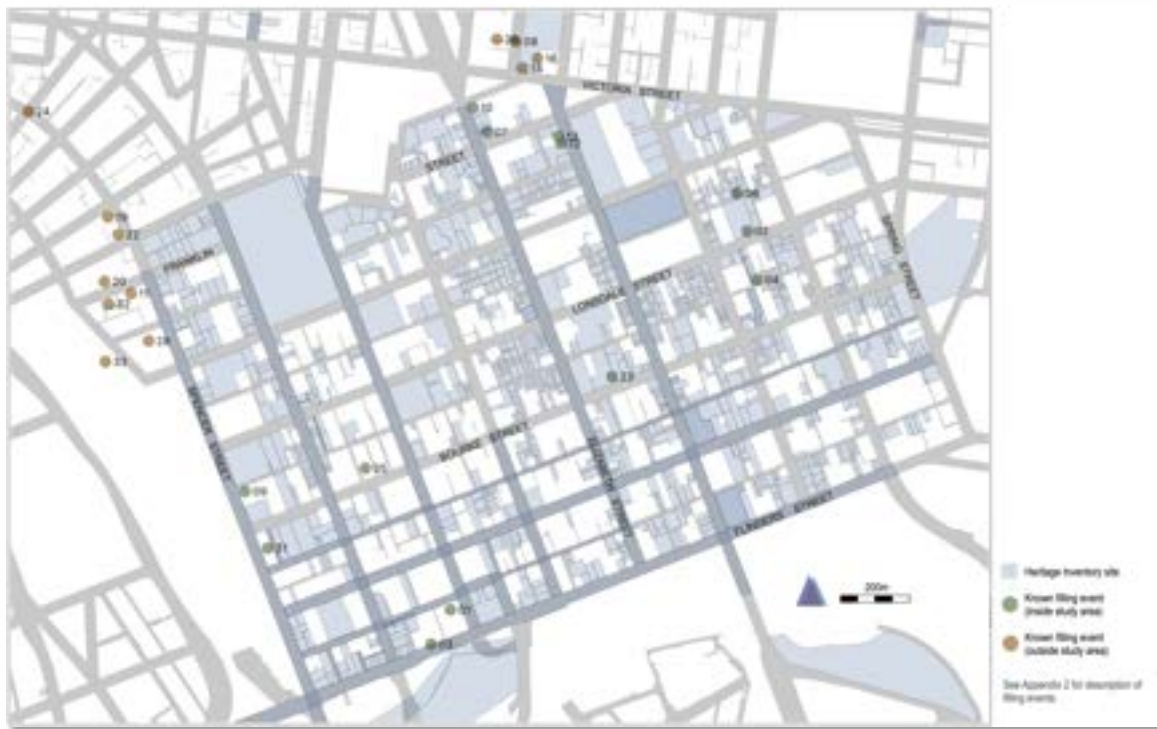


Figure 6 Locations of filling events listed in Appendix 2 overlaid on a plan of the distribution of Heritage Inventory sites.

The majority of the historical data concerning orders to fill comes from the minutes of the Public Works Committee meetings. For the most part, these meeting minutes record that orders were made to land owners (sometimes occupiers) to fill property to the level of adjacent streets, lanes or other rights of way. In most cases, these records do not spell out the depth of fill that would be required to comply with the order, meaning that for most of the recorded events the meeting minutes are not adequate to determine whether the filling required was to be a few inches or a few feet (in the measurements of the day) deep.

¹⁰ A small number of the references (for example 15 and 21) are to inferred filling events – these are references that describe conditions that likely led to filling events.

It should also be noted here that it is probable that in many instances landowners filled up their properties without the need for Council orders or intervention – in these cases no record of the event is likely to exist in the City Council or Public Works Committee records.

3.1.1 Locations of filling orders

In the majority, perhaps all, of the cases viewed, the requirement to fill a portion of land was the direct consequence of the formation of the adjacent street. As discussed earlier, street formation, particularly in low-lying locations, had the effect of disrupting any existing surface drainage that followed the natural contours of the city. The effects of this in some locations, appears to have been dramatic, and in some cases even disastrous. One such area is the supposed location of 'Lake Lonsdale', where conditions appear to have worsened after the formation of Lonsdale Street:

[letter to the editor] 'Sir, - from the report of the Registrar General lately published, it would appear that there is a very great preponderance of deaths from epidemic and infectious diseases. Now, as one great source of diseases of this character is derived from the existence of fetid nuisances, such as open ash-pits, or pools filled with decomposing matter, it assuredly lies within the power of those directing our municipal affairs greatly to lessen the rise and spread of these alarming and fatal evils...not far from my residence there is an open space of ground, on the north side of Lonsdale street, between Russell and Stephen streets, which is an eyesore to the inhabitants, and an evidence of disgraceful neglect on the part of whose duty it is to inspect such nuisances. Towards the close of last summer the street and pavement were here raised several feet and this large open space on the north side consequently made a hollow. No provision was made for either draining the water off, or filling up the place level with the road, and it has therefore become the reservoir of all the winter rains - in fact, a miniature Yan Yean. At present, this standing pool, for it is nothing else, is in a condition to be truly dangerous to the health of the inhabitants, being filled with decayed and decaying vegetable matter, as also a sprinkling of dead rats, and other animals. The locality is populous, and there is a numerously attended day school upon the banks of the verdant water (The Age 11/9/1855).

Certainly, the historical contour lines derived from the 1853 Hodgkinson plan of Melbourne illustrate the dam-like consequences of street-forming in this location (Figure 7). An 1857 article from *The Age* also noted the dam-like results of the formation of the streets:

Like all modern cities, where the erection of dwellings must precede the formation of permanent road levels, Melbourne presents numberless instances of houses adjoining the sides of rights-of-way whose floors are several feet beneath the street level, and as in most instances the channels,

from the absence of sewers, are incapable of carrying off the storm water rushing down from higher ground, and finds its way into the basement storeys, and accumulates beneath the floors, rendering the dwellings wholly unfit for human habitation. Sutherland Street presents a striking example. As the street level is raised nearly four feet above the original slope of the ground, it follows that the houses built along its sides have been left as much below the new level...(The Age 23/3/1857).



Figure 7 Detail of Proeschel's 1853 map of Melbourne with Hodgkinson's 1853 contours overlaid. Note the basin-like conditions of the block bounded by Lonsdale, Little Lonsdale, Russell and Stephen Streets (with water flow likely to enter from the north northwest, north, and north northeast) with conditions likely made worse by the forming of part of Lonsdale Street in this location. According to the key the stippled areas of the map are vacant land, the L-shaped and T-shaped buildings note the locations of a school and chapel, respectively.

In other locations, the damming of water resulting from road construction had even more serious consequences, as is outlined in this entry in the Public Works Committee meeting minutes of August 1856.

Letter read from the Honourable the Attorney General enclosing a copy of verdict at inquest on the body of a man found drowned in a waterhole off Spencer Street. Town clerk instructed to forward to the Attorney General copies of the correspondence that has taken place between the

public works department and the government and the corporation relative to the fencing in of crown lands abutting on newly made streets (20/8/1856 in VPRS 4037/P03, unit 3).

And near Dudley Street in West Melbourne four years later:

Right Worshipful Sir, I have the honour to complain to your worship of a nuisance near my residence in Dudley Street west, there is a large water hole or pond in a right of way leading off the above-mentioned street endangering the lives of all passersby. A child was only a few days ago taken out of it by a person passing at the time or it would have been inevitably drowned. The street has lately been kerbed and channeled which has been the means of making it much worse being deeper and a great deal more dangerous...(W. C. Thomas 13/9/1860 in VPRS 3181/P0, unit 653).

In other instances, land filling orders were required in order to rectify much more modest differences between property and street levels, for example in the instance of Edward Barker's property on Bourke Street, cited below.

3.1.2 Unrecorded filling events

The notices that stemmed from the City Council ordering landholders to fill up their properties or, if such orders were not complied with, from the issuing of a contract to have the land filled by a contractor, form the main evidence available for the undertaking and distribution of the filling of private land in the 1850s and 1860s. It is likely, however, that there exists also a whole division of landowners who undertook the required filling without the need for government intervention. Certainly, there does exist ample evidence of landowners attempting to comply with the permanent street levels – enquiries regarding the projected street levels from owners planning to build were a common feature of public works committee meeting minutes in the 1850s. Their very ubiquity in the minutes gives the impression, however, that the permanent levels of many of the streets of Melbourne were somewhat in flux for some time. For example, Edward Barker, a resident of Bourke Street (in number 133, on the north side between William and King Streets, according to the 1854 Butterfield directory) contacted the City Council regarding the changing level of the street:

Four years ago the owner of the house I now occupy applied to the city surveyor to name the intended future level of the street and afterwards channelled and kerbed the distance at his sole expense but now I find the path way in front of the property below me has been raised about eight inches which I presume to be the permanent level and which will cause the front of my residence to have a stagnant pool of water which will become offensive, may I therefore beg you

will oblige me by giving instructions for it to be raised to the level now forming (Barker 13/8/1855 in VPRS 3181/P0, unit 822).

The raising of the streets to permanent levels was not the only problem – other landowners found that the lowering or cutting of adjacent streets left their property at odds with the permanent levels:

I beg to lay the following case before you. In 1857 I purchased a piece of land in this street as no levels could be given for any streets below or west of Spencer Street proceeded to erect a house thereon at a distance of 44 feet from the street so that the latter being formed the new levels should not interfere with the house then erected.

On the 22nd March being desirous of building close to the street I applied for the intended formations and erected a house accordingly. Since the commencement and completion of Dudley Street the levels have been made entirely different from those given to me the consequence of which is that my house has been raised 18 inches higher than originally intended and I have been put to the expense of ordering bluestone steps and have been unable for the last six weeks to [?] the [?] with apparently little prospect of yet doing so - my design for building the additional houses is also completely frustrated and I have therefore to beg the corporation and enquire humbly of your honourable body into this matter...(William Wallace 5/9/1859 in VPRS 3181/P0 unit 464).

The clear evidence for landowners on the whole desiring to comply with filling obligations prior to any Council-issued filling order suggests that there may be numerous locations across the CBD, and probably in the inner city also, where filling took place in the mid to late nineteenth century for which there is not likely to be any direct historical evidence in the Council records.

3.2 Complying with filling orders

It can be assumed that the majority of landowners who received filling orders complied without further difficulty, and in many instances the only record of the filling event is an order to fill which was then carried out by the landowner. It should be noted that in many instances filling orders appear to have been made for yards or empty allotments on which no, or few, structures had yet been constructed. There were certainly instances in which filling orders were issued on properties containing buildings, including houses, however. As may be predicted, some such instances caused financial or other difficulties to landowners

Correspondence from those landowners who sought assistance from the city Council or the public works committee, where it is preserved in the records, provides some insight into the processes of filling, and what may have been involved when structures were present on the property.

A letter from John Smith to the City Council dated 1861, provides the only detailed evidence in the historical record found so far for the process involved in the deep filling of a property that contained a substantial brick or stone structure.

Smith was employed as a bricklayer in Benalla when he became aware of an order to fill his property located in Alma Street, south Carlton. Smith, though willing to comply with the order, was unable to return to Melbourne to complete the task and was forced to seek Council assistance. His letter to the Council is informative in that it provides a detailed outline of the process of filling a property in an instance where an existing structure was involved, and is all the more of interest in that it appears to describe a process similar to that carried out at the houses unearthed at the Jones Lane/Wesleyan precinct excavations in 2017 (see Section 4.2.2). This involved the removal of floors, windows, doors and all portable structural features, prior to the filling (or partial filling¹¹) of the lower storey of the house. Smith's letter was written in response to an order to fill issued by the Council in October of 1861 (Figure 8). Both are reproduced below.

¹¹ While it is clear that the filling required would be over the floor level of the lower part of the house, it is unclear how high the required filling was to be.

MR. JAMES SMITH'S PROPERTY.
Councillor STORY moved—
“That the council, in its capacity of Local Board of Health for the city of Melbourne, now order that notice, in accordance of the 13th section of the act 18 Victoria, No. 13, be given to James Smith, of or supposed to be of Benalla, in the colony of Victoria, bricklayer, the overseer, proprietor, or owner of a house and land in a right-of-way called Alma-street, in Smith Ward, being on the north side of the said right-of-way, commencing 115 feet 6 inches from Bouverie-street, and having a frontage of twenty-six feet to the said right-of-way by a depth of twenty-seven feet, portion of Section 14, Allotment 3, city of Melbourne, being a place containing or used for the collection of drainage, filth, water, matters or things of an offensive nature and likely to be prejudicial to health, requiring him within fifteen days from and after the date of this order to drain, cleanse, or fill up the said place; and that, in the event of his failing to comply with this order within the time herein specified, this council, as Local Board of Health for the city of Melbourne, will execute the works necessary, and will cleanse and fill up the said place at the expense of him the said James Smith; and that John Kelly, Esq., the city surveyor, be and he is hereby authorized, empowered, and directed to, in the event of such failure, execute the said works and cleanse and fill up the said place at a cost not exceeding £10, and thereupon to proceed, on behalf of this council, as the Local Board of Health aforesaid, against the said James Smith for the recovery of the cost so incurred.”
The motion was seconded, and carried.
The council then adjourned.

Figure 8 Excerpt from *The Argus* (26/10/1861) describing a filling order for property owned by James/John Smith in Alma Street, Smith Ward (Carlton).

Sir, I received yours of the 13th inst and I was not aware that all the lane had been paved but mine if Mr Thompson had sent me word that he was going to fill it up I would have done mine at the same time it is rather strange he did not inform me off it as he did not do so as he promised me. I have no friend or anyone to look after it. I should like you to look after it if you would be so kind as to look after it you would greatly oblige me and I will pay all expenses and you know best what it wants doing to the place so that there may be no more complaints as I do not want to annoy no one, you will see the summons that you sent had the wrong name signed in it it was James Smith and it should have been John Smith so I hope you will appear in my behalf and tell the Magistrate that I attended to the affairs as soon as I knew about it as the nuisance would not be abated by filling up the lane. I have considered that it would be best to pull up the floors

and take all the joists out and fill it up as it stands, I don't care about making it fit for a tenant to live in you know what it wants doing too and let it by tender the same as your own send me the amount of tender and I will send the money down by the return of post. I will state what I want

First

fill up the right of way and make it same as what is done.

Second

take up the boards and joists and take off the doors also the chimney piece take down and put them in the room above the house. Board up windows and doors with the boards of the floors fill up the inside of the house level with the road and leave the joists in the backyard after filling in the yard also to leave all the steps and stone there is in the yard on the top and not to fill them in leave them so that they can be got to hoping you will be so kind as to comply with my request I have the honour to be your humble servant, John Smith, Bricklayer

PS I am busy at work and I cannot come down and leave my work as it is not often bricklayers have plenty of work to do therefore I cannot neglect it (PROV VPRS 3181/ P0, unit 822).

Judging from historical records viewed for this project, it appears that the majority of landowners complied with land filling orders if they were able, although there were some legal threats made to the Council, as well as at least one instance where it appears that there was an outright refusal to cooperate.

In reference to paragraph in report of 21st ulto. With regard to Mathew [Conthes?] land in Block 35, Allot 17, Bourke ward, it will be necessary the usual form of notice should be served on his agent Mr David Lyons. I understand from my [enquiries??] made that Mr Lyons is not willing to spend more than £20 - which the cost of filling up will amount to about £100. Under the circumstances it seems useless to call for tenders without some guarantee of the money being paid to the Corporation...[?] (note from Adams, City Surveyor to City Council 5/11/1868, VPRS 3181/P0, unit 464).

As may be predicted, the requirement to comply with filling does appear to sometimes have depended on status or connections, or a lack thereof:

Letter read from Mr J.J.[?] A'Beckett Bishops Registrar requesting to know if the corporation would construct a culvert under the embankment in front of the Bishops residence for the purpose of

carrying off the water which has accumulated in the garden in consequence of the street having been lately raised above the level of adjoining land.

The town clerk was instructed to reply that the law obliges persons having property abutting upon streets to raise their land to the level of the street but the committee have no objection to allow the Bishop to run a culvert under the embankment in question (A'Beckett 16/7/1857 in VPRS 4037/P0, unit 3).

3.2.1 Financial difficulties with complying with fill orders

As may be expected, complying with the filling orders was for some landowners, a heavy financial burden. Both Richard Hill and Ann Sigsworth, owners and occupiers of wooden houses in Franklin Street, were forced to appeal to the Council for assistance. These appeals for assistance offer some insight into the filling process where less substantial structures were involved.

The 1856 petition of Richard Hill whose wooden house would be 'almost buried' by the filling required to raise his land to the newly formed street level indicates that he was able to raise the level of his wooden house above the proposed filling:

To the Worshipful the Mayor of Melbourne and Councilors of the City of Melbourne.

The petition of Richard Hill, Franklyn Street, North Melbourne. That by the improvements now being made at Franklyn Street your petitioners house will be almost buried, the earth being raised as high as the roof.

That your petitioner has been very unfortunate in his Labor at the Goldfields, and has now no further means than would be sufficient for the expense of raising his wooden house by the aid of screws, if the Council would allow the earthwork to be filled in by the officers.

That your petitioner therefore prays that the corporation will charitably direct that the earthwork may be done by your Officers, and save the petitioner from ruin.

The petitioner has asked for the signatures of a few persons to this petition as a guarantee of the truth of it.

That petitioner hopes the equity of this request will be apparent to every member of the corporation will give him as much assistance as he can (VPRS 3181/P0, unit 822).

Hill's petition was dated April 1856, and was marked 'granted' on the 1st of May that year. Interestingly the Melbourne City building registration (MCC registration No 865) records list Richard Hill as building or registering a wooden house in Franklin Street later that year in December of 1856, possibility indicating that

the house-raising operation was not entirely successful, or perhaps caused too much structural damage. The following year Hill built another wooden house, also on Franklin Street (MCC registration 477). Bourke Ward rate book records suggest that the two houses were most likely on the same property – in the 1862 rates, for example, Hill was listed as the owner of two adjacent wood houses each consisting of ‘3 rooms and a skillion’ one at 37 Franklin Street, and the other ‘off Franklin Street’. His property appears to have been located between Adderley and Spencer Streets.

Ann Sigsworth owned a small wooden house towards the western end of Franklin Street, not far from that of Richard Hill. It seems to have been located off the street, probably fronting on to Franklyn/Franklin Place, a laneway off Franklin Street between Spencer and Adderly Streets. Bourke Ward rate assessments dating to 1859 and 1862 describe the property as consisting of a ‘wood shanty and yard’ and as a ‘wood shanty’ with two rooms, respectively, which would seem to corroborate Sigsworth’s claims of indigent circumstances. In 1868 Sigsworth received a notice to fill up her land, and was forced, like Hill, to appeal to the Council for assistance to do so:

Gentlemen, Having received notice (to fill my land up level with Franklin Street) from City Council. I beg leave to state that I am quite unable to do so in consequence of indigent circumstances. The cost of filling up would be much more than the value of my land.

Gentlemen, hoping that you will kindly take my case under your consideration as I am a widow and have been for many years.

Gentlemen, hoping that you will take my case into your kind consideration, your petitioner will in duty bound ever pray. I beg to remain yours, etc., Ann Sigsworth

Sigsworth strengthened her case by including the signatures of eight witnesses, John P Fawker MLA amongst them, who were willing to testify that they ‘consider your petitioner (Ann Sigsworth) a person worthy of your kind consideration’ (VPRS 3181/P0, unit 464).

Sigsworth’s appeal appears to have been granted. Rate books indicate that she remained in possession of and lived in the two-roomed wooden house off Franklin Street through the 1860s and her will and probate documents indicate that she retained possession of the property up until her death in 1876 (VPRS 28/P02, unit 51, item 14/826). In this instance it is unclear whether house-raising was required, or whether the filling order was complied with by yard, and perhaps under-floor, filling only.

3.2.2 The process of filling vacant land

The City Surveyor’s contract specification books are available for the parts of the 1860s and they provide some information concerning the manner in which filling was expected to be carried out when it fell under

the remit of the City Council (i.e. generally when landowners failed to undertake the filling themselves and failed to comply with a city order to undertake the filling, or they requested that the city undertake the filling on their behalf). The following text outlines the specifications for ‘filling up ground in Allotment 17 Block 32, Smith Ward (Carlton) in the City of Melbourne’:

18 June 1870

- 1. Contractor shall find all labor tools and materials requisite for the due and full completion of the work.*
- 2. The accompanying plan shows the specifications of each piece of ground to be filled marked A&B respectively and the contractors is to fill up same from its present level to the permanent level of footpath at building line street, being eight inches above the present level of kerb, and sloping from there with a regular fall and properly levelled off to the right of way now in the course of formation on the same allotment.*
- 3. The stuff used for filling must be good sound earth, approved by the City Surveyor, tipped into the hole and each load properly levelled off, the whole being brought to the surface in proper courses...(VPRS 9441/P01, unit 2).*

Whether such a process would have been undertaken by landowners carrying out filling works themselves is uncertain. By the same token, it isn't clear whether the type of fill used by private landowners would necessarily have been of the 'good sound earth' required by government contracts. Indications from the results of the Wesleyan site excavations suggest that fill may have been sourced from various locations or sources (Section 4.2.2).

3.2.2.1 The value of fill

What the letters of Ann Sigsworth and Richard Hill suggest is that, apart from any cost associated with raising, altering or losing houses or other structures, a filling order could have relatively severe financial consequences on landholders simply because of the cost of sourcing, and likely carting, fill. It can be reasonably surmised that numerous orders to fill may have resulted in a shortage of fill, or at least a rise in its value. One may also wonder where, in the mid-nineteenth century, prior to the relatively easy availability of mechanical excavation and motorised transportation, landowners could source adequate fill to level their yards.

Information in various of the city Council records, but particularly in the records of the Public Works Committee, make clear that fill was a sought-after commodity in Melbourne of the 1850s and 1860s. There are numerous requests for fill to be provided to landowners from nearby road cuttings for the purposes of

yard filling. In addition to Hill and Sigsworth, for example, an unidentified landowner in Franklin Street, asked the Public Works Committee for fill in 1862:

21 Franklan Street

Sir,

May I be allowed to ask the liberty of taking a few loads of gravel from the cutting at the top of Franklin Street to fill up two rooms caused by the Corporation having risen the road above the rooms of the house...I shall be glad to give you any information if you consent – waiting for/ per? Instructions. [signature not legible¹²] (14/4/1862, in VPRS 3181/P01, unit 822)

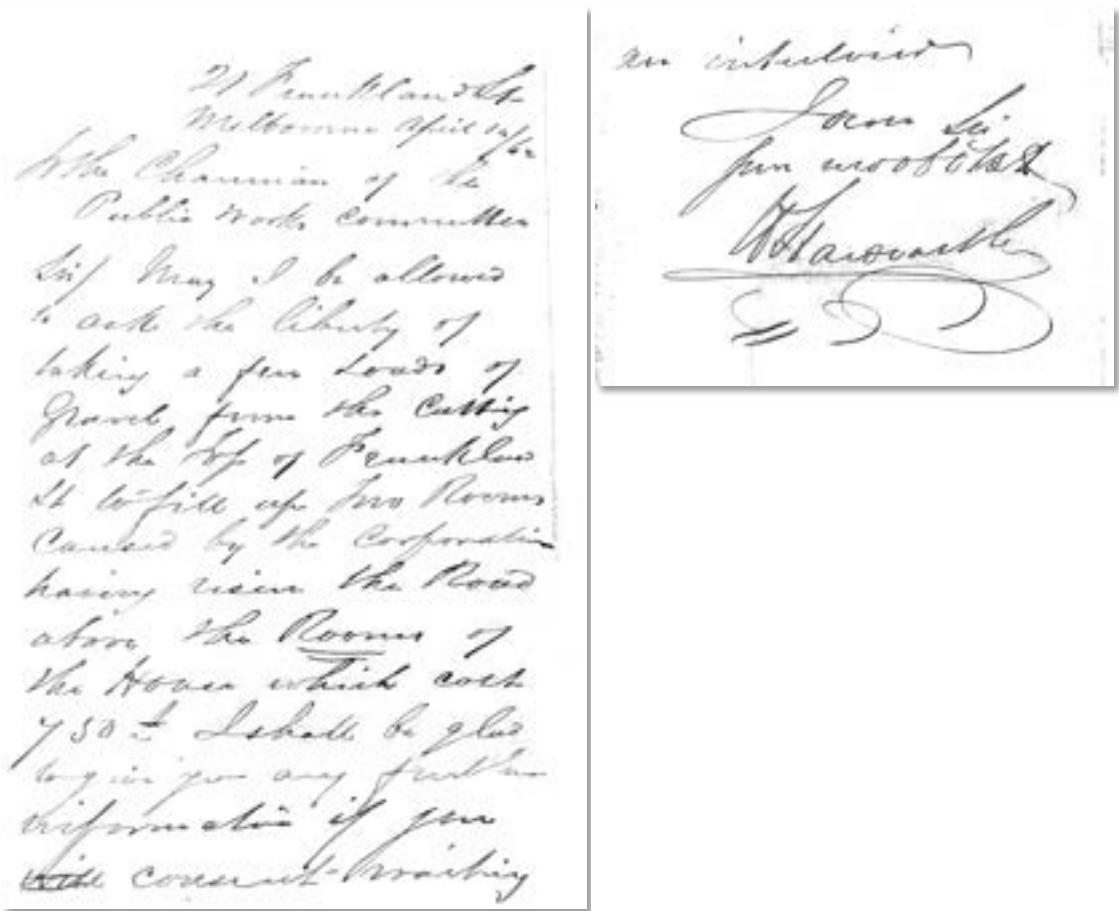


Figure 9 Copy of a letter from '21 Franklan Street' requesting fill from the Public Works Committee (VPRS 3181/P01, unit 822).

¹² A search through rate records relating to Franklin Street (in both Bourke and Gipps Wards) did not enable us to identify the author of this letter, or the property in question. Although an address of 21 Franklin Street was provided on the letter, the numbering of Franklin Street was at this time inconsistent.

There are also many instances in the Public Works Committee minutes record orders made to the City Surveyor to instruct him to, in turn, instruct road-making contractors to deposit fill excavated from road cuttings on to private property. For example, in October and November of 1856 alone, the following instructions were issued:

City Surveyor instructed to order Mr Campbell to give off Victoria Street as much filling as will be sufficient to fill up the yards of Mr Abercrombie off Swanston Street between A'Beckett and Franklyn Streets (8/10/1856 in VPRS 4037/P0, unit 3).

City surveyor instructed to order contractors H.N. Campbell and Co. to fill up the property of Mr P. Nelan in Swanston St.

City Surveyor instructed to order the contractor for Victoria Street to fill the allotment at the corner of Victoria and Leicester Streets (29/10/1856 in VPRS 4037/P0, unit 3).

The City Surveyor instructed to fill the gully running through blocks 14, 25, 30 and 31 Smith Ward, and that the stuff for such purpose be taken from the works being executed in Russell Street (19/11/1856 in VPRS 4037/P0, unit 3).

Fill excavated from street cuttings from Council work was considered to be the property of the Council, to be utilised as the Council saw fit. Apparently, this was not spelled out in Council contracts until 1856, however, when a disagreement, or a misunderstanding, with a contractor resulted in it being written into future contracts:

Letter read from John Finlay respecting the payment of £50 which he was fined for disposing of stuff from his contract in Lygon Street.

Mr Finlay was called in and acknowledged that he has sold a quantity of fill to persons in North Melbourne.

Resolve that Mr Finlay be paid the £50 and that the City Surveyor in all future specifications, to insert a clause preventing the contractors from disposing of any description of material out of any contract on works carried out under the city Council, under penalty (24/12/1856 in VPRS 4037/P0, unit 3).

It may be that after this point in time, Council began generally to charge landowners for the receipt of fill, or perhaps the requests for fill became overwhelming. In 1857 the Public Works Committee meeting minutes make mention of the appointment of a sub-committee which would have power 'to direct the disposal of the filling obtained from the King Street contract' (3/5/1857 in VPRS 4037/P0, unit 3). In the

following week an advertisement was to be placed in the newspapers to request that 'persons who have been supplied with filling stuff from the King Street contract' inform the Town Clerk 'what amounts they have paid for such stuff' (10/6/1857 in VPRS 4037/P0, unit 3). Whether this was as a result of poor bookkeeping on the part of the committee, or another contractor misunderstanding is not clear.

Another potential source of fill for residents or landowners in Melbourne in the 1850s were the unsold Crown Lands on the city fringe. In early 1855, in response to a request from the Mayor of Melbourne, the Colonial Secretary's Office sent the following reply:

In reply to your worship's letter of the 30th Ultimo. I am directed by His Excellency the Lieutenant Governor to inform you that he has been pleased to grant your request that certain citizens residing to the eastward of Elizabeth Street North should be permitted to remove earth from adjoining high unsold Crown Lands provided the surface be left level after the soil is removed (J. Moore to the Mayor of Melbourne 31/1/1855, in VPRS 3621/P0, unit 7).

This appears to have resulted in something of a free for all which shortly thereafter had to be brought under control.

Sir, I have the honor to call your attention to the injury done to the Crown Lands around the City, by persons possessed of permits to remove soil, granted by the City Surveyor obtained nominally for the purpose of filling a yard, but afterwards applied to the detriment of those carters who take licenses from my office to remove loam by competing against them with an article procured at a shorter distance.

If it is still found desirable to issue permits from the City Surveyor's office, I would suggest that persons should be compelled to take soil from some specified place, which would check the mischief now being done, or that the licenses should be issued solely from this office (Powlett, Crown Lands Office to the Mayor of Melbourne 29/6/1855, VPRS 3621/P0, unit 007).

Even the Public Works Committee found itself at times in urgent need of a source of fill. In April of 1855, when work was to go ahead for the formation of Flinders Street, from Russell Street to Wellington Street, on its permanent level, the Public Works Committee sought permission also to commence work on the great hall of the town hall. This provoked some debate at a Council meeting until an explanation for the need to commence the work was given:

Alderman Hayward explained that all the Public Works Committee at present required was permission to remove the soil and put in the foundation, and the stuff so removed was greatly needed towards the completion of the east end of Flinders Street (The Age 3/4/1855).

3.3 Summary of the known reasons and processes of filling in 1850s/1860s Melbourne

The historical research undertaken for this project has revealed that land filling was relatively widespread in the early decades of the post-contact settlement of Melbourne. Records of the filling are available primarily because of the Act which enabled the Council to order landowners to fill their property to the level of adjacent streets, and where this has occurred there are records of the filling orders in the minutes of the Public Works Committee meetings. Some detail concerning the probable impact of filling orders on landowners has been found in other City Council records – in some cases such orders could clearly cause major financial damage to property owners. Evidence in these records also points to fill being a commodity of some value – the idea of which is generally given little consideration in archaeological reporting of early Melbourne.

The known reasons and processes of filling can be summarized as follows:

- The need to level private property by filling was created by a combination of the natural topography of Melbourne and the formation of the city streets. The streets, by necessity, were raised above the natural ground level in low-lying areas, and their formation resulted in the blockage of the natural drainage of the CBD and the inner-city suburbs.
- Act 16 Victoria No 38 enabled the City Council to order the raising of land to the level of adjacent streets.
- The formation of streets, and the setting of permanent street levels appears to have been an on-going process through the 1850s and 1860s in the CBD and (what is now) the inner city.
- An order to raise land could be for as little as a few inches, to as much as several feet¹³, and the impact on existing structures on the property could range from very little to significant.
- There are clear examples of landowners making preparation to raise their houses above the fill, in other instances property owners were clearly required to more or less bury the lower floor of their house.

The filling events described above are not likely to represent all of the land filling that took place within the CBD study area in the 1850s and 1860s, nor is it probable that these filling events ended in 1870. In addition, it is clear that filling took place outside the CBD in inner-city locations in the 1850s, 1860s, such as Carlton

¹³ Some of the historical references, for example the petition of Richard Hill, indicate that the required depth of the fill was as high as the roof line of a house, suggesting a depth of over 6 feet. Archaeological evidence suggests that filling of 6 to 8 feet occurred at the Jones Lane sites (see Section 4.2).

and West Melbourne, and in later decades. Research undertaken to date provides an indication of the extent and impact of Council-ordered filling events in inner Melbourne, but additional research is required in order to ascertain its full extent.

It is likely, also, that there were instances where landowners filled their properties without the need for Council intervention, and alternative methods of research will be required to determine where these locations may be as they are unlikely to be recorded as filling orders/events in Council records. Some potential methods, identified in the course of the research undertaken for this project, are discussed in section 5.

4 Filling events and archaeology

This investigation into historical filling events in Melbourne of the 1850s and 1860s was prompted by the archaeological discovery of deep filling events in the Wesleyan Church precinct and across adjacent Jones Lane, off Little Lonsdale Street in the Melbourne CBD (Heritage Inventory sites H7822-1199, 1198, 2349, 1194 and 1195). This section of the report reviews other archaeological and historical evidence for filling in the Melbourne CBD, and considers the likelihood of other instances of such filling are likely to be present in the CBD, or indeed in the inner-city suburbs on its fringes.

As discussed in the previous section filling events recorded historically in the 1850s and 1860s may have been to any depth (from inches to feet), and for the most part, depths were not recorded in the public works committee meeting minutes. Land filling undertaken could have consisted of anything between relatively shallow filling of vacant land and yards, to deeper fills that involved a requirement to move, dismantle or abandon existing structures. The varying depths of the historical filling events make it archaeologically difficult to distinguish between the filling events of the type discussed in this report (generally early, some by Council order, but most, or all, as a result of the lifting of adjacent street levels by the Council) and the various types of filling (levelling fill, yard fill, demolition fill, etc.) that are commonly found on historical archaeological sites. For this reason, and because archaeologists working in the Melbourne CBD have not been aware of this filling phenomenon until quite recently, it is difficult to determine in many instances whether fill noted in an archaeological report is likely be one of the filling events discussed here, or the result of some other condition, constraint or process.

For this report a review was made of available archaeological reports from the Melbourne CBD, with a view to attempting to determine whether it was possible to distinguish these early street-level induced filling events from other. On the whole, apart from the small number of instances of deep filling, it was difficult to identify examples of the 1850s/1860s filling events. Apart from a small number of instances, few excavations have taken place in those locations where filling orders are known to have been issued, making it more difficult to investigate and assess the archaeological implications of these orders.

A review of available archaeological reports from sites in the Melbourne CBD did, however, reveal some probable other instances of deep (over 1m) filling, and also some instances of what appears to be shallower early yard and land filling which *may* have resulted from the same processes. They are discussed briefly below.

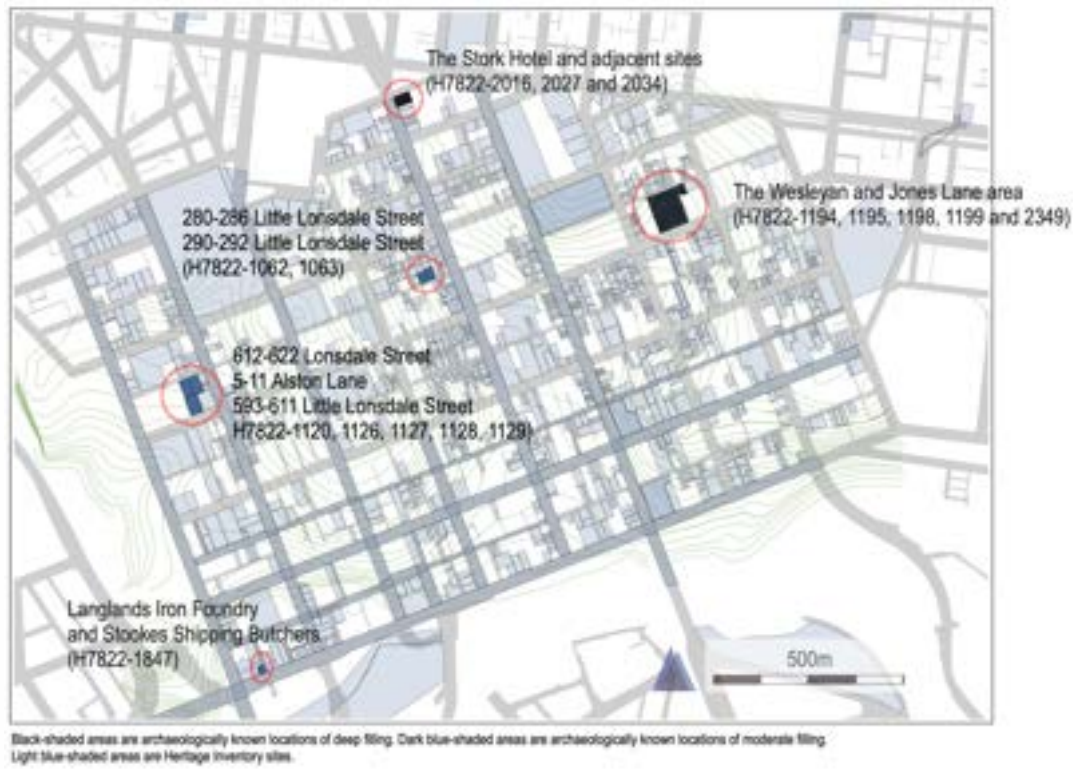


Figure 10 Location of the archaeological sites discussed in this section.

4.1 Possible examples of moderate early filling (up to 1m in depth)

4.1.1 280–286 Little Lonsdale Street (2–8 Sutherland Street) and 290–292 Little Lonsdale Street (H7822-1062 and H7822-1063) – O’Connor, Pepdjonovic and Sporal (2014)

The ALA excavation at and near the intersection of Little Lonsdale Street and Sutherland Street revealed what appears to be fairly extraordinary preservation of an early industrial site, and also apparent evidence of under-floor filling within footings, both on the eastern side of Sutherland Street. Interestingly the Bucks Head Hotel site contained no evidence of filling, deep or otherwise, which would appear to be at odds with expectations.

Known history of the Sutherland Street and Little Lonsdale Street intersection suggests occupation from at least the 1850s. The western side of the intersection was occupied by the Buck’s Head Hotel from the 1850s. The early history of the eastern side of the intersection is less clear – certainly by the late nineteenth century the area housed a series of residential and commercial premises, and a series of brick or stone structures existed in this location by the mid 1850s as indicated by the Bibbs plan (O’Connor et al 2014: 25-35, 43).

4.1.1.1 Archaeology

Of main interest to the current report are the archaeological features exposed on the eastern side of Sutherland Street, to the north of terraces that fronted onto Little Lonsdale Street. The removal of clay fill and features associated with later and earlier bottle yards that occupied this location, and the removal of a final layer of redeposited clay revealed the earliest phase of use of the site. Exposed features included the remains of a timber water tank stand, a hollow log pipe, a water mill cavity and a timber lined water race, all excavated into the natural ground surface. A well-preserved pile of discarded timber was also found in this area. Together these features and their layout appear to be the remains of a small remarkably well-preserved early industrial landscape that had been sealed under an early clay fill (O'Connor et al 2014: 102–106). A subsurface drainage system appeared to run from this area towards Little Lonsdale Street. It ran under the bluestone footings of the houses that fronted Little Lonsdale Street (O'Connor et al 2014: 143). Later clay fill and pitched floors deposited within the footings of the terrace houses *may* have been constructed in response to damp underfloor conditions, but the phasing of this suggests that it likely occurred decades later than the early filling which is the subject of this report (O'Connor et al 2014: 143). Interestingly, the Buck's Head Hotel site, located on the opposite (west) side of Sutherland Street, did not show any evidence of early filling, which would seem to be at odds with expectations (see below), rather natural ground was encountered at relatively shallow depths across the hotel site (O'Connor et al 2014: 122–140).

In this instance the early filling, and one may speculate, the dampness of the location appears to have been the reason for the very good preservation of the earliest archaeological features and deposits on the site.

4.1.1.2 Historical evidence and the likelihood of filling in other sites nearby

Although no filling order for this location was found in the sample of historical filling events provided in Appendix 2, an 1857 article in *The Age* described 'upwards of three feet' of water beneath houses in Sutherland Street which had been left below the level of the adjacent street when it was 'raised nearly four feet above the original slope of the ground.' The article's author goes on to urge that the authorities should intervene if the owners of these properties do not 'rebuild them at proper level' (*The Age* 28/3/1857, see also Section 3.2 for more complete text of the quote).

Given the slope of the ground in this location, it would seem that it should be the western side of Sutherland Street that would most likely be in danger of flooding if the level of Sutherland Street had been raised, which makes the lack of fill at the Buck's Head Hotel site all the more puzzling. The damming effect created by street level raising would, however, depend largely on the sequence of modifications to surrounding streets – raising a street on one side may have simply diverted drainage in another direction,

for example. There certainly exists the possibility of filling events existing in the general location of Sutherland Street, but the archaeological evidence available to date suggests that the prediction of the probable extent of this is not a straightforward matter. The results of this excavation also suggest that the need for filling may have been a highly localised matter.

4.1.2 Langlands Iron Foundry and Stookes Shipping Butchers (H7822-1847) – Myers, Mallett and Mirams (2015)

Site H7822-1847 was located at the corner of Downie and Flinders Streets, just to the east of Spencer Street at 556–560 Flinders Street, Melbourne. The site may have formed a portion of John Batman’s garden, but by the early 1840s made up a portion of Langlands Foundry – the first in Melbourne. From the mid 1860s the study area was occupied by brick shops or other commercial premises that fronted Flinders Street (Myers et al 2015: iv).

4.1.2.1 *Archaeology*

Natural ground surface was found to be 80–100cm below the current level of the adjacent Flinders Street footpath. An early brick-paved surface was found to be pressed into the natural ground in places, and other foundry-related features, such as pits and a brick-lined well, were cut into natural ground (Myers et al 2015: 16–28). It also should be noted that some shallow circular depressions and a deeper pit filled with animal bone and rubble cut into the natural ground were identified as features possibly associated with the pre-foundry (garden or orchard) phases of the site (Myers et al 2015: 13–15). A series of fills associated with the end of use of the site as a foundry and the levelling of the site for new construction were found across the excavated area:

Once demolition had taken place, rubble was left on site...Foundry waste was then dumped over the top of the whole area; beginning with the ash/charcoal deposit, then the thick ferrous slag deposit capping the sequence. This served to bring the site up to level, and provided a solid construction surface for the new buildings (Myers et al 2015: 32).

These fills were considered likely to date to the late 1850s or early 1860s, and appear to have been sourced from the foundry site itself. Whether these can be tied to the raising of street levels, or were simply demolition/levelling for new building is unclear.

4.1.2.2 *Historical evidence and the likelihood of filling in other sites nearby*

Myers, Mallett and Mirams (2015: 18) noted that there is ample historical evidence of flooding events in Flinders Street in the nineteenth century, and suggest that this is a reason for the brick and other hard paving surfaces associated with the early foundry site. Certainly, the early street levels drawn up by

surveyor Darke indicated that a significant amount of fill was required near the intersections of Collins and Flinders Street (Figure 2) and the 1853 contours indicate that the area was relatively flat and probably received water draining from areas to the north, not to mention being prone to inundation if the Yarra flooded. An excerpt from the minutes of an 1856 meeting of the Public Works Committee indicates that some filling did occur in this area:

A deputation consisting of Mr Langlands, Cole, Orkney, Willis, Merry and others, were received by the committee. Messrs Cole, Willis, Langlands, Dow and Orkney stated that they had received levels from the late city surveyor, to which levels they built. The original plan by Mr Lang, City Surveyor, was produced, by which it appeared that if that plan had been adhered to the street would have been about two feet higher than the proposed levels - City surveyor was instructed to prepare a new plan and section of Flinders Lane from Spencer Street to King Street, showing 15 inches of filling opposite Mr Langlands gate in place of 2 feet, 3 inches' (PWC meeting minutes 10/12/1856, VPRS 4037).

Another entry from May of 1855 indicates that work on the level of the western part of Flinders Street had probably occurred around that time:

Reference from the city Council of a petition from Mr Thomas James praying mitigation of the injury caused to his premises at the corner of Mincing Lane¹⁴ and Flinders Street by the alteration of the street level. Considered – referred to the city surveyor for report (PWC meeting minutes 25/5/1855, VPRS 4037).

No doubt there exists stronger historical evidence for the raising of the level of Flinders Street to mitigate against flooding from the Yarra. Contour data certainly suggests that any raising of the level of Flinders Street west (between Spencer and Elizabeth Streets) would likely have resulted in blocking natural drainage that flowed from the north, and must have resulted in the requirement to raise land on the north side of the street. Darke's proposed street levels certainly indicated the need to lift the street levels to the south of Flinders Lane in this part of the city. A report of the test excavations carried out at the Fox and Hounds Hotel (H7822-1889) located at the intersection of Queen and Flinders Streets provides some evidence that early filling may have occurred along that portion of Flinders Street. While available data from the site is limited, given that the available report is a test excavation only, the results do suggest that there may have been undisturbed early deposits in the lower levels of the site, and an early heavy dark clay fill (Clark and Tucker 2001).

¹⁴ Mincing Lane was located off Flinders Street between King and William Streets.

4.1.3 612–622 Lonsdale Street, 5–11 Alston Lane, 593–597, 599 and 601–611 Little Lonsdale Street (H7822-1126, H7822-1120, H7822-1127, H7822-1128 and H7822-1129) – Pepdjonovic and O’Connor 2016a and b

The study area for this project consisted of land located between Lonsdale and Little Lonsdale Streets to the east of Merriman Lane. Historical research suggested that post-contact occupation of the study area commenced in the mid nineteenth century. Brick structures/houses fronted the Lonsdale Street portion of the area from that time, and others faced onto Little Lonsdale Street from at least 1866 (Pepdjonovic and O’Connor 2016a: 34).

4.1.3.1 Archaeology

Of main interest to this investigation is the reported presence of early fills in part of the Zone 1 (facing Lonsdale Street) portion of the excavation area ‘laid down sometime between the 1860s and 1880s. The terracing fill raised and evened out the ground surface in Section E2’ (Pepdjonovic and O’Connor 2016b: 42). It also sealed in the features of an early kitchen garden which included ‘plant pits, waste pits, postholes, post pits and stake holes’ (Pepdjonovic and O’Connor 2016b: 42). The terracing fill contained ‘mixed domestic refuse, mottled silty clay, fieldstones, crushed brick and is typical of others found on urban sites. The majority of the deposit was likely transported to the site from another place’ (Pepdjonovic and O’Connor 2016b: 45). The fill was not found to cover all of the Zone 2 area, and it is considered likely that it may not have been spread in locations where standing structures existed at the time. No evidence of filling was found to be associated with early houses excavated to the north of this area. The earliest of these was situated on a slight rise relative to Little Lonsdale Street.

Whether this filling is the result of the phenomenon discussed in this report is open to speculation. The mixed nature of the fill suggests that it was sourced by the landowner, and the filling was not a contractor job of the sort described in Section 3.2.2. It is clear, however, that the fill used to level yard areas was early, and its deposition resulted in the good preservation of the features of an early garden that may otherwise have been destroyed by subsequent occupation.

Aboriginal stone artefacts were also discovered in the course of this excavation, and the study area because the subject of the Cultural Heritage Management Plan (CHMP12991). Artefacts were found both *in situ* in natural soils and in various occupation and fill deposits (O’Connor 2014).

4.1.3.2 Historical evidence and the likelihood of filling in other sites nearby

No direct historical evidence for filling in this location was found in the course of the historical research undertaken for this project, although Darke’s 1837 proposed levels do indicate that the alignments of both Spencer and King Streets in this vicinity required filling, as did a portion of Lonsdale Street between the

two (Figures 2 and 4). The slope of the land would suggest that areas close to Lonsdale Street may have required filling, but it does not appear that early fill was found in this portion of the site, rather the yard fill mentioned above was located in the northern half of the excavated site.

4.2 Examples of deep filling (over 1 m in depth)

4.2.1 The Stork Hotel and adjacent sites (H7822-2016, H7822-2027 and H7822-2034) – Clark, Noble and Filihia (2014)

The Stork Hotel, and adjacent sites on Elizabeth and Therry Streets, on the northern edge of the Melbourne CBD, was excavated by Vincent Clarke and Associates in 2013. The hotel site itself (H7822-2026) was less of a focus of excavation than the adjacent sites at 496–498 Elizabeth Street (H7822-2034) and 51–55 Therry Street (H7822-2027) due to the then existing hotel cellar which occupied the footprint of the original hotel (Clark et al 2014: 1, 18).

The Stork Hotel was first licensed in May of 1857 (Clark et al 2014: 10). The authors of the archaeological report note some apparent discrepancies between 1858 rate book descriptions, which appear to note a three-storey building, and an image of the building drawn for an advertisement in 1859 which shows a two-storey building (Clark et al 2014: 10). The hotel building was substantially renovated in 1925 (Clark et al 2014: 15).

The adjacent site on Elizabeth Street was likely occupied by a blacksmith and tent-makers through the 1850s and early 1860s (Clark et al 2014: 48). The property at 51–55 Therry Street was occupied by a saddler in about 1857, and by wheelwrights, blacksmiths and wagon builders in the early 1860s (Clark et al 2014: 79).

4.2.1.1 *Archaeology*

The investigation into the Stork Hotel itself focused primarily on the documentation of the cellar, inside which survived original features from the 1850s hotel. A series of niches were noted in those walls that fronted Therry and Elizabeth Streets, but the idea that these may have been the remains of original ground floor windows and doors (as asserted in a 1968 Melbourne *Herald* article, see below) was dismissed, as ‘no evidence was found that the basement was ever at street level, or that the hotel was completely rebuilt’ (Clark et al 2014: 39). They did, however, note that the 1–1.5m deep clay fill found to have been introduced to the adjoining sites (see below) was probably laid down ‘some time after the original construction of the Stork Hotel (Clark et al 2014: 30).

One small test excavation was carried out in the rear exterior of the hotel site. The trench was excavated 60cm into yellow clay fill 'at which point it was determined that there was little to no likelihood of any in site archaeological deposits to be present' and excavation ceased (Clark et al 2014: 29).

Excavations at the adjacent site at 496–498 Elizabeth Street revealed the existence of deep clay fill on the site, measuring 1 to 1.3m below the present ground surface in depth. For the purpose of this report, archaeological structures and features present on the site can be classified as one of two types – deep bluestone footings that are likely to have been constructed at the same time as the Stork Hotel and which sat directly in the clay fill with no evidence of a footings trench, and later features that were cut into the deep clay fill (Clark et al 2014: 53–66). It is the deep fill and the bluestone footings which pre-date it that are of interest here. The footings were described as being constructed in 'a random un-coursed fashion, with varying sized dressed bluestone utilized [and] a soft sand and lime mortar...between the stones' (Clark et al 2014: 65). Interestingly, some of these bluestone footings were found to abut one another, and were not tied-in, suggesting that they represented more than a single phase of building though they were built in a similar fashion (Clark et al 2014: 64). There is evidence that the stone footings were used as a base for brick walls.

Due to the presence of perched water at about 1.3m below the present ground surface, the excavation did not proceed to natural ground, nor were the bases of the bluestone footings found.

Yellow clay fill was also found to be present at the adjacent site on Therry Street, and although it seems to have underlain the later archaeological features excavated above, it does not appear to have been excavated to its full depth, again because of the presence of water (Clark et al 2014: 96).

In light of the results of the more recent excavation of the Wesleyan site (also undertaken by Vincent Clark and Associates), and in light of the historical information (below) it would appear that the Stork Hotel (H7822-2026) and the adjacent sites at 496–498 Elizabeth Street (H7822-2034) and 51–55 Therry Street (H7822-2027) are examples of deep early filling events which took place in the mid to late 1850s. Unfortunately, the circumstances of the excavation, primarily the presence of perched water which flooded trenches once a level of 1.3m below the current ground surface was reached, meant that the full potential of any early archaeological remains which may have been sealed under the deep clay fill, was not assessed.

4.2.1.2 Historical evidence and the likelihood of filling in other sites nearby

The Stork Hotel and adjacent sites are, as discussed above, located at the intersection of Elizabeth and Therry Streets, at the northern end of the CBD extent of Elizabeth Street. In March of 1856 the public works committee recommended that an order be issued to landowner Thomas Budds Payne Esq. 'to fill up to the

level of the adjacent streets certain land being allotment 18 of section 43, at the junction of Therry and Elizabeth Streets' (*The Age* 4/3/1856). Of interest also is an order issued in October of the previous year for the owner of vacant land in Franklin St, a Mr Benjamin, to raise his land to the level of Franklin Street (*The Argus* 16/10/1855). Figure 11 shows the position of these two properties.

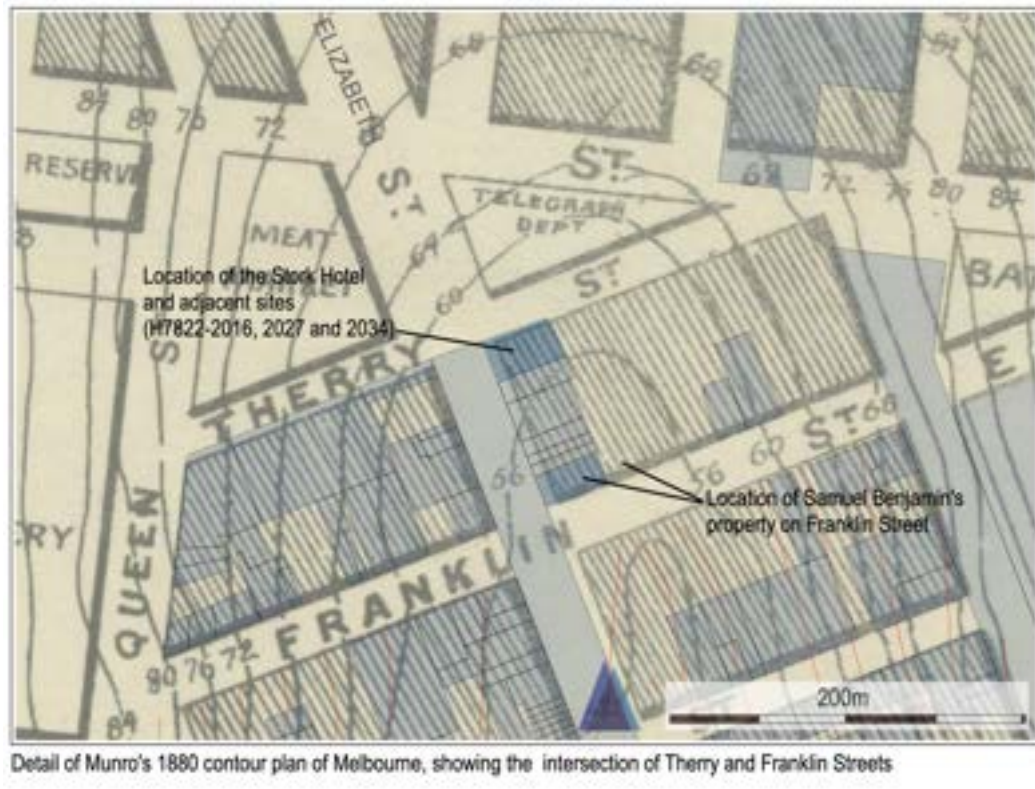


Figure 11 The location of the Stork Hotel, and Samuel Benjamin's land on Elizabeth Street. While the 1880 contour plan shows no evidence of Franklin Street having been built up, it is clear that this area could have become flooded by water flowing in from the north. Areas shaded light blue are Heritage Inventory sites.

Interestingly Ochre Imprints' excavation on a portion of what was one of Samuel Benjamin's Franklin Street properties¹⁵ at the corner of Elizabeth and Franklin Streets (H7822-2028) did not reveal deep filling of the sort found at the Stork Hotel and adjacent sites excavation, but did reveal the alignment of a filled gully that flowed roughly from the northwest to the south through the eastern side of the site. The western edge of the gully is visible on the Bibbs mid-1850s plan of Melbourne in the form of an odd alignment of the back fencelines of the properties facing on to Elizabeth Street (Figure 12).

¹⁵ H. Benjamin was the original owner of lots 3 and 4 of section 42 – these two properties were located on the north side of Franklin Street between Queen and Elizabeth Streets.

Geoff Hewitt, who directed excavations at the H7822-2018 site, noted that the presence of the gully was revealed by the levels of natural ground at the eastern edge of the excavated site (Hewitt pers comm 11/4/2019). One could speculate that this gully was the subject of Benjamin’s filling order, but there is no clear historical evidence of that. The combination of archaeological and historical evidence in this location does, however, suggest strongly that the characteristics of filling events may have been highly localised – the sites on the corners of Therry and Franklin Streets are less than 100m apart, and while both appear to contain archaeological evidence for historical filling events, those filling events vary significantly in depth and extent, and in their impact on the archaeological record.



Figure 12 Showing the partly known and partly inferred line of a gully identified during the excavation of H7822-2028 at the corner of Franklin and Elizabeth Streets. This gully appears to flow from the direction of corner of Elizabeth and Therry Streets.

A number of Heritage Inventory sites exist along the northern portion of Elizabeth Street between Therry and Elizabeth Streets and Consents have been issued for some of them. Reports are not yet available for excavations that may have been carried out – when they become available their results will be of interest to gaining a better understanding of the alignment of this filled gully and the distribution of filling events in this local area.

4.2.2 Wesleyan precinct/Jones Lane

The existence and archaeological importance of early deep land filling in Melbourne was first noted as a result of excavations carried out in 2017 at a cluster of Heritage Inventory sites located near the intersection of Jones Lane and Little Lonsdale Street and in the precinct of the Wesleyan Church (Figure 13) by Vincent Clark and Associates and Green Heritage. This location is at or near the purported location of 'Lake Lonsdale' mentioned in Section 2.1.2 and 3.1 (see also Figure 7) – a naturally basin-like landform, the water-holding characteristics of which were augmented by the formation and raising of surrounding streets. Historical references quoted in Section 2.1.2 indicate that land surrounding Lake Lonsdale was occupied by the later 1840s, though Proeschel's 1853 mapping would appear to suggest that some vacant land existed in the surrounding area into the early 1850s (Figure 7).



Figure 13 Location of the Little Lonsdale/Wesleyan precinct Heritage Inventory sites, and the Exploration Lane site (H7822-1096) later excavated by Vincent Clark and Associates.

Full excavation reports for these sites are not yet available but in both cases the heritage consultants have provided information for inclusion in this report.

4.2.2.1 Jones Lane/107–111 and 113–115 Little Lonsdale Street (H7822-1194, H7822-1195)

A full report is not yet available for this excavation, but Green Heritage has supplied a summary of the result for inclusion in this report, for which we are indebted to Barry Green and Laura Campbell. The quoted text below comes from information supplied by Laura Campbell in an email received on the 26th of February 2019.

According to the information provided, the initial clean back of the site resulted in the exposure of the ‘what appeared to be bluestone footings...set into redeposited natural clay’ and further clean back of this clay ‘revealed bluestone walls and brick chimneys’ which confirmed the excavators’ suspicions that the deep fill found a short time earlier at the Wesleyan site by Vincent Clark and Associates, was also present at the Jones Lane site. The re-deposited natural clay essentially filled what had been the ground floor level of a bluestone house.

Continued excavation revealed the structural remains of two c. 1840s terrace houses, consisting of ‘bluestone walls with window and doorway openings and brick fireplaces’ but ‘all fixtures, fittings, and door and window frames had been removed, and almost no artefacts were found’ – an exception to this appears to have been a pit found to the south of the rear wall which contained a number of beer, wine and gin bottles (Campbell 2018).

The excavators’ description of the removal of all the portable fixtures and fitting from the filled portion of the structure is of course a practical response to the situation, but is also of interest in that it appears to be an example of the results of the process outlined by John Smith in his instructions to the Council regarding filling up his Alma Street, Carlton property in 1861 (Section 3.2). As was fairly clearly the case at Smith’s property, fill was placed in and around the existing structure with the original bluestone walls, and in the Jones Lane case, fireplaces, left in place and effectively becoming part of the fill as the land level of the property was raised well over a metre above natural ground (Barry Green pers comm).

4.2.2.2 The Wesleyan and Jones Lane precinct/the Wesley Church site, 118–133 Lonsdale Street and the western side of Jones Lane (H7822-1199, H7822-1198 and H7811-2349)

The information concerning the excavation of these sites is derived from a paper by Dr Michelle Negus Cleary, Nadia Bajzej, Jasmine Scibilia and Meg Hass which was generously supplied by the authors (Negus Cleary et al 2019 and 2019a).

Excavation of the eastern portion of the Wesley Church site and the western side of Jones Lane by Vincent Clark and Associates revealed deep filling in most of the excavation area, but also demonstrated that the filling was not a single event as there were ‘different depths of fill and different characteristics to the fill deposit itself’ (Negus Cleary et al 2019: 3).

On the western side of Jones Lane, clear evidence was found for the deep filling of bluestone structures that existed there in the 1850s. In the structures termed residences 2–4 by the excavators deep structural features that align with the outlines of buildings depicted on the mid-1850s Bibbs plan of Melbourne were found situated beneath the basement footings of later nineteenth century structures. Up to 2m of yellow clay fill had been placed in some locations. In residence 7, slightly further to the north, the clay fill was shallower and was ‘grittier’ and contained ‘more inclusions’ than that found in properties to the south, perhaps suggesting a different source for this fill. In residence 11 on Little Lonsdale Street the fill differed again, being composed of yellow clay and large quantities of broken glass. Negus et al (2019: 9) note that the glass may have been dumped in the property during the filling event.

Across the portions of the three Heritage Inventory sites excavated, fill associated with lifting of the property levels in the 1850s varied between 60cm and 2m in thickness, and ranged from uniform yellow-orange sticky clay (sometimes containing historical artefacts and in one location containing a dump of bottles and broken glass) to a yellow and grey mottled gritty clay. It is probable that these differing fill types are each associated with different properties and are a reflection of individual owners sourcing the fill and filling properties themselves (Negus Cleary et al 2019a: 23).

The excavators noted that while the clay fill (aside from the bottle dump) contained comparatively few historical artefacts, the archaeological value of the fill is that it provides a secure, and relatively tightly dateable, cap for structures and artefacts found beneath (Negus Cleary et al 2019: 6).

Interestingly, the excavators noted that ‘archaeological excavations and geotechnical testing in the southern and south-eastern areas of the Wesley church block, within the Wesley Church and Lonsdale Street sites, did not reveal this same yellow clay [fill]. From this we conclude that the properties closer to Lonsdale Street did not require raising to the same extent as those closer to Little Lonsdale Street (Negus Cleary et al 2019: 1). This result is of interest, and at odds with the available contour and historical data which suggest that a) the pre-filling landscape consisted of low-lying land as far south as the Lonsdale Street alignment (see Figure 7), and b) a filling order was issued to the owners of property on the north side of Lonsdale Street between Russell and Stephen Streets on the 21st of February 1855 (see Appendix 2). As with the results of the Bucks Head Hotel site (H7822-1063), this result would appear to demonstrate that the filling events were highly localised and, with the historical data collected so far, still somewhat unpredictable in terms of location and depth of fill.

4.2.2.3 Historical data and the likelihood and the likelihood of filling in other sites nearby

As discussed in Section 2.1.2, this portion of Melbourne appears to have been somewhat notorious in the 1840s and 1850s as the location of a swamp-like accumulation of surface water known as Lonsdale Swamp,

or Lake Lonsdale. Contour lines derived from Hodgkinson's 1853 contour plan of Melbourne make clear that this location, bounded by Lonsdale, Little Lonsdale, Russell and Stephen (now Exhibition) Streets formed something of a low-lying basin that would have received water from land to the north, north northwest and east. The lack of drainage from this site was made worse by the partial formation of Lonsdale Street (evident in the 1853 contours) and was apparently made worse by additional work on the road in 1854 or 1855 (see Section 3.1). Filling orders were made for landowners holding properties on the north side of Lonsdale Street in this location in February of 1855, and for those holding properties on north side of Little Lonsdale Street in about October 1855 (Appendix 2).

Working on the assumption that detailed historical data has been or will be collected by Green Heritage and Vincent Clark and Associates for their respective projects in the area bounded by Lonsdale, Little Lonsdale, Russell and Exhibition Streets, the following section consists of an assessment of the archaeological potential of the north side of Little Lonsdale Street and the laneways (Hayward, Davison, Bennetts, Exploration and Evans Lanes) which run north off the street.

Given that this general location is known already to be one where filling occurred, the aim of the enquiry is to ascertain the likelihood of deep filling, of the sort found at the Jones Lane and Wesleyan sites, occurring within this block to the north of Little Lonsdale Street. Three Heritage Inventory Consents have been issued for sites within the area under question (158–162 Little Lonsdale St (H7822-1115), 9–11 Exploration Lane (H7822-1096) and 25 Bennetts Lane (H7822-1088)). No excavation reports are currently available for these sites, but Negus Cleary et al 2019 note that the Exploration Lane site (H7822-1096), excavated by Vincent Clark and Associates, did not contain deep fill of the type found at the Wesleyan/Jones Lane precinct (Negus et al 2019: 10). This result alone indicates that the deep filling phenomenon is not necessarily widespread in the local area.

Rate book information

An analysis of rate book data was undertaken for properties listed on the north side of Little Lonsdale Street, and the lanes running northward of it. Rate book entries for these locations for the years 1854, 1855 and 1865 were collected for cross year comparison, working under the assumption that at least some changes in built structures present in the study area *might*¹⁶ be apparent in the rates information if deep filling had been required in this location.

¹⁶ It is acknowledged that this might not necessarily be the case as the original walls of the lower storey could subsequently be used as footings for a new structure, meaning that the description of the size and material of the filled house may not have been substantially altered.

The tables provided in Appendix 3 show basic rate book data (ratepayer and property description) for these years for each of the northward running lanes, and then for the north side of Little Lonsdale Street itself.

In order to try to track properties across the span of three years, property ratepayer surnames that span across at least two years have been highlighted grey. House/property descriptions that span across at least two years have been highlighted blue. For the most part, much of the data is unsurprising or predictable. Many landowners and their associated properties appear relatively consistently across the three years. For example, in Hayward Lane properties associated with ratepayers with the surname Clothier/Clothyer, Ash and McLaughlin show a consistent sameness and/or expected progression over the span of the three years. The number of wooden houses in the lane, though never high, diminishes over the three years as wooden structures appear to have been replaced by more substantial brick ones. Much the same can be said for Davison and Evans Lanes where structures show a general consistency across the years.

The data for Bennetts Lane is reproduced in Table 1, because it appears to indicate that there was disruption in the lane in 1855, presumably as a result of the filling order made in October of that year (or alternatively by flooding caused by the forming of Little Lonsdale Street which likely preceded the filling order). The disruption is evident in two ways. The first is notations that appear in the rate books, which suggest that a number of structures are buried by something that unfortunately is not legible. Another notation suggests that a wooden house is 'raised up,' possibly like the wooden house of Richard Hill discussed in section 3.2.1. An example of these notations is shown in Figure 14.

Gipps Ward				
No. of House	Name of Inhabitant	Particulars of Household	Description of Household	
346	James Courtney	Little Lonsdale Street buried by [?not legible]	Brick house 2 rooms	1 range of 2 houses 1 ad. (buried by [?not legible]) 2 rooms 2 chimneys
3	Patience Holroyd	do	Wood house	2 ad. Wood do
6	John Carrick	do	Wattle do	3 ad. do
7	J. Paddy	do	Wood do	3 ad. do
8	W. Ewins (owner)	do	Brick do	2 ad. Wood house 2 rooms
9	Mary Ann Jones	do	Wood do	2 ad
350	Miss Higgins	do	do do	2 ad
1	Sam Bedding	do	do do	2 ad (buried by [?not legible])
2	J. Barry	do	Brick do	2 ad (do)
3	John Bowden	do	do do	2 ad (do)
4	J. Murphy	do	Wood do	2 ad (raised up)

Figure 14 An excerpt from the 1855 Gipps Ward rate book, showing a portion of the entries for a laneway off Little Lonsdale Street presumed to be Bennetts Lane. The upper red underlined notations appear to read 'buried by [?not legible]', the lowest one appears to read 'raised up'.

Table 1 Gipps ward rate book information for Bennetts Lane (north of Little Lonsdale Street).

1854			1855			1856		
address	owner/ratepayer	description	address	owner/ratepayer	description	address	owner/ratepayer	description
Third lane east of Russell Street (Bennetts Lane)	Patrick Courtney	Brick cottage, 2 rooms and cow yard in yard enclosed with the following (below)	Third lane east of Russell Street (Bennetts Lane)	Patrick Courtney	brick house, 2 rooms, stables [in brackets ' buried by r??d]	Third lane east of Russell Street (Bennetts Lane)	Patr Courtney	brick, 2 rooms, cowsheds and loft
	James Courtney	Brick cottage, 2 rooms stable and hayloft (in enclosed yard)		James Courtney	brick house, 2, 2 rooms, Range of 4 houses each (buried by ???)		Js Courtney	brick, 3 rooms, 5 rooms
	Denis Lynch	Brick house, 2 rooms (in enclosed yard)						
	John B?ingham	Brick house, 2 rooms (in enclosed yard)						
	William Ham	Brick cottage, 2 rooms (in enclosed yard)						
	Robert Palm	Wooden house, 2 rooms, brick house at rear, 2 rooms		Catherine Maloney	wood house, 3 rooms and brick house		Wm Harris	wood, 2 rooms and brick house of 2 rooms
	Thomas Carrick	Wooden house, 2 rooms and workshop in front		Thos Carrick	wattle house, 2 rooms and wood house		Thos Carrick	brick, 2 rooms and kitchen
	William Rogers	Brick stuccoed house, 3 rooms, shed and wooden house in front, detached		J. Paddy	wood house, 3 rooms and kitchen		Wm Hinds?	wood house, 4 rooms and kitchen
	Isabelle Kelly	Wooden house 2 small rooms (note indicated that this is in one yard with house below)					Js Williams	wood house, 2 rooms

1854			1855			1856		
address	owner/ratepayer	description	address	owner/ratepayer	description	address	owner/ratepayer	description
	William Erskine	Brick house, 2 rooms		Wm Erskine (owner)	brick house, 2 rooms and wood house 2 rooms		Thos Cohen	brick, 2 rooms
	Edward Linane	Wooden house, 2 rooms		Mary Ann Jones	wood house, 2 rooms		Wade?	wood, 2 rooms
				Miss Higgins	wood house, 2 rooms		Mrs Digg	wood, 2 rooms
	Samuel Redding	Wooden house, 2 rooms and cow yard		David? Redding	wood house, 4 rooms (buried by ??d)		Danl Reddin	wood, 2 rooms and cowshed
							Andw Drummond	stone, 2 rooms
	Joseph Boyle	Brick stuccoed cottage, 2 rooms		J. Barry	brick house, 2 rooms (buried by ??d)		John ?gen	stone, 2 rooms
							Barry	wood, 2 rooms
	George Nott	Brick stuccoed cottage, 2 rooms		Mrs Donohue	brick house, 2 rooms (buried by ??d)		Barry	wood, 2 rooms
	John Anglam	Wooden house, 3 rooms (half buried?)		J. Murphy	wood house, 2 rooms (raised up)		Donovan	wood, 4 rooms

The second evidence of disruption in the Bennetts Lane rates is the change in housing stock over the three years examined. Where the houses in other laneways appeared to show either a general consistency or an improvement over the three years, the changes to the Bennetts Lane houses are more erratic. For example, Patrick and James Courtney appear to have owned five brick two-roomed houses or cottages all enclosed in a single yard in 1854. The 'buried by [??]' notation appears next to these properties in 1855, and the name of the tenants are then absent. By 1856 the number of brick houses owned by the Courtneys appears to have diminished to either two or three. Also on Bennetts Lane J. Barry appears to have been the ratepayer for a two-roomed brick house in 1855, yet in the following year Barry was instead the ratepayer for two wooden two roomed houses that appear to have been located in the same portion of Bennetts Lane. Likewise, a brick house for which Mrs Donohue was the 1855 ratepayer, appears to have been replaced by a four-roomed wooden house in 1856¹⁷.

The ordering of the property entries suggests that from Little Lonsdale Street the entries proceed north up the western side of Bennetts Lane and down its eastern side. This assumption is reinforced by a plan of Gipps Ward provided in the 1856 rate book (and reproduced also in Howells-Meur 2002: Figure 5). These factors would tend to indicate that the property associated with the Courtneys, and J. Barry were located in the southern half of Bennetts Lane. Reddin's, or Redding's property may have been located at the northern end of Bennetts Lane.

It should be noted also that the rate book entries for Exploration Lane show a whole cluster of structures that appear to have altered from brick to wood and then brick again through the years 1854 to 1856 (Appendix 3). Whether this is the true situation is unclear – the brick to wood and back again transformation through the three years is fairly uniform and may be an indication of a clerical error. On the other hand, this may be another indication of a disruption of part of Exploration Lane caused by filling orders. No notations that appear to read 'buried' or 'raised' were noted in the Exploration Lane entries however, and the excavation of H7822-1096 by Vincent Clark and Associates did not reveal evidence of deep fill (see above).

The approximate location of possible filling disruption on Bennetts and Exploration Lane, as suggested by rate book evidence, are shown on Figure 15. Note that due a lack of street numbering and the vagaries of rate book data, these locations should be considered to be approximate only.

¹⁷ This is making the assumption that Donohue and Donovan might be the same person, but regardless of this a brick house once present in this part of the land appears to have disappeared between 1855 and 1856 (again making the assumption that rates were recorded in a consistent order).

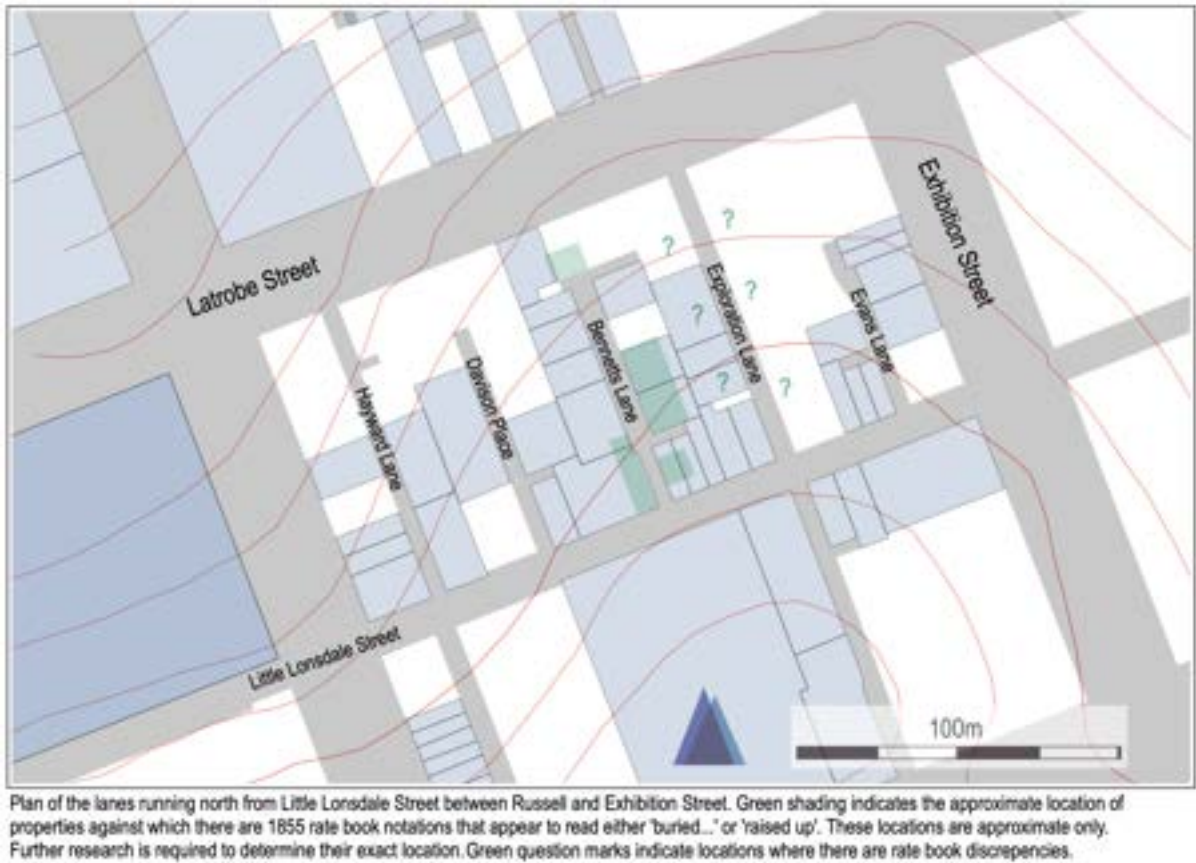


Figure 15 Showing the estimated locations of those properties that 1854-1856 rate book entries suggest might have been subject to disruption as a result of filling requirements. Size and dimensions of properties are not currently known and further research would be required to determine this. Blue shading indicates the location of a Heritage Inventory site

It is of interest to note that the filling that took place in this precinct in 1855 did not completely solve the drainage problems there. In September of 1856 a petition was made by householders in the area campaigning for the Council to acquire property and open a right of way:

We the undersigned citizens of Melbourne residing off Little Lonsdale Street would earnestly call you attention to the necessity of opening the right away[sic] through Mr Taylor's premises for the purpose of efficiently carrying of the water in that locality having suffered very much from the overflow of water in that locality and from a firm conviction that the culverts which has been lately laid down do not answer the purpose of so large a body of water the City Surveyor being an eye witness to the fact that it does not answer the purpose it was designed. And your petitioners will ever pray, Patrick Kelly, James Loftus (his mark), R[ichard] [Ab]solom, Wm Blavin, Nicholas Laughton, John Courtney (petitioners to City Council 27/8/1856).

The names of the petitioners involved would appear to suggest that the right of way in question is that now known as Jones Lane. In the 1857 rate book it was called Loftus Lane, and it appears to have been the first laneway to the west of Stephen/Exhibition Street. At the time of the creation of the Bibbs plan (generally thought to date to the mid 1850s) that laneway/right of way did not continue through to Lonsdale Street from Little Lonsdale (Figure 16).



Figure 16 Plan showing the inferred location of Loftus Lane.

4.2.3 The Capitol Theatre – non-archaeological example

Of interest to this study is the description provided in Robyn Annear's (2014) *A City Lost and Found: Whelan the Wrecker's Melbourne* discussion of Whelan's demolition operations at 109-117 Swanston Street in the early 1920s at the site that was to become the Capitol Theatre¹⁸.

When Whelan's job was all but done, the builders commenced excavating for the theatre's foundations. Four feet down they uncovered the remains of a picket fence and portions of an old corduroy track, both running parallel to Collins Street, with the stump of a chimney buried nearby. The building just wrecked had stood there since 1865, and the site had been built over and uncrossed by tracks for long years before that (Annear 2014: 48).

This description sounds very much like another example of deep early filling. This brings the known examples of deep filling in the Melbourne CBD to three. These locations are shown on Figure 17.



Figure 17 The locations of known deep filling events in the Melbourne CBD.

¹⁸ This description was brought to our attention thanks to a member of the project steering committee.

4.3 The archaeological implications of filling events

As outlined above, it is clear that the City Council issued at least dozens of filling orders to property owners through the 1850s and 1860s. There are probably many more recorded instances of filling orders than have been found during the historical research undertaken for this report, and there are probably still more instances of filling undertaken by landowners without the need for a Council order or other intervention. Filling may have been deep, requiring the raising of a wooden house, or the partial filling of a more solid, less moveable structure, or it may have been relatively shallow, meaning that landowners were required to only fill a portion of their yard or property to eliminate surface puddles, small gullies or pooling water.

The archaeological implications of the deep filling events are fairly clear – the known archaeological examples have produced, where fully excavated, deeply buried and well-preserved structural remains. While little information is currently available¹⁹, there is an obvious possibility that such sites may also contain well-preserved occupational deposits, rubbish accumulations and household infrastructure such as cess pits (that would not likely have been emptied by the landowner or occupant if the abandonment or partial burial of the place was imminent), garden beds and garden features, fencelines and possibly evidence of earlier occupations, all sealed under a clearly datable layer of fill. The improved preservation of early Melbourne land surfaces that such a sealed layer of fill may create also has implications for the protection of Indigenous archaeological features or artefacts that may be present in the CBD or inner city.

The archaeological evidence of these filling events may, it could be hypothesized, be fairly strongly predisposed to be the remains of domestic structures associated with the less wealthy residents of Melbourne, given what appeared to be the general tendency for wealthier individuals to live in the higher and better ventilated parts of Melbourne (for example see the 1848 comments of the Sanatory Committee noting that the ‘humble classes’ tended to live in the lowest portions of the city in Section 2.1.2). They may represent examples of ‘everyday’ Melbourne homes and businesses from the time of post-contact settlement through the mid-nineteenth century. These residences and businesses were likely of the type of urban vernacular architecture that does not generally have surviving examples - particularly in the CBD. They may also show the evidence of adaptation or alteration of the structures to the poor conditions that eventually led to the filling event.

It is clear that these filled sites are no Pompeii, in that there exists evidence, both archaeological and historical, that portable items of value were removed from buildings prior to filling in those instances when landowners had no choice but to leave a portion of solid structure in place to become part of the land fill.

¹⁹ Excavation reports for the Wesleyan and Jones Lane sites have not yet been completed, and the Stork Hotel site was not fully excavated.

On the other hand, it would seem likely that the filled blocks became temporary receptacles for locally discarded rubbish and for items considered to be of low or little value in view of the lack of rubbish disposal options in Melbourne at that time, and the known tendency for residents to use the laneways and rights of way as rubbish tips. The discovery of a bottle dump in the fill at residence 11 on Little Lonsdale Street during the excavations carried out there by Vincent Clark and Associates (see above) further supports this supposition.

The further examination of these sites and the associated historical record might shed some light on the role of fill in mid nineteenth century Melbourne. Fill is often dismissed during excavations as being of little archaeological value because the fill was derived (in most instances) from an off-site unknown source and is considered to offer little in terms of information useful for archaeological interpretation. Perhaps the information that is coming to light in relation to the mid-century filling events in Melbourne should prompt a reconsideration of this approach. Fill was clearly a somewhat scarce and important commodity in Melbourne at this time – perhaps something could be learned by paying more attention to its composition and distribution across the city. Further research into filling events (both shallow and deep) and the mapping of the known movement of fill would provide a reasonably tight chronology for fill distribution and could assist not only with the interpretation of individual archaeological sites, but also increase our understanding of the sourcing, distribution and use of this commodity. In addition, the collection and distribution of loam or topsoils from the outer parts of the city, or even from road cuttings within the CBD itself, on to city properties may, if they can be traced²⁰, have significant implications for the interpretation of Aboriginal material cultural discovered in fills on historical archaeological sites.

It is possible, because of the use of relatively clean clay fill known to have occurred in some deep filling locations, that other filling, in particular deep filling, events have been overlooked during archaeological excavation. In some instances it may be difficult to distinguish between re-deposited clean clay and the natural clay which underlies the Melbourne CBD, but an awareness, on the part of archaeologists working in Melbourne, of the potential presence of deep clay fills should ensure that this does not happen in future.

In summary:

- There are known archaeological examples of deep filling events from the 1850s in the Melbourne CBD. While archaeological information concerning the outcomes of these is fairly preliminary, it is clear that in more than one location deep filling occurred inside and around existing structures,

²⁰ Certainly, the historical records make some of this traceable – for example the orders for contractors to supply particular landholders will fill derived from the cutting of a particular street. More detailed analysis might make man movements of soils for fill mappable.

leading a level of preservation of walls, fireplaces and other structural features not typically found in CBD archaeological sites.

- More moderate (less deep) filling can also have significant implications for archaeology, as it may have resulted in the sealing and protection of very early features, structures and deposits that would otherwise have been disturbed or destroyed by subsequent occupation and use of the site. Included in these might be cess pits that were sealed 'as is' at the time of the filling event. The dampness of low-lying or flooded areas combined with the (usually clay) cap could result in improved conditions for the preservation of some organic remains.
- The fill layers are a potentially securely dated stratum (if historical evidence of the filling event can be found) the identification of which would assist generally in the interpretation of site formation processes on any given archaeological site.
- The filling events themselves are part of a city-wide phenomenon, and should be considered in that light. The fill itself was a commodity, the sourcing, creation and distribution of which has tended to be dismissed in archaeological reports in the past. An understanding of the locations from which fill was sourced, and where it was placed, may have implications for the interpretation of Aboriginal²¹ as well as historical archaeological material in the CBD. Unlike many other commodities that appear in the historical archaeological record, fill is generally largely ignored and dismissed by archaeologists during the interpretation of historical archaeological sites, yet paying more attention to it may assist in the interpretation and understanding of nineteenth century Melbourne.
- Though widespread, the characteristics of the filling events were highly variable and localised, with archaeological evidence indicating that sites located a short distance from one another may have been subject to very different filling requirements and processes.

²¹ Historical records point to the removal of earth from unsold and presumably undeveloped land to the north of the CBD in the 1850s (see Section 3.2.2.1). Most likely it was taken from other locations as well. The potential for fill removed from such locations to both contain Aboriginal cultural material (that would have then been distributed to other locations in the city) and to cover and subsequently assist in the preservation of *in situ* Aboriginal cultural material in filled locations is obvious.

5 Discussion of potential methods of identifying filling events

The majority of the evidence for historical filling events in the Melbourne CBD comes from the records of the City Council, either in the form the minutes of the Public Works Committee meetings, in which filling orders are noted (PROV VPRS 4037), or in the form of correspondence to the Council from landowners regarding land levels and filling orders. Historical newspaper reports are also a useful source of information – particularly reports concerning the outcomes of Council or committee meetings.

On the whole, researching these sources, the Public Works Committee meeting minutes in particular, is a slow and time-consuming process. While the meeting minutes are readily available at the Public Record Office Victoria, the simple act of reading through the volumes of hand-written minutes available, while interesting, is somewhat arduous, and would require more time than was available in this project. It is also clear that not all historical filling events would have been recorded in these sources.

This section of the report provides a discussion of other potential methods of identifying locations of historical deep-filling events in the Melbourne CBD that were considered in the course of this project.

5.1 Comparing contours – historical contour data from 1853 and 1880

The first and main method attempted involved the comparison of two available datasets derived from contour plans of the Melbourne CBD derived from the two plans listed below.

- C. Hodgkinson (surveyor) 1853 *Contoured Plan of part of the City of Melbourne* (Figure 18)

This plan has a notation in the top left corner, noting that it is the Melbourne Sanitary Survey, Sheet No 1, working plan of contours. The vertical distance between contour lines on the plan is 4 feet, ‘the first contour being four feet above the ordinary level of low water as indicated by a tide gauge set up at a point on the river bank on the prolongation of the line of Flinders Street.’ The reduced levels ‘of the subjoined benchmarks are also given to low water at the tide gauge, corresponding to a datum 15’08 feet below the sill of the niche on the west side of the abutment of Princes Bridge on the right bank of the river’.

- N. Munro (surveyor) 1880 *Contour plan of portion of the City of Melbourne* (Figure 19)

This plan was created ‘for use in connection with the Mayor’s prize for essays, etc. on the underground drainage of the metropolis’. The datum for this plan is also noted to be the ‘low water mark to River Yarra’ and the bench mark on the NW abutment of the Princes Bridge ‘sill of niche is 15.08 above low water’.

As the information provided on the plans appears to suggest that they used the same vertical datum, and the contour lines shown on the plan are at the same vertical scale, comparing the contour data on the two

plans was considered a possible method for identifying locations that had been subject to filling in the years between the creation of the two plans.

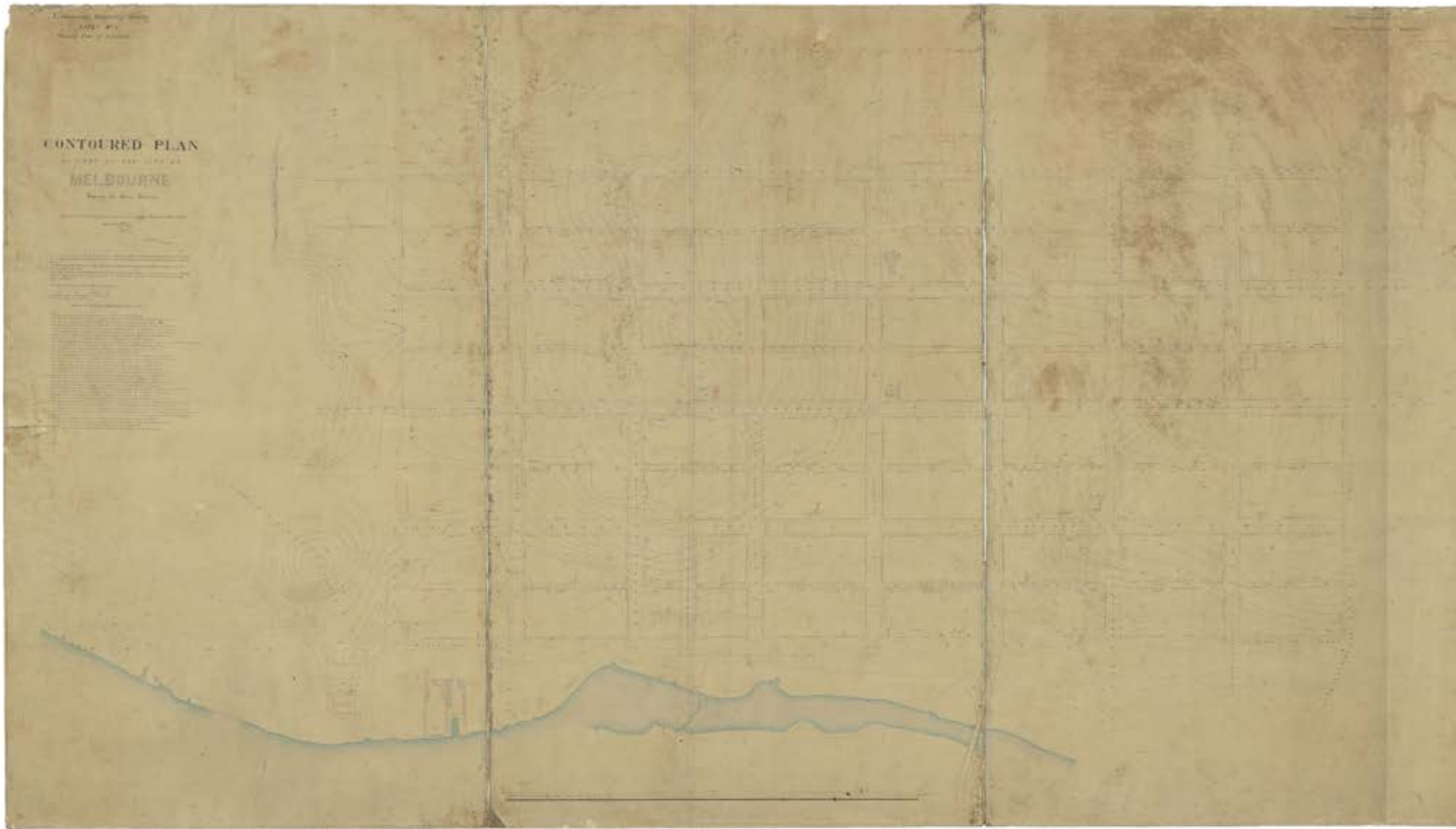


Figure 18 Hodgkinson's 1853 contour plan of Melbourne.

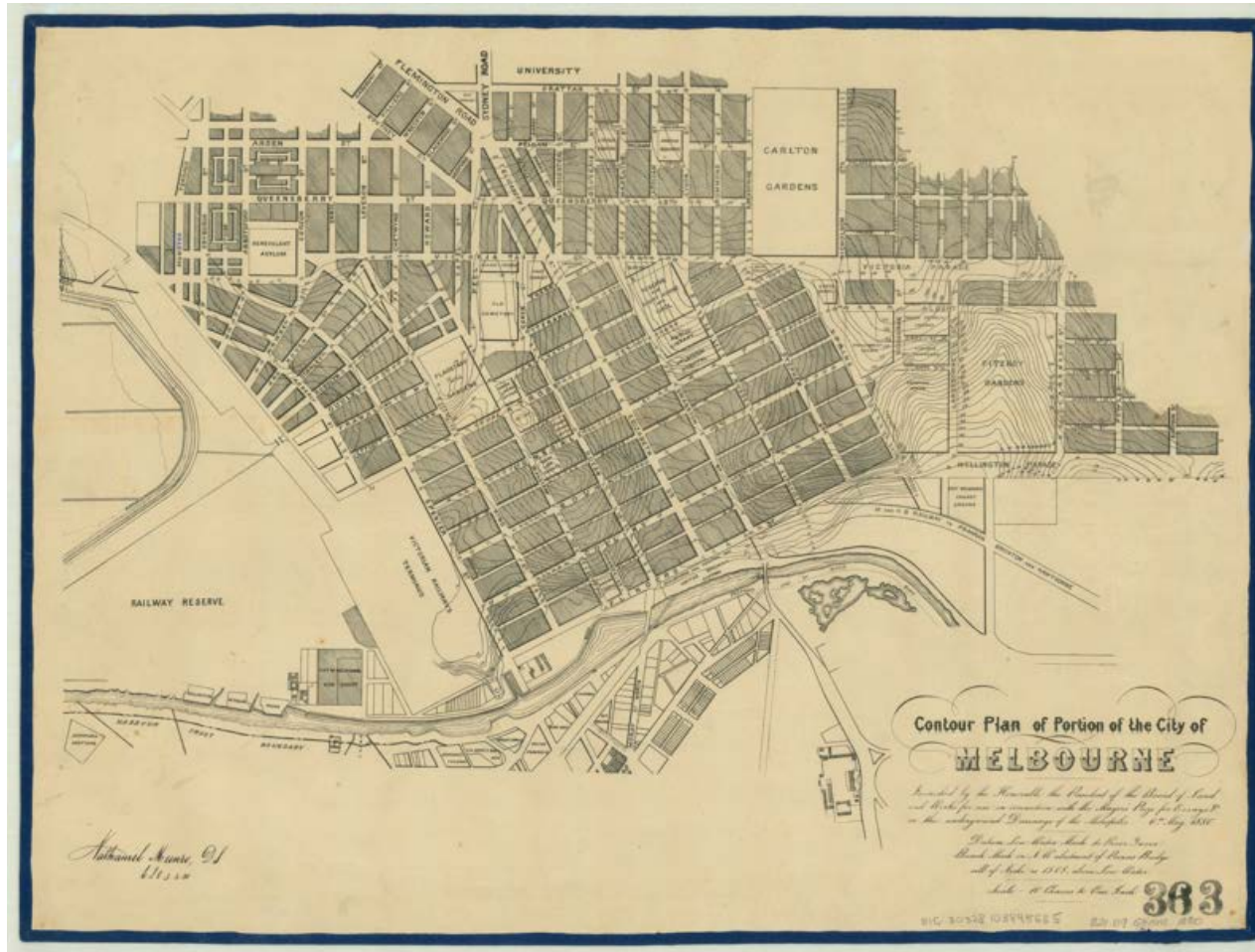


Figure 19 Munro's 1880 contour plan of Melbourne.

This method is not, of course, without its obvious problems. Manually georeferenced raster data, particularly scanned copies of historical plans will never be completely accurate, and the manual tracing of contour lines is also open to some human error. That said, a comparison of the two sets of contours does show some points of difference, but the usefulness of this is questionable. Figure 21 is an attempt to make this difference more visible. In it possible locations of filling have been shaded green – these are locations where contour lines in 1880 have, in essence, shifted downslope from their 1853 position. While the results of this does tend to produce green shading in areas where filling might have been expected, such as around Elizabeth Street and in the block bounded by Lonsdale, Latrobe, Russell and Stephen (Exhibition) Streets, it also produces shading in what would appear to be areas that were unlikely to have been filled – the eastern side of Batman’s Hill and on the rise between William and Queen Street along the line of Collins Street, for example. Perhaps one of the most surprising aspects of the result of the contour comparison is the lack of visible evidence of street level modifications between 1853 and 1880, which seems at odds with the other historical evidence. It does suggest the probabilities that either the 1880 CBD contours were largely based on those of the 1853 plan, or that the contour interval is simply too large to show a difference. The former seems the more likely explanation, given historical data that was discovered after the contour comparison had been made.²² The outcome of this attempt was therefore a realisation that a comparison of these two datasets is not likely to be of use for the purpose of determining the locations of deep nineteenth century filling in the CBD²³.

The Melbourne and Metropolitan Board of Works plans of the Melbourne CBD blocks that were prepared in the 1890s would probably offer useful level data for comparison. As with modern levels, using this data for comparison with the 1853 plan would require consideration of the vertical datum used, but it is considered to be a method worth pursuing.

²² The probability that this plan was based on earlier contours is reinforced by the reports of an 1871 meeting regarding the creation of a contour plan for the planning Melbourne’s sewerage scheme in which the idea of utilizing and adding to the existing contour data was discussed (Lloyd-Smith 1971: 10–11). This evidence was found after the contour data had been analysed.

²³ A similar attempt was made with contour lines derived from a 1972 Melbourne and Metropolitan Board of Works plan of Melbourne. This involved digitising the 1972 contour lines and then (in order to make them comparable to the 1853 dataset) converting their values to feet from metres and converting levels to the 1853 datum. This method produced results that may not be directly comparable, and more work is required to assess this method and determine whether the levels have been accurately converted. For this reason, a plan of these contours is not shown here.



Red contour lines are derived from the 1853 Hodgkinson plan, base plan is the 1880 Munro plan

Figure 20 Plan showing the 1853 Hodgkinson contour line data set (in red) laid over the 1880 Munro plan.



Red contour lines are derived from the 1853 Hodgkinson plan, base plan is the 1880 Munro plan

Figure 21 Plan showing the 1853 Hodgkinson contour line data set (in red) laid over the 1880 Munro plan with green shading highlighting locations that may have been subject to filling (although later historical research has shown that this data is likely to be inaccurate).

5.2 Street levels

Historical research undertaken for this project has focused primarily on City Council records of filling orders and the responses of some landowners to them. The orders were, on the whole, made necessary by the construction or modification of city streets to their 'permanent levels'. The alteration and fixing of the street levels in the Melbourne CBD appears to have commenced as early as the 1840s and been on-going through the 1850s, and continued at least up until the late 1860s and likely beyond as evidenced by the newspaper report of Council business reproduced below:

Permanent street levels. Councilor Butters moved the adoption of the report of the Public Works Committee, informing the Council that the city surveyor had pointed out the necessity of having a datum line fixed; accurate levels taken of the whole of the streets already formed within the city boundary; sections and cross-sections made on which the permanent levels may be definitely laid down, and to which citizens requiring information as to levels may be referred, and bench marks placed upon the lamp pillars; and recommending thereupon that the work be authorised...(The Argus 24/09/1867.

Historical information also indicates that street level alteration continued in the inner city suburbs of Melbourne in the later nineteenth century (see Section 3.1).

While some information concerning the street level alteration was collected in the course of undertaking the historical research carried out for this report, more work would be required in order to collect the data needed to form a clear picture of the sequence of street formation in the CBD and inner city. Given the clear association between the building up of streets and the need to fill private property, working out the sequence and heights of street formation to permanent level would likely enable the identification of areas where filling was required, as well as the year in which the filling probably occurred.

A more complete investigation into the changing street levels was beyond the scope of this project, but this avenue would appear to be a promising one in terms of working out the timing, and potentially the depths of required filling. Figure 22 is a preliminary assessment of areas that likely required filling based on Darke's 1837 proposed street levels. At this stage, it is unclear whether or to what extent Darke's proposed levels were acted on across the city, but these proposed alterations provide an indication of where street filling, and hence land filling were probably required. We do know that street level alteration was occurring by the mid to late 1840s (see Section 2.1.1). It is assumed that filling occurred where it was originally proposed by Darke, then certainly it can be expected that those portions of land through which water flow would have been blocked by the raising of the adjacent street were likely subject to filling, whether as a result of Council order or (pre-1853) of simple necessity. The background to Figure 22 is the

1840 Russell plan of Melbourne which showed the structures present in the city at that time. This plan indicates that early structures existed in some of the areas that may have required filling – particularly along the north side of Collins Street. As discussed in Section 2.1.1, some of these structures were likely built to Darke’s proposed levels. Others were not and they, or the land around them, may have been subject to later filling.



Figure 22 Preliminary assess of the likely locations that filling may have been required, based on Darke’s 1837 proposed street levels (Figure 3) and the 1853 contour data.

A more thorough examination of the changing street levels (and importantly the sequence of this change) prior to final fixing of the levels in the nineteenth century would likely yield useful results in terms of determining which portions of the city are likely to have been subject to filling.

6 The likelihood of additional deep filling events existing in the Melbourne CBD, or elsewhere

The research undertaken for this report has resulted in the discovery of one historical description of what appears to be a deep filling event which can also be pinpointed to a fairly exact location. This description takes the form of a letter written by John Smith to the Melbourne City Council (discussed in Section 3.2 of this report) in which Smith outlined the method by which he hoped contractors would fill his property. The process described would have resulted in the partial burial of the lower part of what the description appears to indicate was a two-storey house, and may have resulted in deeply buried structural remains such as were excavated at the Wesleyan Church and Jones Lane sites discussed in Section 4.2.2.

Smith's property was located on the north side of Alma Place, 115 feet west of Bouverie Street in Carlton, and outside of the CBD study area of this project (location 26 on Figure 6). A relatively modern apartment complex sits on this location, which is indicative of a strong likelihood that any archaeological site that once existed there has been destroyed. The contents of Smith's letter suggests that his neighbours also would have had to fill their properties, but the extent of the filling is unclear – whether need for filling extended along both sides of Alma Street, or along Bouverie Street to the south is not currently known. More research is required in order to determine the likelihood of this, and of the historical archaeological sites existing in this general area.

No other historical references to deep filling that could be pinpointed to a reasonably exact location were found. The location of a house on Franklin Street that was, according to its owner, beneath the level of the adjacent street due to 1862 Council level alterations (see Section 3.2.2.1 and filling event 27 in Appendix 2) has not been found despite attempts to locate its whereabouts through a review of Gipps and Bourke Ward rate records. Again, additional historical research may rectify this.

Information derived from a combination of the known archaeology of the local area, and detailed examination of rate book records has resulted in the identification of some possible locations of deep filling in the fairly immediate surrounds of the Wesleyan Church/Jones Lane area. As discussed in Section 4.2.2.3, there appears to be relatively promising information suggesting that some properties in Bennetts Lane were subject to filling deep enough to cause some disruption, damage or change to the structures located on them (although the actual depth of the filling is not known). Additional historical research would be required in order to pinpoint the exact locations of these properties, but Figure 15 provides an indication of their probable positions.

One could also, of course, speculate that properties immediately adjacent to the locations of known filling have also been filled. For example, Heritage Inventory site H7822-2033 at 490–494 Elizabeth Street which sits immediately adjacent to deep filling uncovered during the excavation of the Stork Hotel and adjacent sites by Vincent Clark and Associates, or Heritage Inventory site H7822-1191 at the intersection of Little Lonsdale and Exhibition Streets which sits immediately to the east of the deep filling uncovered by Green Heritage at 109–111 Little Lonsdale Street. Similarly, sites located on the north side of Little Lonsdale Street to the north of the Wesley Church and Jones lane sites may also contain deep filling.

There is a danger in this speculation, however, as demonstrated by the Vincent Clark and Associates excavation at 9–11 Exploration Lane (H7822-1096) and toward the southern end of the Wesley Church site (H7822-1199) which showed that the characteristics of filling can be highly localised (see Section 4.2.2.2). For this reason we are reluctant to name any single inventory site as a probable candidate for containing historical deep filling based on existing information. Currently collected historical information is too vague to accurately identify individual sites. In addition, the information collected indicates that the need for land filling in the mid to late nineteenth century was both widespread and not necessarily recorded in the records consulted to date. For these reasons it is considered potentially misleading to attempt to isolate particular areas of the CBD as filling hotspots, based on current information.

While the historical information collected to date does not allow any archaeological site containing deep filling to be pinpointed with any certainty, the widespread nature of the known filling orders, combined with the large number of still untapped historical resources available, suggests that as yet unidentified deep fill locations do exist in the CBD and elsewhere, and that any archaeological work undertaken in the CBD should be carried out with that fact in mind.

Section 7.3 provides recommendations for addressing the possibility of filling events on Heritage Inventory sites.

7 Findings and further work

7.1 Findings of this project

The historical research undertaken for this project has shed some light on the reasons for the ‘buried block’ phenomenon identified as a result of excavations undertaken by Vincent Clark and Associates and Green Heritage in the Wesley Church/Jones Lane precinct of the Melbourne CBD. It has revealed that filling as a result of Council alterations of street levels was a widespread phenomenon in the mid to late 19th century and historical records of filling events can be found in a number of interconnected sources, primarily consisting of various records of the Melbourne City Council held at the Public Record Office Victoria. The major sources for data relating to filling events consulted for this report are:

- **Minutes of the Public Works Committee VPRS 4037/PO** – these meeting minutes contain mentions of filling orders. Such orders were often also reported in newspapers of the day when they reported on City Council meetings. It must be kept in mind, however that these records only record those instances of filling that required Council attention – i.e. it became necessary for the Council to order a landowner to fill their property. There is likely no Council record of those instances where landowners took it upon themselves to fill their properties without Council prompting.

These meeting minutes also contain some requests from landowners for projected street levels.

- **Town Clerk’s Files (VPRS 3181/PO)** – there are various files grouped under different categories. Material relevant to filling events were found in the various files groups under the topics health, lands, lanes, nuisances and streets.

Other files from which information was derived for this report are listed in the references section and referenced through the report, and there may be information in other Council records that have not yet been examined. It is suggested that further research into the alteration and fixing of Melbourne street levels would likely yield further information concerning probable filling locations, including those for which no Council intervention was required. Rate book data has also been shown to be potentially useful in determining the likelihood of deep or disruptive filling in areas that have already been pinpointed as probable filling locations.

While there is certainly scope for a more thorough and comprehensive examination of the available historical records (Section 7.2), the work undertaken for this project has gone some way to explain the processes involved in the land filling phenomenon visible in the archaeological record. The results of the historical research can be summarised as follows:

- The need to level private property by filling was created by a combination of the natural topography of Melbourne and the formation of the city streets. The streets, by necessity, were raised above the natural ground level in low-lying areas, and their formation resulted in the blockage of the natural drainage of the CBD and the inner-city suburbs. This process was underway by at least the mid 1840s.
- Act 16 Victoria No 38 (1853) enabled the City Council to order the raising of land to the level of adjacent streets.
- The formation of streets, and the setting of permanent street levels appears to have been an on-going process through the 1850s and 1860s in the CBD and (what is now) the inner city. In some locations it continued into later decades.
- An order to raise land could be for as little as a few inches, to as much as several feet (or the height of a roof), and the impact on existing structures on the property could therefore range from very little to significant.
- There are clear examples of landowners making preparation to raise their houses above the fill, in other instances property owners were clearly required to more or less bury the lower floor of their house.

It was the archaeological discovery of deep filling at the Wesleyan/Jones Lane precinct that prompted the development of this project. The implications for archaeology of the filling events known to have occurred in Melbourne in the early decades of post-contact settlement are significant, and can be summarised as follows:

- There are known archaeological examples of deep filling events from the 1850s in the Melbourne CBD. While archaeological information concerning the outcomes of these is fairly preliminary, it is clear that in more than one location deep filling occurred inside and around existing structures, leading to a level of preservation of walls, fireplaces and other structural features not typically found in CBD archaeological sites.
- More moderate (less deep) filling can also have significant implications for archaeology, as it may have resulted in the sealing and protection of very early features, structures and deposits that would otherwise have been disturbed or destroyed by subsequent occupation and use of the site. Included in these might be cess pits that were sealed 'as is' at the time of the filling event. The dampness of low-lying or flooded areas combined with the (usually clay) cap could result in improved conditions for the preservation of some organic remains.

- The fill layers are a potentially securely dated stratum (if historical evidence of the filling event can be found) the identification of which would assist generally in the interpretation of site formation processes on any given archaeological site.
- The filling events themselves are part of a city-wide phenomenon, and should be considered in that light. The fill itself was a commodity, the sourcing, creation and distribution of which has tended to be dismissed in archaeological reports in the past. An understanding of the locations from which fill was sourced, and where it was placed, may have implications for the interpretation of Aboriginal as well as historical archaeological material in the CBD. Unlike many other commodities that appear in the historical archaeological record, fill is generally largely ignored and dismissed by archaeologists during the interpretation of historical archaeological sites, yet paying more attention to it may assist in the interpretation and understanding of nineteenth century Melbourne.
- Though widespread, the characteristics of the filling events were highly variable and localised, with archaeological evidence indicating that sites located a short distance from one another may have been subject to very different filling requirements and processes.

7.2 Suggested further work

As discussed in the introduction, the historical research undertaken for this project has only scratched the surface of the available historical data, and it very much feels that there is great deal of additional work required to understand and make use of the filling phenomenon discussed in this report.

7.2.1 Completing the historical research into the filling phenomenon:

Due to the sheer volume of historical information available in the minutes of the Public Works Committee, not all available volumes, even those from the 1850s and 1860s, have been examined. These are likely to contain more useful information and a complete examination of them would complete the data in terms of listing filling orders issued by the Committee through the years examined. This data, though, is only one part of the story, given that they do not contain information concerning filling events for which landowners did not require either prompting or assistance from Council. Nor do they generally provide an indication of the depth of required filling. Avenues of inquiry that may fill in these gaps include:

- An analysis of the process and sequence of the alterations to and fixing of the final levels of the city streets. Street level data may provide a clearer indication of the depth of filling that was required. The sequence in which street levels were raised may on provide a better understanding of the sequence and depths of the filling events across the CBD.

- More targeted and detailed rate book analysis of locations known to have been subject to filling. A close examining of rate book data for properties on the north side of Little Lonsdale Street appeared to indicate a disruption in property types, and possible indications that some properties had been either raised or buried around the time when other historical data, in the form of filling orders, indicated that this may have occurred. While the close examination of rate book data is very time-consuming, it may be a worthwhile avenue of inquiry for gaining additional information on those locations where deep filling is suspected to have occurred.
- An examination of the City Surveyors contract specification plans. If these plans exist and are available, they could provide useful information on the depths of required filling for those filling events that were carried out by contractors. They are referred to in the City Surveyor specification books, but were not located during the work undertaken for this report.

A good understanding of the characteristics and sequence of filling across the city would assist in the interpretation of the historical archaeology across the CBD, potentially providing a horizontal sequence of filling across the CBD and inner city suburbs. It *may* be possible to trace the movement of fill across the city in some instances, providing an interesting additional perspective on site formation processes, and important information concerning potential site preservation.

Filling orders provide the opportunity to date specific filling events in different parts of the city, and potentially have also created a mid-nineteenth century landscape sealed by historically dateable events. The fill itself is a sealed archaeological deposit that was sourced, carted, traded and laid down across the Melbourne CBD and inner city.

The sort of work required to fully elucidate the chronology and character of the filling events across Melbourne is beyond the scope of any individual archaeological project in that the relevant information is not generally easy to access and find. It would generally be difficult to discover the relevant information in the course of historical research undertaken typically undertaken for such a project, making the need for this to be addressed in a single report/project all the more necessary. It is hoped that the information provided in this report provides a base, in terms of a basic understanding of the phenomenon, that future work can build on.

7.2.2 Expanding the scope of the Heritage Inventory in inner city suburbs:

It is clear that filling events occurred in Fitzroy, Carlton, East Melbourne, probably North Melbourne, and West Melbourne. The example of John Smith's house (Section 3.2) indicates that deep filling may have occurred in Carlton. Other references to filling, or the possible need for filling in inner city suburbs were noted in the course of the historical research undertaken for this project but were outside the scope of the

study and beyond the study area. As Figure 6 indicates, clusters of filling events are known to have occurred in the 1850s and 1860s beyond the bounds of the Melbourne CBD. They were both on the immediate fringes of the CBD and further afield (see Appendix 2).

These inner city suburbs have never been the subject of a large-scale study of the type undertaken in the CBD by Fels, Lavelle and Mider in the early 1990s, and as a result comparatively few Heritage Inventory sites have been recorded within them. Considering the potential significance of sites that were subject to early deep filling, the risk in these locations of the loss of significant archaeology is higher than in the CBD where inclusion on the Inventory provides filled sites a level of protection. Large-scale preliminary studies of these inner city areas aimed at recording the existence of potential Heritage Inventory sites there would go some way to addressing this issue.

7.3 Implications for archaeological work in the CBD and the inner city

While one of the original aims of this project was to identify likely locations of additional, as yet unidentified locations of deep filling in the Melbourne CBD, that outcome has proved to be somewhat elusive. The relatively large quantity of historical material related to filling events, combined with the lack of readily accessible clear information concerning the required depths of the fill makes the isolation of deep fill locations difficult. In addition, the highly localised nature of the filling events as demonstrated by the archaeology makes any clear identification of particular locations or sites difficult. This makes any mapping of potential deep filling sites highly speculative and potentially misleading – for this reason it has not been undertaken for this report.

There exist instances both of deep filling occurring in the absence of any known historical reference to a filling event (for example, the Capitol Theatre in Swanston Street, see Section 4.2.3) and of no archaeological evidence of fill in locations where deep filling might be expected as a result of historical and/or archaeological information (for example, the Bucks Head Hotel site (H7822-1063), and the southwestern and southern portions of the area excavated by Vincent Clark and Associates at the Wesleyan and Jones Lane precinct where no clay fill was found (Section 4.2.2.2)). This makes any prediction of deep filling locations, in the absence of a clear historical description of the fill and of the property location, highly problematic. Certainly, continued excavation in the Melbourne CBD in locations near known deeply filled sites, and in those locations where historical data indicates there may have been deep filling (such as along portions of Bennetts Lane) will go some way to helping to tease out the correlation between historical and archaeological information and the extent of historical filling.

Both deeply and moderately filled archaeological sites have the potential to contain structures, features and deposits that are unusually well-preserved, meaning that there may be both management and

archaeological implications to their discovery – the former being around the potential significance of the site and the questions that it raises regarding a need for management strategies beyond salvage excavation, and the latter being around the potential complexity of the archaeology and particular needs around timing and resources that excavating such a site may require. Given that archaeological excavations in the Melbourne CBD are generally carried out as a result of property development, meaning that there could be quite high financial implications attached to management decisions around them, there is a clear need to identify as early as possible, and as clearly as possible, locations of deep filling.

At present, it would appear that the best course of action for archaeological investigation *anywhere* in the Melbourne CBD or in the inner city would be to:

1. Consider the position of the site in terms of contour mapping and determine whether the site is located in a situation that may have required filling (i.e. not on the top of a natural rise).
2. Undertake the excavation of deep soundings in the first phase of any historical archaeological investigations undertaken in the CBD to assess the probability of early clay (or other) fills being present at the site and to ensure that supposedly natural clay is indeed natural.

Clearly the discovery of early historical deep clay fill in any given Heritage Inventory site will have the potential to increase the significance of the archaeology of the site, potentially making the site eligible for inclusion on the State Heritage Register. While it would be useful to be able to identify potential sites of deep filling prior to the commencement of archaeological assessment, this is not generally possible with the level of historical data currently available. The completion of the historical research outlined in Section 8.2.1 would go some way to make this a more realistic proposal.

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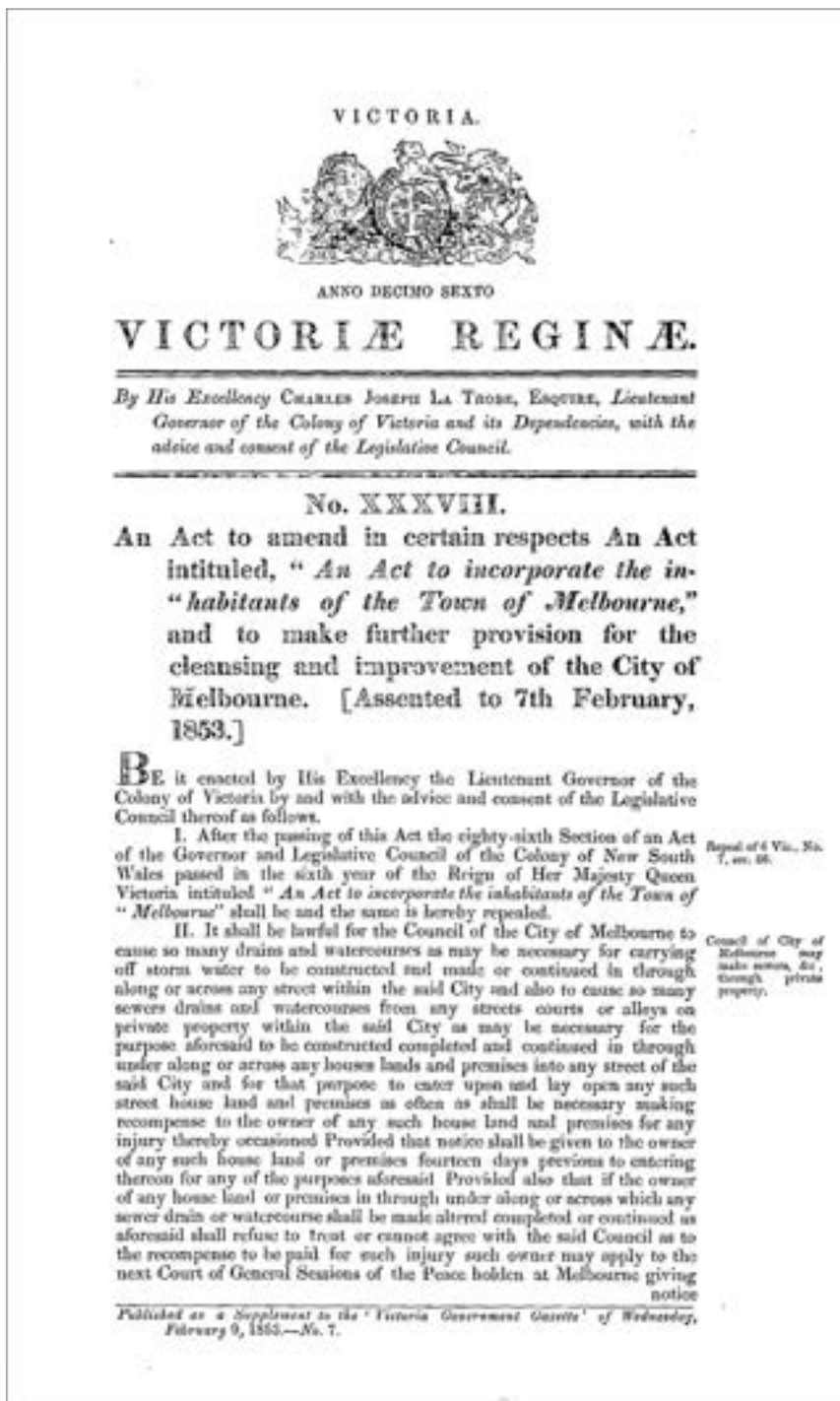
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Appendix 1 – Copy of the Act (Act 16 Victoria No 38 [1853])



notice thereof to the said Council and the said Court shall have power to summon and empanel a jury to assess the recompense which ought to be paid to such owner or occupier for such injury as aforesaid and thereupon the said Court shall order the sum assessed by such jury to be paid to such owner accordingly and such judgment shall be final to all intents and purposes and the said Court may award costs to either party at their discretion Provided further that every such sewer drain or water course if carried in through or under any house or other building in the said City shall be a tube constructed of cast iron and kept constantly air-tight and in good order by and at the expense of the said Council.

Council of the said City may order owner or occupier to raise surface of yard or land.

III. Whenever it shall be made to appear to the Council of the said City upon the statement or complaint in writing of the Surveyor thereof that the surface of any yard or land situated in the said City and not being a street therein is lower than the level of the nearest street or of the street sewer or drain into which the water off the said yard or land should in the opinion of the said Surveyor flow or be made to flow it shall be lawful for the said Council at any time by writing under the hand of the Mayor and the Town Clerk of the said City to order that the surface of such yard or land or any part thereof shall be raised to such height in such manner and within such time as to the said Council may appear expedient and thereupon the occupier or owner of the said yard or land shall in such manner and within such time as shall be expressed in such order raise the surface thereof to the satisfaction of the said Surveyor.

Neglect of owners provided for.

IV. If any such owner shall omit to raise the surface of such yard or land as aforesaid in such manner and within such time as shall be expressed in the said order it shall be lawful for the said Council to raise the surface of the same or such parts thereof as shall not have been so raised in pursuance of the said order and to ascertain and charge such owner with the costs and expenses thereof.

As to recovery of expenses, &c.

V. If any such owner shall not pay all such costs charges and expenses as aforesaid the same shall and may be recovered by the said Council from the owner or from the occupier or any one of several occupiers of such yard or land in all respects in the same manner and by the same remedies as are provided by an Act of the Governor and Council of New South Wales passed in the fourteenth year of the Reign of Her Majesty Queen Victoria intituled "An Act for regulating the formation of drainage and repair of streets courts and alleys on private property within the City of Melbourne," with reference to the recovery of costs charges and expenses incurred in paving flagging macadamizing levelling draining and sewerage or otherwise completing and repairing streets courts and alleys on private property in the said City.

Interpretation Clause.

VI. In the interpretation of this Act the term "owner" shall be taken to mean every person who is in possession or in receipt of the rents or profits of such land The term "land" shall be taken to mean any space or place in the said City upon which no building has been erected whether enclosed or unenclosed. The term "street" shall mean public street market place square crescent highway roadway lane passage or other public place.

Appendix 2 – Known filling events (derived from historical sources)

Green shaded events are in the study area and plotted on Figure 6. Blue shaded events are outside the study area and plotted orange on Figure 6. Grey shaded events are not plotted (generally because they are either off the map provided in Figure 6, or because their location is too unclear).

These are events for which contemporary historical information or descriptions were found.

#	Date	Year	Source	Detail
1	18/01/1855	1855	VPRS 4037 (PWC minutes)	Letter read from Mr John Smith complaining of an intolerable nuisance existing on the premises at the back of the Sydney Hotel in William Street. Chairman instructed to report to the city Council recommending the issue of an order to the owners of the property to fill up their yards to the level of adjacent streets. That being the course recommended by the city surveyor whose report was received and adopted.
1	31/01/1855	1855	Argus	'Levelling private yards. The next order of the day was carried, viz; - That the report of the Public Works Committee No. 9 be adopted, recommending the issue of an order by the Council, in accordance with the provisions of the Act 16 Vict., No. 38, requiring the owners of property adjoining the Sydney Hotel, William Street, to fill up the surface of the same to the proper level.'
2	15/02/1855	1855	VPRS 4037 (PWC minutes)	Recommendation that the Council issue an order to owners of the property on the north side of Lonsdale Street between Russell and Stephen Streets to fill up property 'to the proper level'.
2	21/02/1855	1855	Argus	City Council 'to consider and order upon the report of the Public Works Committee, No. 17, recommending the issue of an order by the Council in accordance with the provisions of the Act 16 Vict, No. 8, calling upon the owners of property on the north side of Lonsdale street, between Russell and Stephen streets, to fill up the surface of the same to the property level. The report was adopted.'
3	25/05/1855	1855	VPRS 4037 (PWC minutes)	a petition from Mr Thomas James praying mitigation of the injury caused to his premises at the corner of Mincing Lane and Flinders Street by the alteration of the street level. Considered - referred to the city surveyor for report
4	16/06/1855	1855	VPRS 3621, unit 007 (govt letters)	Report of 'green stagnant water and other deposits in back yard of premises No 113 Little Bourke Street East [note in margin says 'premises filled']
5	13/08/1855	1855	VPRS 3181 (streets)	Edw Barker at 133 Bourke Street (a tenant in the house) asking that instructions be given to raise the level of the property 'to the level now forming' which appears to be about 8 inches above the yard level. Barker fears this will result in 'a stagnant pool of water' at the front of his residence if not addressed.

#	Date	Year	Source	Detail
6	11/10/1855	1855	VPRS 4037 (PWC minutes)	Chairman instructed to report to the city Council recommending the issue of an order requiring the owners of <i>certain</i> land on the north side of Little Lonsdale Street between Russell and Stephen Street to raise the surface of such land to the level of the street adjacent ²⁴ . This followed a petition from residents of Little Lonsdale Street complaining of the raising of the level of that street, and asking that some other solution to the drainage problem be found. Petition referred to the PWC (reported in <i>The Argus</i> 4/7/1855).
1	04/10/1855	1855	VPRS 4037 (PWC minutes)	Letter read from Mr John Smith complaining of the nuisance existing on property adjoining his and occupied by the premises of the Sydney Hotel, of an eating house, and of Messrs Murphy's Brewery requesting that measures may be taken for remedying the nuisance and that a private lane communicating with this property may be formed in accordance with the provisions of the Private Streets and Alleys Act. Chairman instructed to report to the city Council recommending the issue of an order requiring the owners of the land on which the Sydney Hotel, Messrs Murphy's Brewery, the neighbouring buildings stand to raise the surface of such lands to the level of the street adjacent in accordance with the provisions of the Act of Council 16 Victoria No 38.
6, 7, 8, 35	16/10/1855	1855	Argus	Orders to fill several properties: <ol style="list-style-type: none"> 1. Vacant land in Franklin Street, the property of Mr Benjamin, to be raised to the level of Franklin Street (7). 2. Yard adjoining Mr Benjamin's to be raised to the level of Franklin Street (7). 3. Vacant land at the back of Wm Evans' Bourke Street property to be raised to the level of the adjoining private lane²⁵. 4. Properties at the back of Nos 13 and 14 Bouverie Street, property of Kinder and Cornwall to be raised to the level of that street (8). 5. Property of Mr Nicholson, adjoining 10 Bouverie Street, to be raised to the level of Bouverie Street (8). <p>Also, Council considered a report of the public works committee recommending that an order be made requiring the owners of certain land on the north side of Little Lonsdale Street between Russell and Stephen Streets to be raised to the level of adjacent street (6)</p>
9	20/03/1856	1856	VPRS 4037, (PWC minutes)	Recommendation to the City Council that Messrs Bright Brothers and Co be ordered to fill up property at corner of Little Bourke and Spencer Streets (they either own or occupy this land) in accordance with Act 16 Victoria No 38 ²⁶ .

²⁴ Plotted location approximate only. It is clear that not all the land in this location was to be raised.

²⁵ The location of Evans' Bourke Street property has not been identified. In the 1853 *New Quarterly Melbourne Directory*, William Evans is listed as an upholster at 138 Queen Street and at 172 Little Bourke Street. In the 1855 *Butterfield Melbourne Commercial, Squatters and Official Directory* there is no listing for William Evans at all. The 1859 *Tanner's Melbourne Directory* has a listing for H.C. Evans, bookseller at 94 Bourke Street. A search of rate records along Bourke Street would likely identify the location of this property, but was beyond the scope of this report.

²⁶ In the 1860 *Sands Directory* Bright Brothers are listed as having a guano store on the south side of Little Bourke St at the Spencer St intersection. Bright Brothers were listed in the 1854 *Butterfield Directory* but with premises on Flinders and Lonsdale Streets only, but they were the original post-contact owners of allotment 1, section 16 in Lonsdale Ward, and so the correct location of this filling event may be close to the plotted location of #31 (on the corner of Little Collins Street).

#	Date	Year	Source	Detail
9	26/03/1856	1856	Age	City Council considered 'the report of the Public Works Committee No. 25, was adopted, recommending that an order be issued in accordance with the provisions of the Act 16 Victoria No. 38, requiring Messrs Bright, Brothers and Co. to fill up certain land of which they are the owners or occupants, and which is situated at the corner of Little Bourke Street and Spencer Street, to the level of those streets.'
10	04/03/1856	1856	Age	The report of the Public Works Committee, No. 22 was adopted, recommending that an Order be issued in accordance with the provisions of the Act, 16 Victoria, No. 38, requiring Thomas Budds Payne, Esq. to fill up to the level of the adjacent streets certain land being allotment 18 of section 43, at the junction of Therry and Elizabeth Streets.
11	20/4/1856	1856	VPRS 3181 (streets)	Petition from Richard Hill of Franklyn Street, North Melbourne – wooden house will be almost buried, can be raised by the aid of screws, requires Council assistance to fill.
11	01/05/1856	1856	VPRS 0403, unit 002	Petition read from Mr Richard Hill of Franklin Street asking that a sufficient quantity of earth should be placed upon his land to enable him to put his house on the same level to which the adjacent street has recently been formed - city surveyor instructed to comply.
12	08/10/1856	1856	VPRS 4037 (PWC minutes)	Mr Campbell instructed by city surveyor to provide Mr Abercrombie as much fill from works on Victoria Street as required 'to fill up [his] yards located off Swanston Street between A'Beckett and Franklin Streets ²⁷ .
13	29/10/1856	1856	VPRS 4037 (PWC minutes)	City surveyor instructed contractors Campbell and Co to fill up the property of Mr P. Nelan on Swanston Street ²⁸ .
14	29/10/1856	1856	VPRS 4037 (PWC minutes)	City surveyor instructed to order contractor for Victoria Street to fill up the allotment at the corner of Victoria and Leicester Streets.
15	20/10/1856	1856	VPRS 4037 (PWC minutes)	Ratepayers in Latrobe ward complain of stagnant water and decayed animal and vegetable matter in East Melbourne in area between Simpson Road, Powlett, Gipps and Hoddle Streets. City surveyor instructed to take care of it, spending no more than £20.
16	19/11/1856	1856	VPRS 4037 (PWC minutes)	The city surveyor instructed to fill the gully running through blocks 14, 15, 30 and 31 Smith Ward, and that the stuff for such purpose be taken from the works being executed in Russell Street.
17	10/12/1856	1856	VPRS 4037 (PWC minutes)	The city surveyor instructed to prepare plans of Adderley Street on its permanent level and the streets leading from Spencer Street between LaTrobe and Hawke Street, to enable the Council to call upon owners of property to fill up their yards in accordance with the terms of the management of towns, etc

²⁷ No listings for Abercrombie found in directories from 1854, 1859, 1860 or 1861. Location plotted is approximate only.

²⁸ It is assumed that this is P. Neylon, who owned lot 10 of section 38 (between A'Beckett and Franklin Streets on the west side of Swanston St).

#	Date	Year	Source	Detail
18	08/04/1857	1857	VPRS 4037 (PWC minutes)	Letter read from Mr Richard [Nile?] respecting his property in Franklyn Street which is much lower than the level of the street since its formation. The city surveyor was instructed to get the land filled up by the contractor who is now at work in the neighbourhood ²⁹ .
19	02/08/1857	1857	VPRS 4037 (PWC minutes)	Request for an order on the King Street contractor to fill up William Shiels' land in Spencer Street to street level. Decision postponed by committee until contract finished so that the quantity of excess fill is known ³⁰ .
20	16/09/1857	1857	VPRS 4037 (PWC minutes)	Mr Lyell requested that the committee honour a previous promise to have his land in Franklin Street filled to street level. The city surveyor was instructed to order the King Street contractor to deposit '300 cubic yards of stuff on Mr Lyells property' ³¹ .
21	05/09/1859	1859	VPRS 3181 (land)	William Wallace of Dudley street complaining that changed levels has meant that his house is now higher than required owing to a change in the levels told to him by authorities ³² .
22	22/11/1859	1859	Argus	The report of the Public Works Committee, recommending that an order be issued to the owners of the land abutting on Dudley and Spencer streets, being Allotment No 7 of Block [??], city of Melbourne, to raise the surface of the land to the levels of Dudley and Spencer Streets, be adopted.
23	10/1/1860	1860	VPRS 3181 (nuisances)	Charles Pardor at 29 Bourke Street. Calling attention to the rear of the property being '12 inches deep in putrid matter...and the extreme of it too large [5 by 200?] to be allowed to repair ³³ .
24	31/7/1860	1860	VPRS 3131 (streets)	Formation of Hawke Street will leave property of Alexander Short below street level, requesting fill from cutting in same street ³⁴ .
25	20/11/1860	1860	VPRS 3181 (nuisances)	Drawing attention to a stagnant pool of water in George Street, East Melbourne created by recent street formation. The street has been recently made and filled and this allotment is under the level of the street.
26	16/11/1861	1861	VPRS 3181 (streets)	John Smith with instructions to E. G. Fitzgibbon regarding filling up Smith's property now that the laneway has been filled. This required the removal of floor boards and joists and the chimney piece.

²⁹ This surname is difficult to make out. Nile does not appear in available directory listings for Franklin Street for 1854 (when there were no listings for Franklin Street), 1859 or 1862, or in the 1862 rate records. There exists the possibility that this was Richard Hill (see number 11) but this seems unlikely as Melbourne City Council building records (Burchett Index) indicate that Hill built an additional house on Franklin Street west in June of 1857 (after the filling incident listed in #11) – it would seem unlikely that there were on going level issues with his property if this was the case.

³⁰ The 1860 *Sands Directory* listed William Shiels as the proprietor of the *James Watt Hotel* located on the south side of Rosslyn Street, west of the Spencer Street intersection.

³¹ Bourke Ward rate records from 1862 a George Lyall was listed as listed as the owner of a property at 40 Franklin Street (south side of the street between Spencer and Adderley Streets).

³² Probably not a filling event, but unclear.

³³ Pardor (or Pardoe) was a dentist whose business premises were on the north side of Bourke Street, between Elizabeth and Swanston Streets. Mapped location is approximate only.

³⁴ More research needed to identify property. Mapped location approximate only.

#	Date	Year	Source	Detail
27	14/4/1862	1862	VPRS 3181 (streets)	Signature unclear (Harworth/ Newcastle?), letter written from 21 Franklin Street asking for a few loads of gravel to fill up two rooms, the need for which was 'caused by the corporation having risen the road above the rooms of the house which cost £750'. Gravel to come from a cutting 'at the top of Franklin Street' ³⁵ .
28	12/01/1864	1864	Argus	City Council considered 'an appropriation be made to the extent of £10, for the purpose of filling up to the level of adjacent streets, allotments eleven and twelve, block thirty-four, Bourke Ward, which have been reported by the city surveyor as dangerous nuisances, and that upon the work being completed, and the owners of the property discovered, the town clerk would be instructed to take proceedings to recover the cost
29	28/06/1865	1865	VPRS 3181 (nuisances)	John Reilly, City Surveyor bringing under the notice of the city Council defective drainage and stagnant water 'on the west side of Station Street in section 58 being allotment 6 and 7 Smith Ward' he recommends 'that the owner be noticed to fill up the ground to the levels of Station Street and Palmerston Street' ³⁶
30	13/08/1865	1865	VPRS 3181 (nuisances)	John Thomas enquiring as to whether his property at allotments 9, 10, 11 in sec 19 'is now cleared of water cause by city improvements' because he wishes to 'build and improve the place' ³⁷ .
29, 31	14/01/1868	1868	Argus	The following recommendations of the public works committee were adopted: 'that tenders be called for filling up lands to the levels of adjacent streets in block 58, Smith ward...and in block 16, Lonsdale ward...the owners or occupiers having failed to comply with the order of the Council to raise the surface of to admit of the drainage flowing into the adjoining streets' ³⁸ .
32	22/6/1868	1868	VPRS 3181 (land)	Filling up land level with Franklin Street – 'the cost of filling up is more than the value of my land' Ann Sigsworth.
33	5/11/1868	1868	VPRS 3181 (land)	Land in block 35, allot 17, Bourke Ward. Order given to landowner to fill up land. Landowner's agent is not willing to spend more than £20, but the cost will be in the order of £100.
34	03/09/1869	1869	VPRS 3181 (land)	Memo from the city surveyor asking for specifications for filling up land at block 96 allotment 3, Bourke ward, also noting that McDonald who owns adjacent low-lying property has stated that he can't fill up his land until the adjacent portion of Rosslyn Street, next to Adderley Street, has been filled.
34	14/09/1869	1869	Argus	Orders were given for the filling up of allotment 3, in block 96, Bourke ward, at the cost and risk of the owners ³⁹ .

³⁵ Nothing resembling this name was found in the relevant rate books from 1862 or 1868. The claim of a property worth £750 seems overblown for the time and does not match values in 1862 rates.

³⁶ This is located north of the mapped area.

³⁷ Not certain that this is a filling event, but would appear likely. Location uncertain.

³⁸ Plotted location is approximate. It is assumed that the order refers to private landowners whose property was to the Spencer Street end of Section 16 (between Little Collins and Bourke Streets).

³⁹ Location uncertain.

Appendix 3 – Rate book data for the north side of Little Lonsdale Street for the years 1854, 1855 and 1856

Heritage in Ruins, report to the Heritage Council Victoria

1854			1855			1856		
address	owner/ratepayer	description	address	owner/ratepayer	description	address	owner/ratepayer	description
First lane east of Russell Street (Hayward Lane)	Charles James	Brick house, 2 rooms and kitchen	First lane east of Russell Street (Hayward Lane)	Patk Dunn	brick house, 2 rooms and kitchen	First lane east of Russell Street (Hayward Lane)	not legible	brick, 4 rooms
	Joseph Sullivan	brick house, 2 rooms and kitchen		Robt Clothier	brick house, 2 rooms and kitchen		Robt Clothier	brick, 4 rooms
	William Cothyer	Brick house, 2 rooms and kitchen		Wm Clothier	brick house, 2 rooms and kitchen		Wm Clothier	brick, 4 rooms
	Joseph Henry	Brick house, 2 rooms and kitchen		Edward Butterworth	brick house, 2 rooms and kitchen		Edwd Butterworth	brick, 4 rooms
	John Edwards	Brick cottage, 2 rooms		Isaac Lazarus/ ?	brick house, 2 rooms and kitchen		Js Lazarus, alias 'Izzard'	brick, 2 rooms and kitchen
	Thomas Gardner	Brick cottage, 2 rooms		Mrs Sharpe	brick house, 2 rooms and kitchen		J. Corner	brick, 2 rooms and kitchen
	Anne Ash	Brick cottage, 2 rooms		Miss Ash	brick house, 2 rooms and kitchen		Foley	brick, 2 rooms and kitchen
	Thomas Anderson	Brick cottage, 2 rooms		Edwd Tyrell	brick house, 2 rooms and kitchen		Edwd Tyrell	brick, 2 rooms and kitchen
	James McClelland	Small wooden house, 2 rooms (in bad repair)		Mrs Ann Baxter	wood house, 1 room			
	John Franklyn	Small wooden house, 2 rooms		Michael Sullivan (owner?)	brick house, 2 rooms and 1 room adjoining		Levi Deriger	brick, 3 rooms
	John D Dumham	Small wooden house, 1 rooms		Geo Gibbs	brick house, 2 rooms		Chs McLaughlin	brick, 2 rooms
	Edward Tyrele	Brick cottage, 2 rooms		Geo Gibbs	brick house, 2 rooms		Chs McLaughlin	brick, 2 rooms
	Charles McLaughlin	Brick cottage, 2 rooms and cow shed		Chas McLaughlin	brick house, 3 rooms and shop		Chs McLaughlin	brick shop, 3 rooms
	Joseph Irvine	Brick house, shop, 2 rooms and kitchen (roughcast and stucco)						

Heritage in Ruins, report to the Heritage Council Victoria

1854			1855			1856		
address	owner/ ratepayer	description	address	owner/ ratepayer	description	address	owner/ ratepayer	description
Second lane east of Russell Street (Davison Lane)	James Hales	Brick cottage, 2 rooms	Second lane east of Russell Street (Davison Lane)	Christopher Houghton	brick house, 2 rooms	Second lane east of Russell Street (Davison Lane)	J. Howard	brick house, 2 rooms and yard
	William Griffiths	Brick cottage, 2 rooms		Michael Sullivan (owner)	brick house, 2 rooms		Wm Ackroyd	brick house, 2 rooms and yard
	John Harold	Brick cottage, 2 rooms		John Chantil?	brick house, 2 rooms		Thiel	brick house, 2 rooms and yard
	M. Lorne Pyke	Brick cottage, 2 rooms		M. L. Pike	brick house, 2 rooms		T. W. Pike	brick house, 2 rooms and yard
	James Hamilton	Brick cottage, 2 rooms		M Sullivan (owner)	brick house, 2 rooms		Conrade Tircer	brick house, 2 rooms and yard
	William Edmonds	Brick cottage, 2 rooms		Wm Edwards	brick house, 2 rooms		Geo Rise	brick house, 2 rooms and yard
	William H Walker	Brick cottage, 2 rooms		Rupperdict	brick house, 2 rooms		Wm Rise/ Rice	brick house, 2 rooms and yard
	John Thomas Taylor	Wooden cottage, 1 room		J. T. Taylor	wooden house, 1 room and tent?		Elign Grace	wood, 2 rooms and yard
	William Murray	Brick cottage, 2 rooms		H? Fox	brick house, 2 rooms		Mrs Fox	brick, 2 rooms
	Hugh Blane	Brick cottage, 2 rooms		J. Bartley	brick house, 2 rooms		J? Owen	brick, 2 rooms
	George Polemy(?)	Brick cottage, 2 rooms roughcast		C. Driscoll	brick house, 2 rooms		Lawc Eagan	brick, 2 rooms
	Thomas Glover	Brick cottage, 2 rooms roughcast		J. T. Taylor	brick house, 2 rooms		Thos Quinn	brick, 2 rooms
	Mrs Coffy	Brick cottage, 2 rooms and cowyard		J. Courtney (owner)	brick house, 2 rooms and tent?		Js Courtney	brick, 2 rooms and sheds
	Margaret Campbell	Brick cottage, 1 apartment		J. Courtney (owner)	brick house, 3 rooms		Wm Hill/ Noll?	stone, 3 rooms
	Joseph ?vale	Brick cottage, 2 rooms		J. Courtney (owner)	brick house, 3 rooms		Js Courtney	stone, 3 rooms
				Robt. [can't read surname]	brick house, 1 room		Edw Bower	brick, 1 room
							Mrs Lawrence	brick, 2 rooms
	William Purvis	Brick cottage, 2 rooms and shed		Wm Purvis	brick house, 2 rooms		Wm Purvis	brick, 2 rooms and [not legible]
							Francis Hanagan	brick house, 4 rooms
							Jacob Curry	brick house, 5 rooms

Heritage in Ruins, report to the Heritage Council Victoria

1854			1855			1856		
address	owner/ ratepayer	description	address	owner/ ratepayer	description	address	owner/ ratepayer	description
Third lane east of Russell Street (Bennetts Lane)	Patrick Courtney	Brick cottage, 2 rooms and cow yard in yard enclosed with the following (below)		Patrick Courtney	brick house, 2 rooms, stables [in brackets 'buried by r??d]		Patr Courtney	brick, 2 rooms, cowsheds and loft
	James Courtney	Brick cottage, 2 rooms stable and hayloft (in enclosed yard)		James Courtney	brick house, 2, 2 rooms, Range of 4 houses each (buried by ???)		Js Courtney	brick, 3 rooms, 5 rooms
	Denis Lynch	Brick house, 2 rooms (in enclosed yard)						
	John B?ingham	Brick house, 2 rooms (in enclosed yard)						
	William Ham	Brick cottage, 2 rooms (in enclosed yard)						
	Robert Palm	Wooden house, 2 rooms, brick house at rear, 2 rooms		Catherine Maloney	wood house, 3 rooms and brick house		Wm Harris	wood, 2 rooms and brick house of 2 rooms
	Thomas Carrick	Wooden house, 2 rooms and workshop in front		Thos Carrick	wattle house, 2 rooms and wood house		Thos Carrick	brick, 2 rooms and kitchen
	William Rogers	Brick stuccoed house, 3 rooms, shed and wooden house in front, detached		J. Paddy	wood house, 3 rooms and kitchen		Wm Hinds?	wood house, 4 rooms and kitchen
	Isabelle Kelly	Wooden house 2 small rooms (note indicated that this is in one yard with house below)					Js Williams	wood house, 2 rooms
	William Erskine	Brick house, 2 rooms		Wm Erskine (owner)	brick house, 2 rooms and wood house 2 rooms		Thos Cohen	brick, 2 rooms
	Edward Linane	Wooden house, 2 rooms		Mary Ann Jones	wood house, 2 rooms		Wade?	wood, 2 rooms
				Miss Higgins	wood house, 2 rooms		Mrs Digg	wood, 2 rooms
	Samuel Redding	Wooden house, 2 rooms and cow yard		David? Redding	wood house, 4 rooms (buried by ??d)		Dani Reddin	wood, 2 rooms and cowshed
							Andw Drummond	stone, 2 rooms
	Joseph Boyle	Brick stuccoed cottage, 2 rooms		J. Barry	brick house, 2 rooms (buried by ??d)		John ?gen	stone, 2 rooms
							Barry Barry	wood, 2 rooms wood, 2 rooms
	George Nott	Brick stuccoed cottage, 2 rooms		Mrs Donohue	brick house, 2 rooms (buried by ??d)		Donovan	wood, 4 rooms

Heritage in Ruins, report to the Heritage Council Victoria

1854	owner/ ratepayer	description	1855	owner/ ratepayer	description	1856	owner/ ratepayer	description
Fourth lane east of Russell Street (Exploration Lane)	Samuel Evans	Stone and brick house with shop and 3 rooms	Fourth lane east of Russell Street (Exploration Lane)	Denis Lynch	brick house, 3 rooms	Fourth lane east of Russell Street (Exploration Lane)	Miss Duncan	brick, 3 rooms
	James Abbott	Brick cottage, 3 rooms		J. Ryan	brick house, 3 rooms and kitchen		Patk Reynolds	brick, 2 rooms and kitchen
	Domanick Flemming	Brick house, 2 rooms and small kitchen		J. Ploughman	brick house, 2 rooms		Mrs Fisher	brick, 2 rooms
	? Lavers	Brick stuccoed house, 2 rooms		Peter Romfels	wood house, 2 rooms		Romp??	wood, 2 rooms and stable
	Patrick Stapleton	Wooden house, 2 rooms and stables		J. Sawyer	wood house, 2 rooms		Nigleton?	brick, 2 rooms and shed
	Jeremiah Rigby	Brick house, 2 rooms		Jerhm Rigby	wood house, 3 rooms		Jerhm Rigby	brick, 4 rooms
	no name	Brick stuccoed house, 2 floors, 4 rooms, well furnished		John Winter	wood house, 4 rooms at the back of yard		Jerhm Rigby	brick, 3 rooms
	Margaret Donnerville	Brick stuccoed house, 2 rooms, 2 door entrances		Mrs Somerville	wood house, 2 rooms		Mrs Somerville	brick, 2 rooms
		Brick house, 2 rooms and shed		Mrs Somerville (owner)	wood house, 2 rooms		Mrs Somerville	brick, 2 rooms
				Mrs Somerville (owner)	wood house, 2 rooms		Mrs Somerville	brick, 2 rooms
	Stephen Wilkinson	Brick stuccoed house, 2 rooms	East side	Stephen Wilkinson	wood house, 2 rooms		J. Stanton and J Hinds	brick, 3 rooms
	John George Williams	Brick stuccoed house, 1 room		John Williams	wood house, 3 rooms		S. Williamson	brick, 2 rooms
	no name	Brick stuccoed house, 2 rooms		Mrs Kelly	wood house, 4 rooms			
	Samuel Hockey	Brick house, 4 rooms					Saml. Hanghey	brick, 4 rooms
	Michael Dwyer	Brick house, 2 rooms		Michl Dwyer	wood house, 2 rooms		Michl. Dwyer	wood, 2 rooms
	Samuel Fitzpatrick	brick house, 2 rooms		Saml Fitzpatrick	wood house, 2 rooms		Saml. Fitzpatrick	brick, 2 rooms
		Brick house, 3 rooms (small)						
	no name			Saml Fitzpatrick	wood house, 2 rooms		Saml. Fitzpatrick	brick, 2 rooms
	William Moore	Brick house, 2 rooms		R. Kippod?	wood house, 2 rooms		Thos. Green	brick, 2 rooms
					wood house, 2 rooms, ?			brick, 2 rooms and stables
	Thomas Boyd	Brick house, 2 rooms		S. Green	Shop		Thos. Green	
	Door/ Dove and Taylor			Harton/ Warton?	wood workshop? And coal? Yard			

1854	owner/ ratepayer	description	1855	owner/ ratepayer	description	1856	owner/ ratepayer	description
address	owner/ ratepayer	description	address	owner/ ratepayer	description	address	owner/ ratepayer	description
Fifth lane east of Russell Street (Evans Lane)	Henry Stevenson	Brick house, 2 rooms	Fifth lane east of Russell Street (Evans Lane)	David O'Brien (owner)	brick house, 2 rooms	Fifth lane east of Russell Street (Evans Lane)	John Edwd Chalmers	brick, 2 rooms
	Henry Payne	Brick house, 2 rooms		David O'Brien (owner)	brick house, 2 rooms		Mrs Norman	brick, 2 rooms
	David O'Burn	Brick house, 2 rooms		David O'Brien (owner)	brick house, 2 rooms		Walter Taylor	brick, 2 rooms
	Edward Pearce	Brick house, 3 rooms		Edw Pearce	brick house, 3 rooms		Robt Throckmorton	brick, 2 rooms
	Edward Pearce	Brick house, 3 rooms		Mrs Dunn	brick house, 3 rooms		Cat? Taylor	brick, 2 rooms
	Henry Sarsfield	Brick house, 3 rooms		Wm Toppin	brick house, 3 rooms		Robt Telligh	brick, 2 rooms
	George S?	Brick house, 3 rooms		Joshu Ovens?	brick house, 3 rooms		Miss Young	brick, 2 rooms
1854	owner/ ratepayer	description	1855	owner/ ratepayer	description	1856	owner/ ratepayer	description
address	owner/ ratepayer	description	address	owner/ ratepayer	description	address	owner/ ratepayer	description
Little Lonsdale St, north side	Archibald Maconochie	Brick house, 2 front shop windows, 6 rooms and cellar				Little Lonsdale N side, east of Russell cnr	Mrs S??y	brick 'Ship Inn' bar, 10 rooms, cellar and stable
87 Little Lonsdale	William Gibbons	Brick house, shop and three rooms				Little Lonsdale	John Lowry	brick shop of small room and bakehouse
Little Lonsdale	Benjamin Wycherley	Brick house, shop, 3 rooms and cellar				Little Lonsdale	Edwd Round	brick shop, 3 rooms
			Little Lonsdale	Mrs Wilson	brick house, 7? Room, shop	Little Lonsdale	Mrs Wilson	brick shop, 3 rooms
<i>Hayward Lane</i>								
93 Little Lonsdale	Byrne and Dickenson	Brick house, 5 rooms (stuccoed)	93 Little Lonsdale Street	Benj Gosling	brick house, 3 rooms and shop	Little Lonsdale	Benj Gosling	brick shop, 3 rooms
95 Little Lonsdale	Cornelius Sullivan	Brick house, 4 rooms and kitchen (stuccoed)	95 Little Lonsdale Street	A? Toll	brick house, 4 rooms and kitchen	Little Lonsdale	Mrs? Hemingham	brick, 4 rooms and kitchen
97 Little Lonsdale	James Perkins	Brick house, 4 rooms and kitchen (stuccoed)	97 Little Lonsdale Street	M? or R? Sullivan	brick house, 4 rooms and kitchen	Little Lonsdale	J. Chambers	brick, 4 rooms and kitchen
99 Little Lonsdale	William G Houghton	Brick stuccoed house, 4 rooms and kitchen	99 Little Lonsdale Street cnr	Geo. Stacey	brick house, 4 rooms and kitchen	Little Lonsdale	Mrs McLaughlin	brick house, 4 rooms and kitchen
<i>Davisons Lane</i>								
109 Little Lonsdale	William Learmonth	Brick stuccoed house, 2 rooms kitchen and cellar	109 Little Lonsdale	Tulloch and Brown	brick house, 4 rooms and cellar?	Little Lonsdale	Andw Brown	brick, 4 rooms and cellar
111 Little Lonsdale	Mrs ? Hunter	Brick stuccoed house, 2 rooms kitchen and cellar	111 Little Lonsdale	Mrs ?? Hunter	brick house, 4 rooms and cellar?	Little Lonsdale	Mrs. V? Hunter	brick, 4 rooms and cellar
113 and 115 Little Lonsdale	Robert Bennett	Two brick stuccoed houses, 8 rooms, kitchen and shed	113 and 115 Little Lonsdale (corner?)	??Miller	brick house, 8 rooms (cellar?)	Little Lonsdale	Eliz. Tuck	brick, 4 rooms and cellar

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						Little Lonsdale	Hugh Mundi	brick shop, 3 rooms
<i>Bennetts Lane</i>								
Little Lonsdale Street (1340)	Patrick Casey	Brick house, 2 rooms and shed attached at rear	117 Little Lonsdale corner	Arch? McConochy	brick house, 1 room, shop and bakehouse?	Little Lonsdale	Cramer and Kiers?	brick shop, 2 rooms and bakehouse
			119 Little Lonsdale	Martin Rooney	brick house, 4 rooms and stables	Little Lonsdale	Martin Rooney	brick, 4 rooms
			121 Little Lonsdale	C. Liegler	brick house, 4 rooms kitchen and ???	Little Lonsdale	Mrs Mack?	brick, 5 rooms, back ? And stables
Little Lonsdale Street	William Skinner	Brick house, 3 rooms and wooden shed	123 Little Lonsdale	Mrs Skinner	brick house, 3 rooms	Little Lonsdale	Mrs Skinner	brick house, 4 rooms
Little Lonsdale Street	no name	Brick house, 3 rooms and wooden shed	125 Little Lonsdale	Mrs Skinner	brick house, 3 rooms and kitchen	Little Lonsdale	Mrs Skinner	brick house, 4 rooms
Little Lonsdale Street	William Thomas Bowery	Stone and brick house with shop and 3 rooms	127 Little Lonsdale	J. McCarthy	Stone house, 3 rooms and coffee house?	Little Lonsdale	Ellen Holdsworth	stone shop, 4 rooms
<i>Exploration Lane</i> off Little Lonsdale (131?)	Patrick Kilmartin	Brick cottage, 2 rooms	129 Little Lonsdale	Thos O'Brien	brick house, 2 rooms	Little Lonsdale	Rd Kipponnd	brick house, 2 rooms
off Little Lonsdale	no name	Brick cottage, 2 rooms	131 Little Lonsdale	G. Dickenson	brick house, 2 rooms	Little Lonsdale	not legible	brick house, 2 rooms
off Little Lonsdale	no name	Brick cottage, 2 rooms	133 Little Lonsdale	Patk Kilmartin	brick house, 2 rooms	Little Lonsdale	Patk Kilmartin	brick, 2 rooms and sheds
133 Little Lonsdale	Henry Malimaine	Brick stuccoed house, 2 rooms, kitchen and servants room	135 Little Lonsdale	W. Ward	brick house, 2 rooms and shop	Little Lonsdale	Kaldowner	brick house, 3 rooms and house at back of 2 rooms
135 Little Lonsdale	John Dwyer	brick stuccoed house, shop, 3 rooms, kitchen, servants room	137 Little Lonsdale	John Dwyer	brick house, 3 rooms and shop	Little Lonsdale	John Dwyer	brick shop, 3 rooms and kitchen
137 Little Lonsdale	William Hanley	Brick house, shop, 3 rooms and stable	138 Little Lonsdale, corner	Wm Hanley/ Hanby	brick house, 3 rooms and shop [something illegible under this]	Little Lonsdale	Wm Hanley	brick shop, 3 rooms and [not legible]
<i>Evans Lane</i>								

Appendix 4 – A3 version of the Figures provided in the report

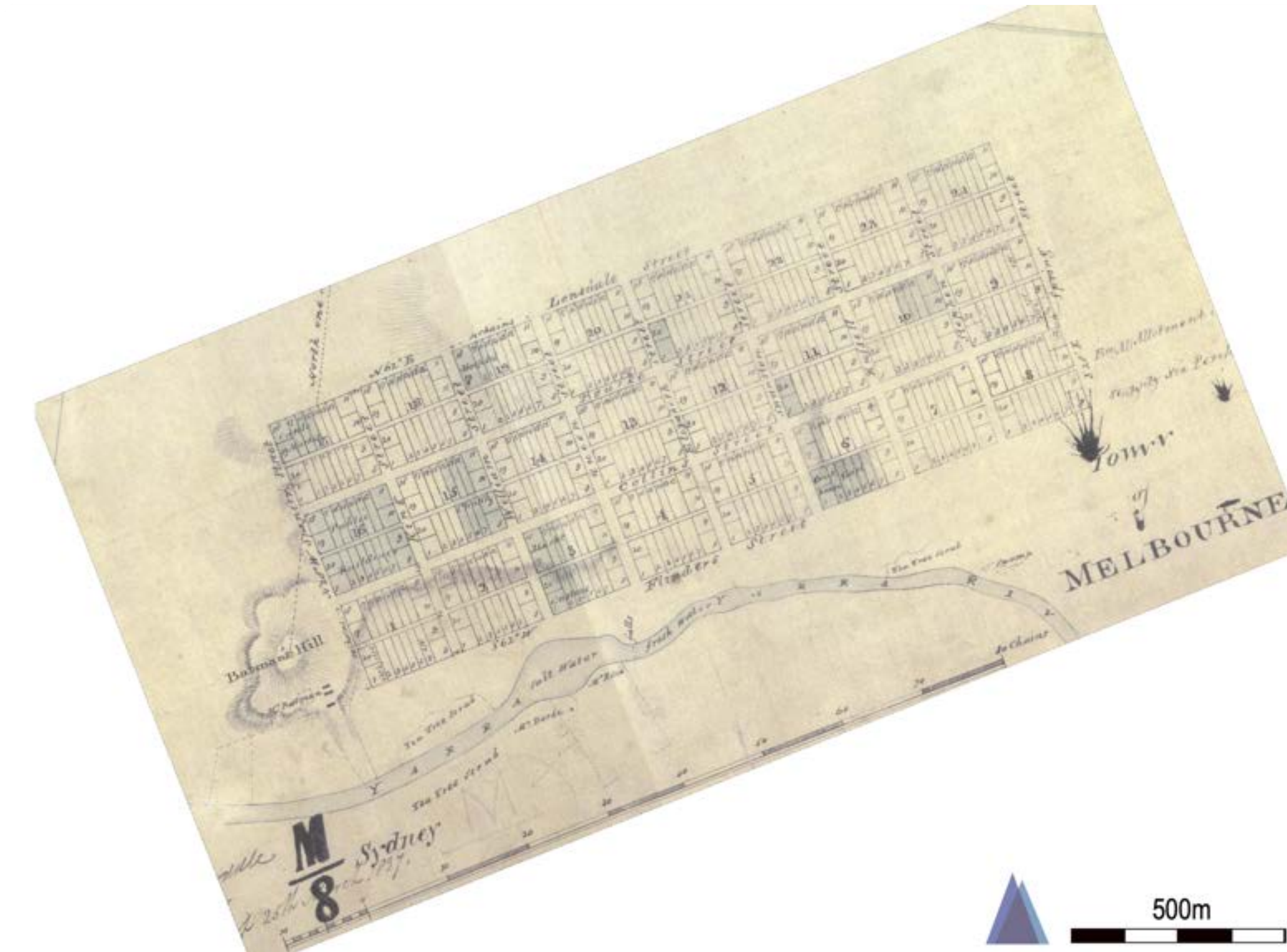


Figure 1 One version of Hoddle's 1837 plan (PROV VPRS 8168/P05 – SYDNEY M8) of the grid layout that was to become the Melbourne CBD. Note the original shading that indicates elevated land/hills in sections 19 and 6 and sloping land along the rough alignment of Queen Street and south of Collins Street.



Figure 2 Plan of the Melbourne CBD, showing the streets for which surveyor Darke's 1837 proposed levels are available, and showing those locations where filling was considered to be required (in orange).

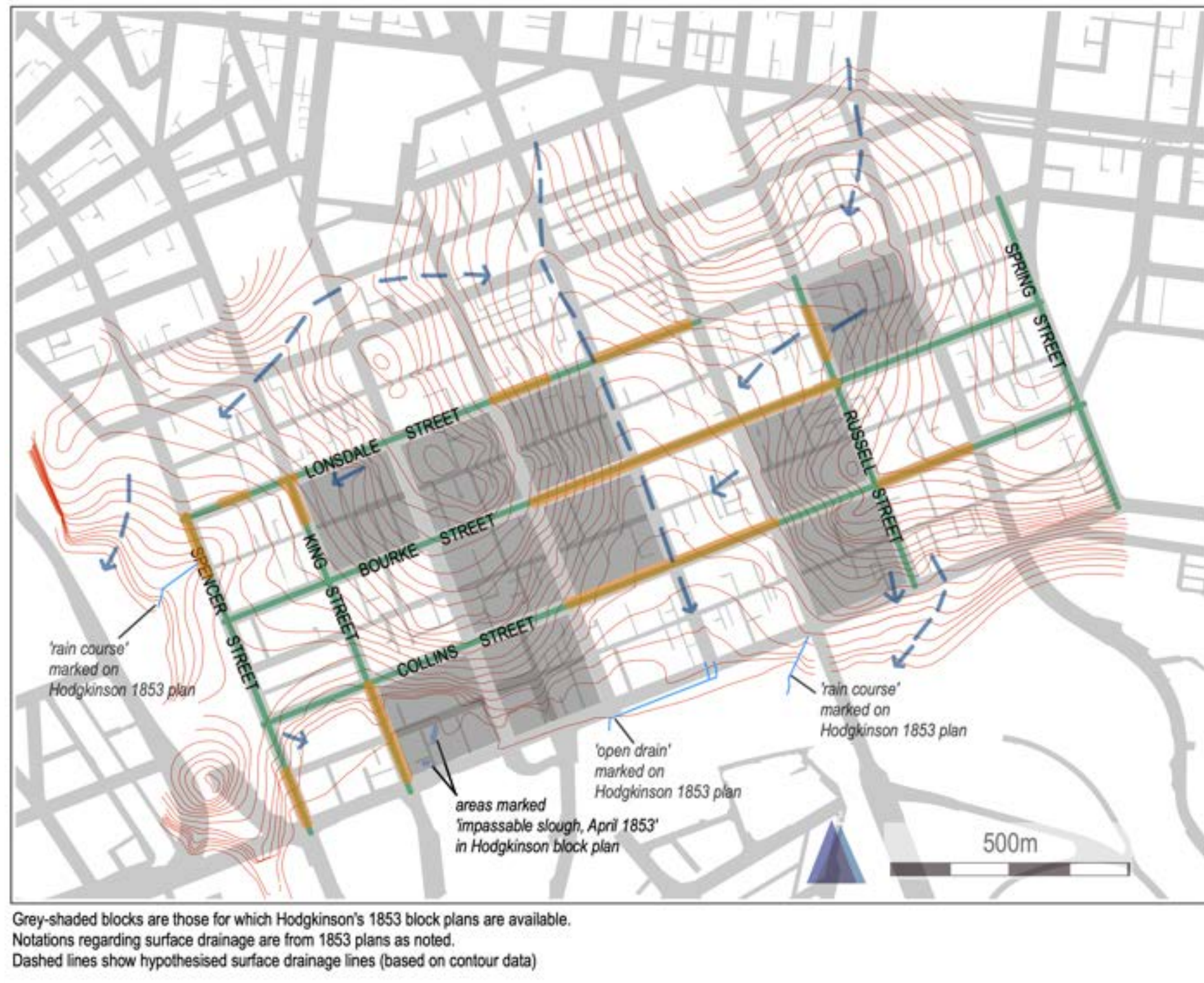


Figure 3 Probable intermittent water courses/drainage lines in the Melbourne CBD, based on Hodgkinson's 1853 contour data.

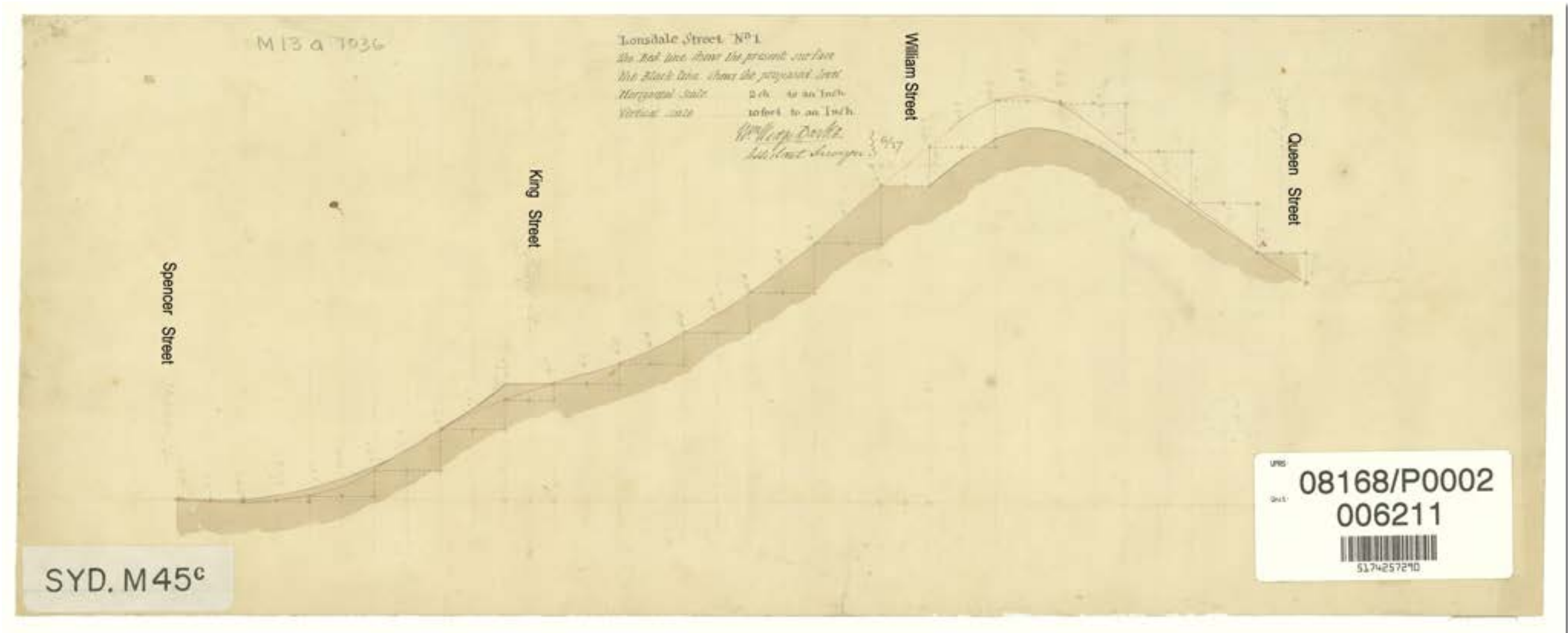


Figure 4 Surveyor Darke's proposed levels (1837) for the western portion of Lonsdale Street. The notations on the plan indicate that the red line shows the then present surface and the black line shows the proposed level. Note that the vertical scale is exaggerated (PROV VPRS 8168/P05 – SYDNEY M45C).

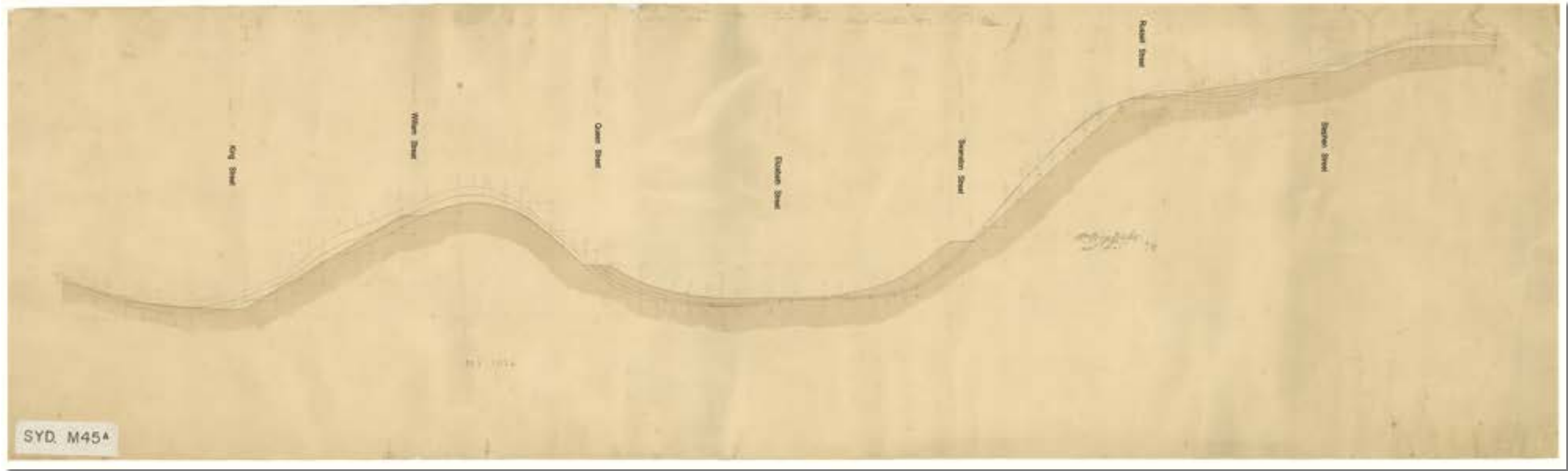


Figure 5 Surveyor Darke's proposed levels for the length of Collins Street. Again, the red line indicates the then land surface and black lines indicate proposed levels. Vertical scale is exaggerated (PROV VPRS 8168/P05 – SYDNEY M45A).



Figure 6 Locations of filling events listed in Appendix 2 overlaid on a plan of the distribution of Heritage Inventory sites.



Hodgkinson's 1853 contours overlaid on the 1853 Proeschel map of Melbourne

Figure 7 Detail of Proeschel's 1853 map of Melbourne with Hodgkinson's 1853 contours overlaid. Note the basin-like conditions of the block bounded by Lonsdale, Little Lonsdale, Russell and Stephen Streets (with water flow likely to enter from the north northwest, north, and north northeast) with conditions likely made worse by the forming of part of Lonsdale Street in this location. According to the key the stippled areas of the map are vacant land, the L-shaped and T-shaped buildings note the locations of a school and chapel, respectively.

MR. JAMES SMITH'S PROPERTY.
Councillor STORY moved—
“That the council, in its capacity of Local Board of Health for the city of Melbourne, now order that notice, in accordance of the 13th section of the act 18 Victoria, No. 13, be given to James Smith, of or supposed to be of Benalla, in the colony of Victoria, bricklayer, the overseer, proprietor, or owner of a house and land in a right-of-way called Alma-street, in Smith Ward, being on the north side of the said right-of-way, commencing 115 feet 6 inches from Bouverie-street, and having a frontage of twenty-six feet to the said right-of-way by a depth of twenty-seven feet, portion of Section 14, Allotment 3, city of Melbourne, being a place containing or used for the collection of drainage, filth, water, matters or things of an offensive nature and likely to be prejudicial to health, requiring him within fifteen days from and after the date of this order to drain, cleanse, or fill up the said place; and that, in the event of his failing to comply with this order within the time herein specified, this council, as Local Board of Health for the city of Melbourne, will execute the works necessary, and will cleanse and fill up the said place at the expense of him the said James Smith; and that John Reilly, Esq., the city surveyor, be and he is hereby authorized, empowered, and directed to, in the event of such failure, execute the said works and cleanse and fill up the said place at a cost not exceeding £10, and thereupon to proceed, on behalf of this council, as the Local Board of Health aforesaid, against the said James Smith for the recovery of the cost so incurred.”
The motion was seconded, and carried.
The council then adjourned.

Figure 8 Excerpt from *The Argus* (26/10/1861) describing a filling order for property owned by James/John Smith in Alma Street, Smith Ward (Carlton).

21 Franklin St
Melbourne April 14/62
The Chairman of the
Public Works Committee
Sir May I be allowed
to ask the liberty of
taking a few loads of
Gravel from the Cutting
at the top of Franklin
St to fill up two Rooms
caused by the Corporation
having raised the Road
above the Rooms of
the House which cost
750 £ I shall be glad
to give you any further
information if you
will consent - Waiting

An interview
from Sir
John Woodroffe
H. H. H. H.
H. H. H. H.

Figure 9 Copy of a letter from '21 Franklin Street' requesting fill from the Public Works Committee (VPRS 3181/P01, unit 822).

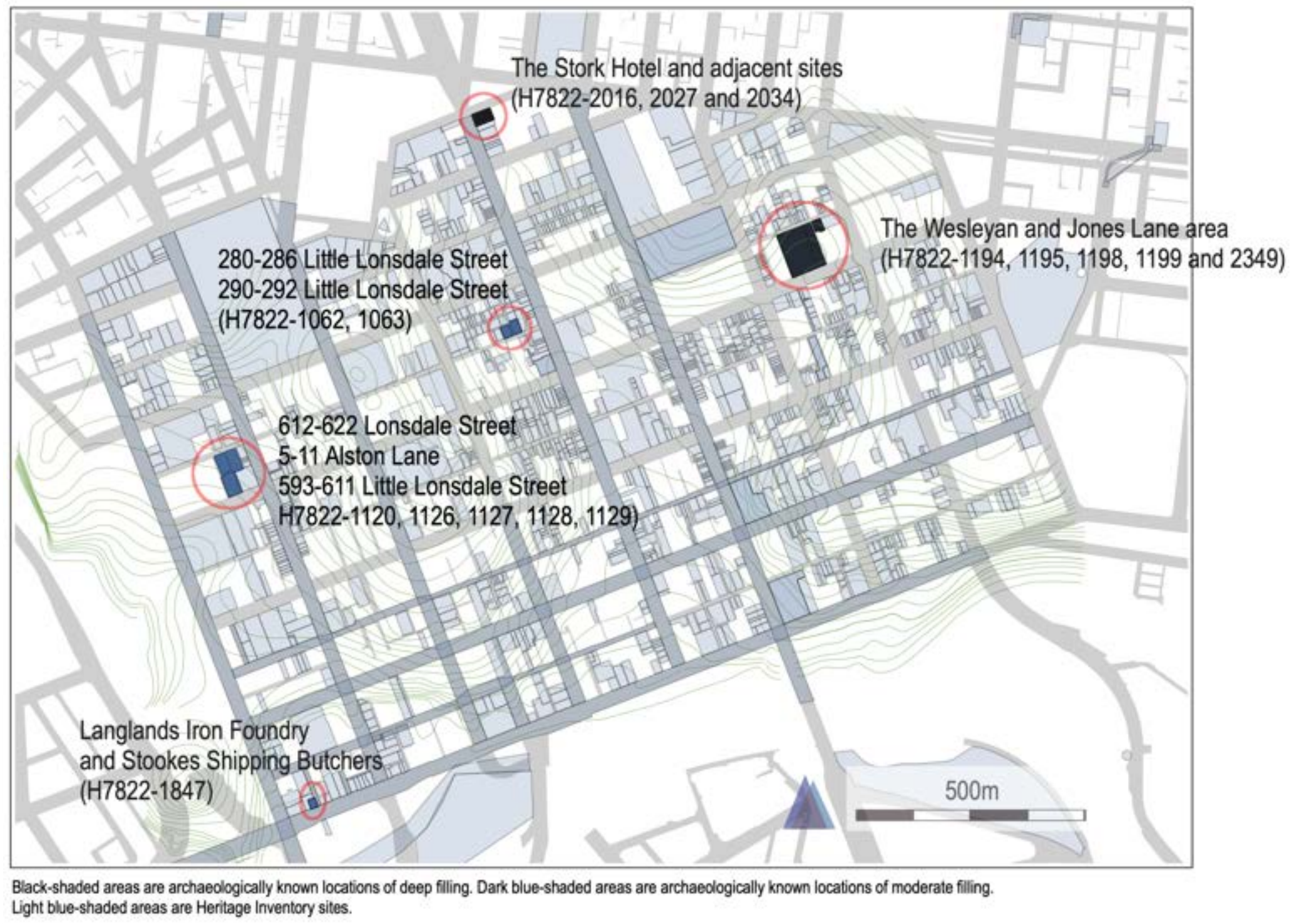
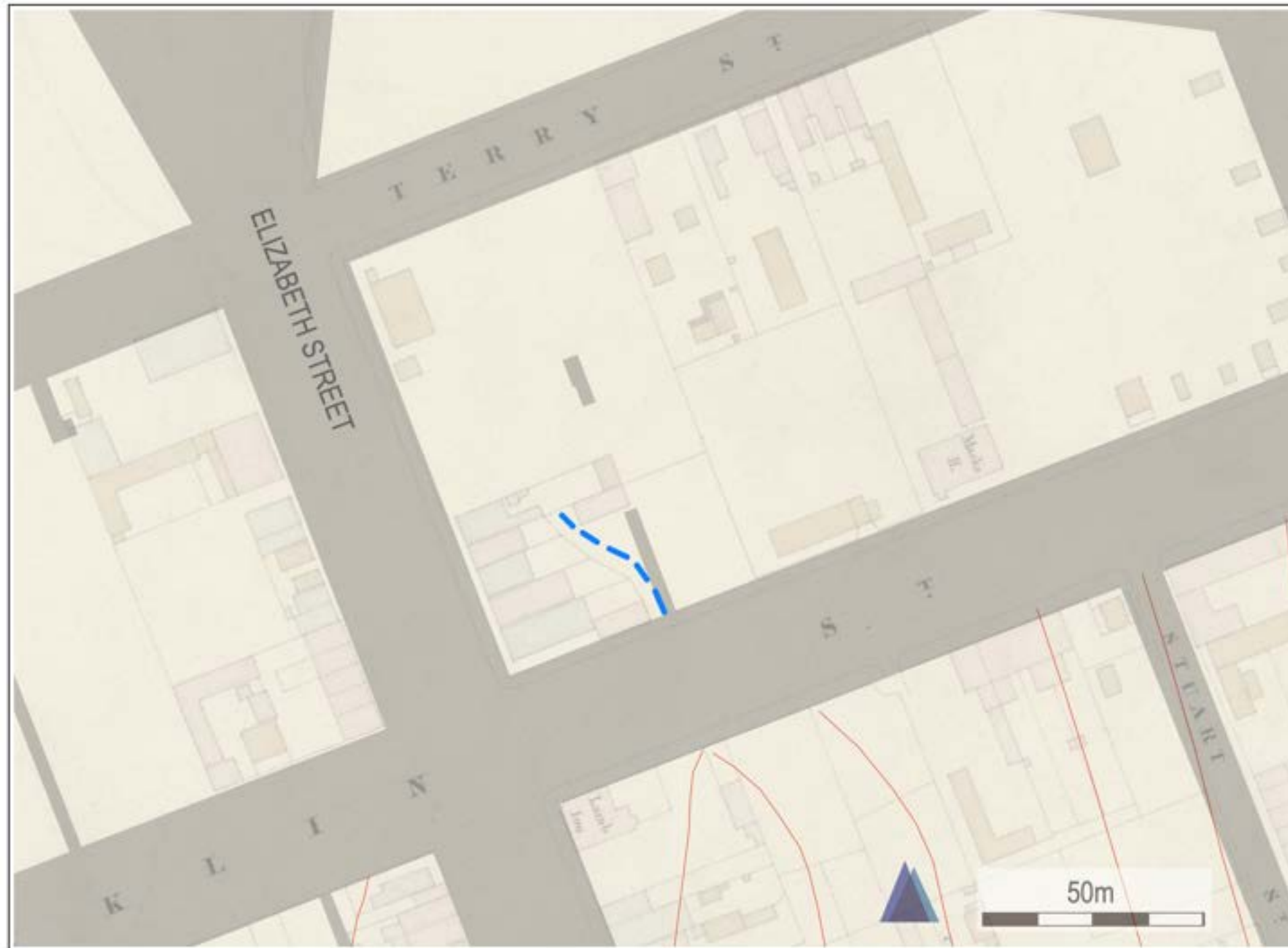


Figure 10 Location of the archaeological sites discussed in this section.



Detail of Munro's 1880 contour plan of Melbourne, showing the intersection of Therry and Franklin Streets

Figure 11 The location of the Stork Hotel, and Samuel Benjamin's land on Elizabeth Street. While the 1880 contour plan shows no evidence of Franklin Street having been built up, it is clear that this area could have become flooded by water flowing in from the north. Areas shaded light blue are heritage inventory sites.



Detail of the Bibbs plan of Melbourne. Dashed blue line is the inferred line of the gully as indicated by the adjacent fenceline. Note that the gully lines up well with 1853 contour lines (which are only available as far as the south side of Franklin Street).

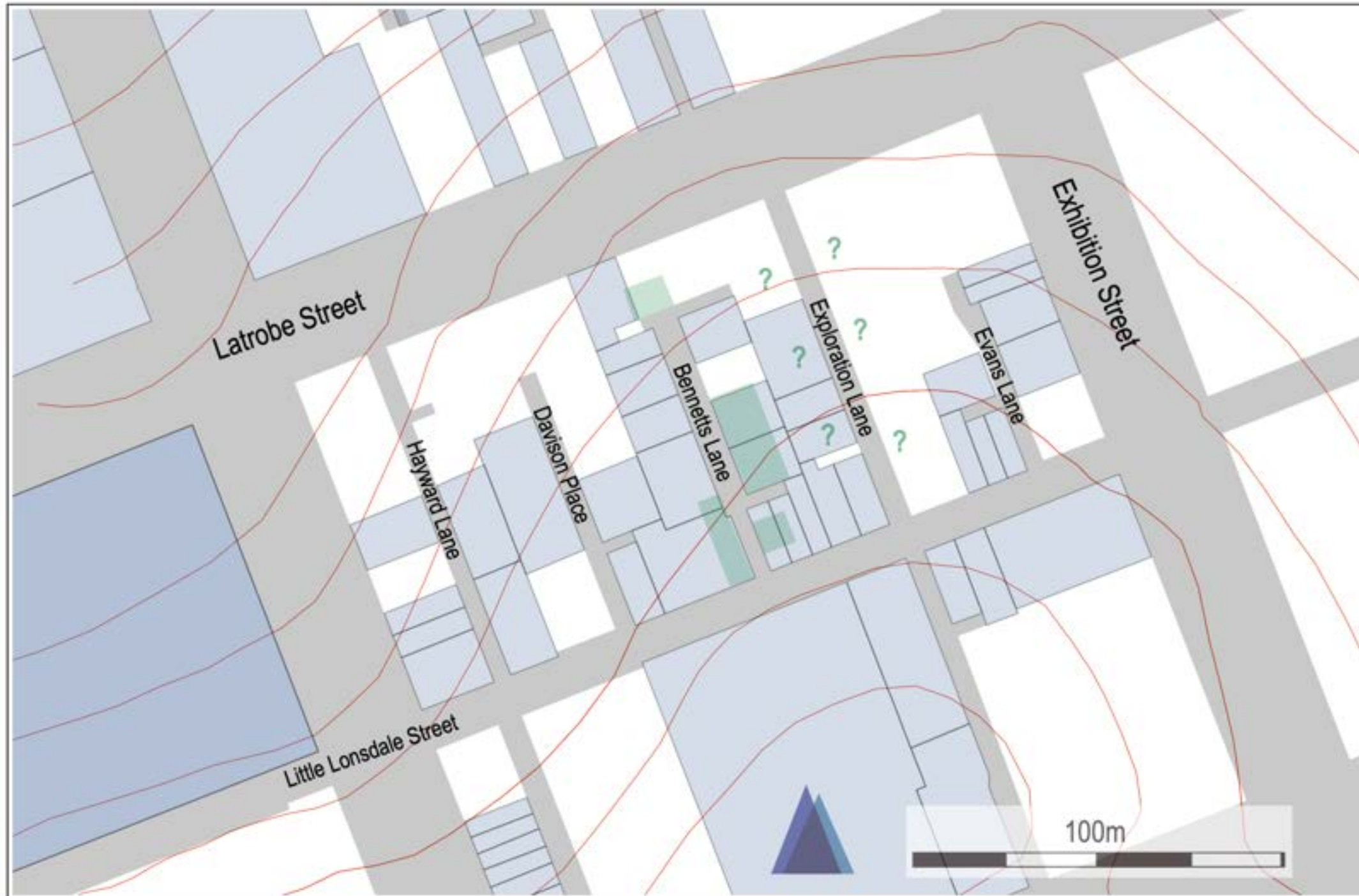
Figure 12 Showing the partly known and partly inferred line of a gully identified during the excavation of H7822-2028 at the corner of Franklin and Elizabeth Streets. This gully appears to flow from the direction of corner of Elizabeth and Therry Streets.



Figure 13 Location of the Little Lonsdale/ Wesleyan precinct Heritage Inventory sites, and the Exploration Lane site (H7822-1096) later excavated by Vincent Clark and Associates.

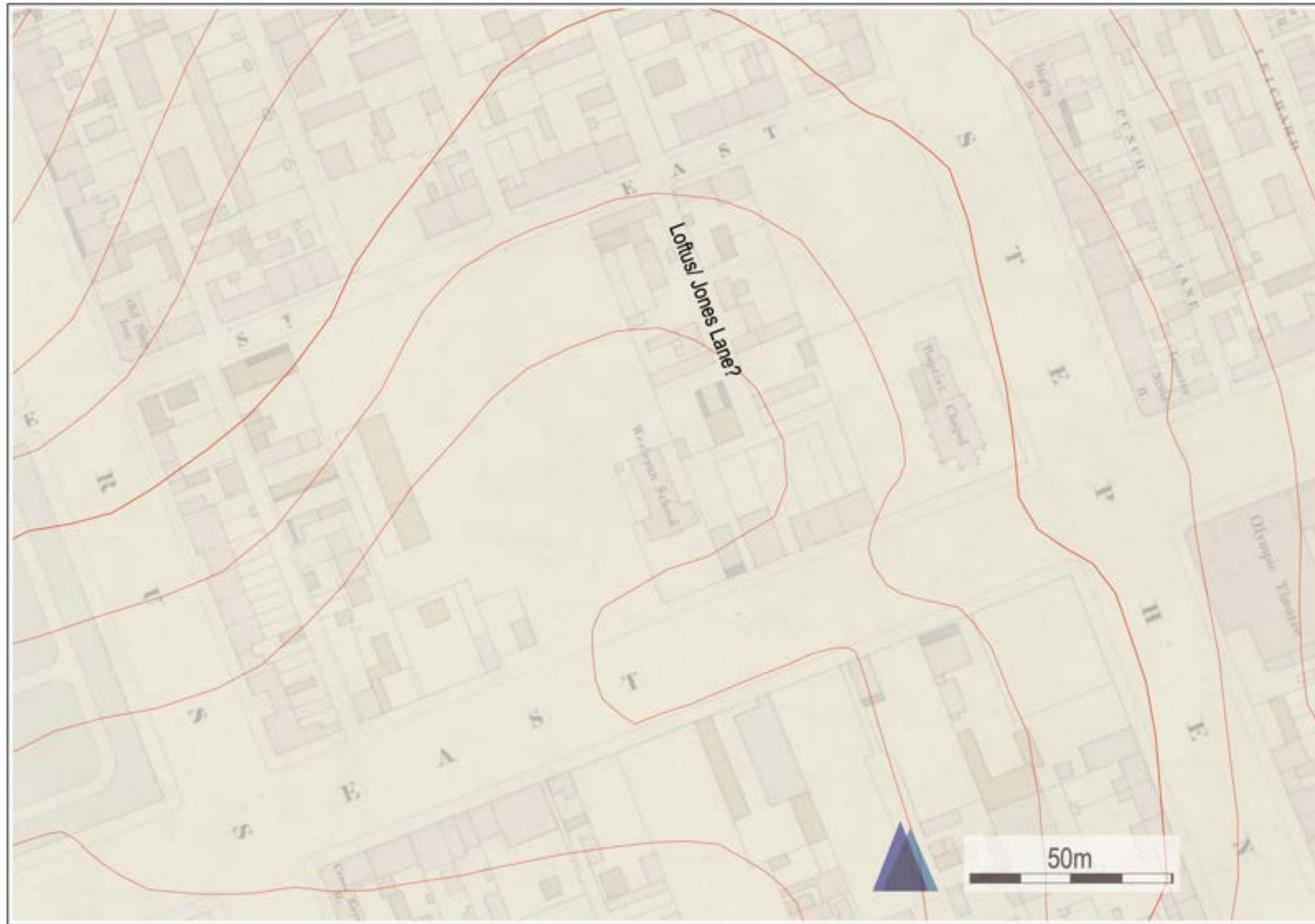
05 Gipps Ward				
No. in Ward	Name of Occupier	Situation of Premises	Description of Premises	
.344	James Courtney	Little Lonsdale Street west side of the street west side of	Milk house 2 rooms	Range of 4 houses 2nd (buried by road)
5	Catherine Halsey	do	Wood house	3 room 1 brick house
6	Thos. Carrick	do	Wattle do	2 do wood do
7	J. Paddy	do	Wood do	3 do 4th floor
8	W. Evans (owner)	do	Brick do	2 do Wood lined 2 rooms
9	Mary Ann Jones	do	Wood do	2 do
.350	Miss Higgins	do	do do	2 do
1	Paul Redding	do	do do	4 do (buried by road)
2	J. Barry	do	Brick do	2 do (do)
3	John Dowling	do	do do	2 do (do)
4	J. Murphy	do	Wood do	2 do (raised up)

Figure 14 An excerpt from the 1855 Gipps Ward rate book, showing a portion of the entries for a laneway off Little Lonsdale Street presumed to be Bennetts Lane. The upper red underlined notations appear to read 'buried by [?not legible]', the lowest one appears to read 'raised up'.



Plan of the lanes running north from Little Lonsdale Street between Russell and Exhibition Street. Green shading indicates the approximate location of properties against which there are 1855 rate book notations that appear to read either 'buried...' or 'raised up'. These locations are approximate only. Further research is required to determine their exact location. Green question marks indicate locations where there are rate book discrepancies.

Figure 15 Showing the estimated locations of those properties that 1854-1856 rate book entries suggest might have been subject to disruption as a result of filling requirements. Size and dimensions of properties are not currently known and further research would be required to determine this. Blue shading indicates the location of a Heritage Inventory site.



Detail of the Bibbs plan of Melbourne showing the inferred location of Loftus Lane. Red contour lines are from the 1853 data set.

Figure 16 Plan showing the inferred location of Loftus Lane.



Figure 17 The locations of known deep filling events in the Melbourne CBD.

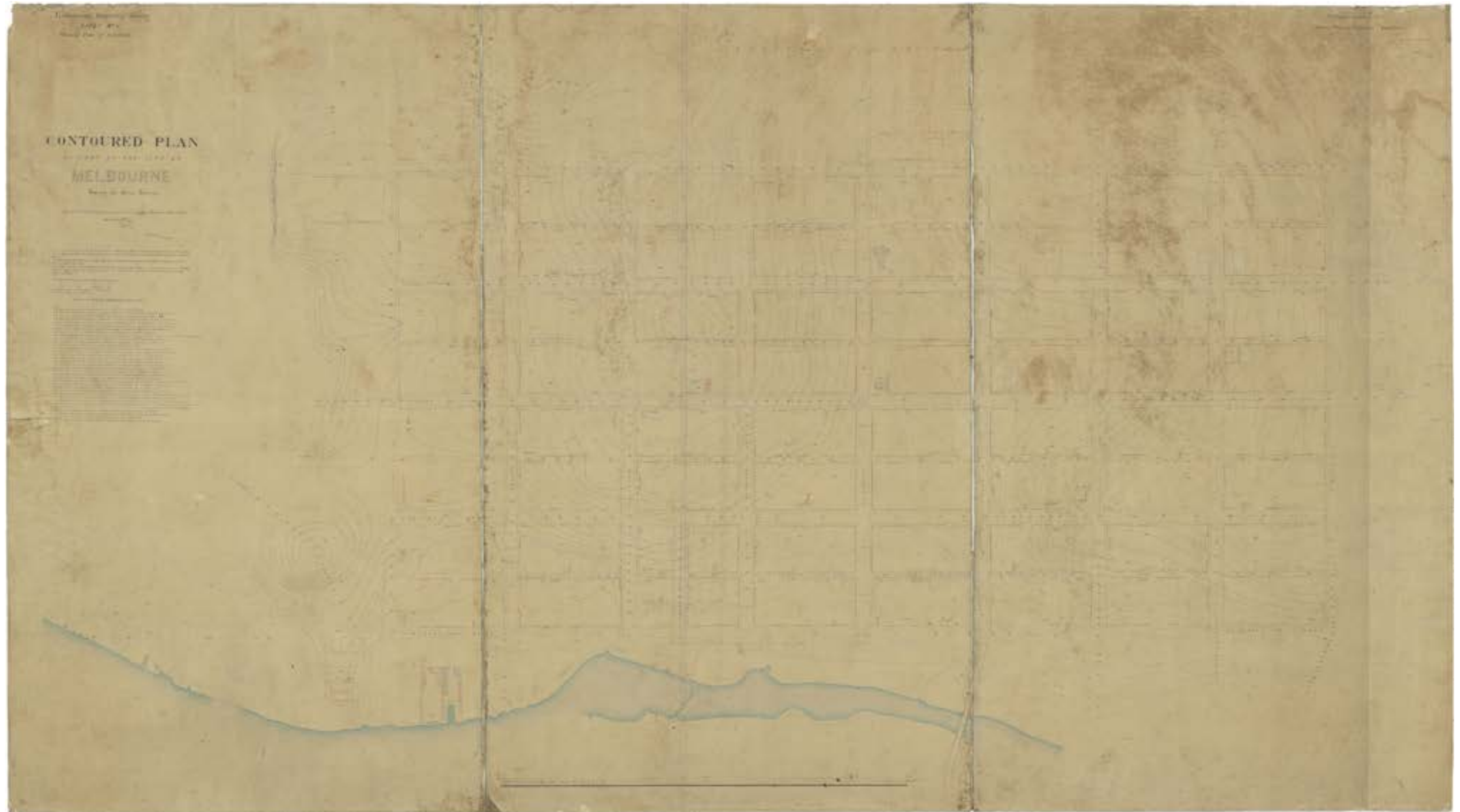


Figure 18 Hodgkinson's 1853 contour plan of Melbourne.

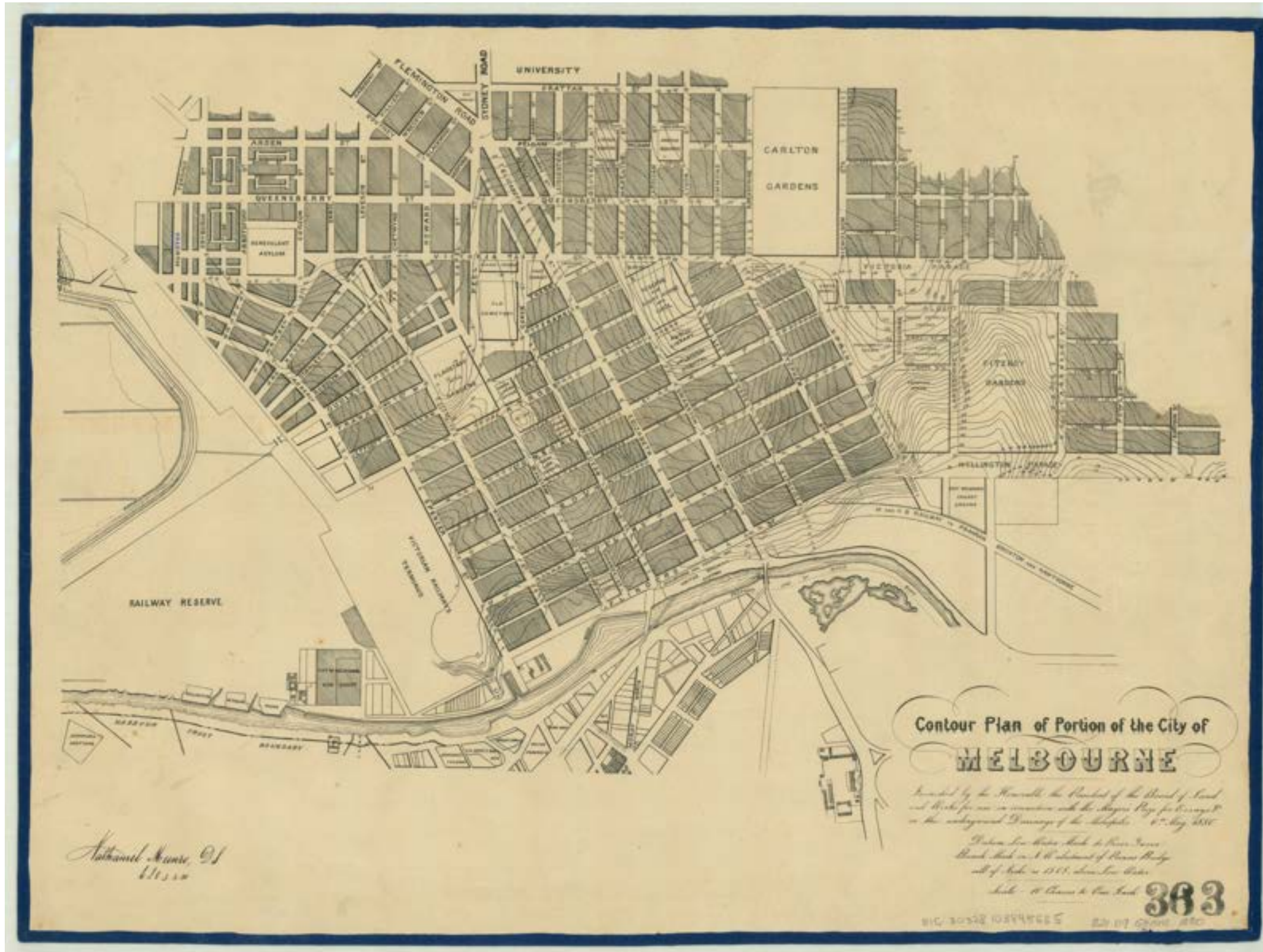
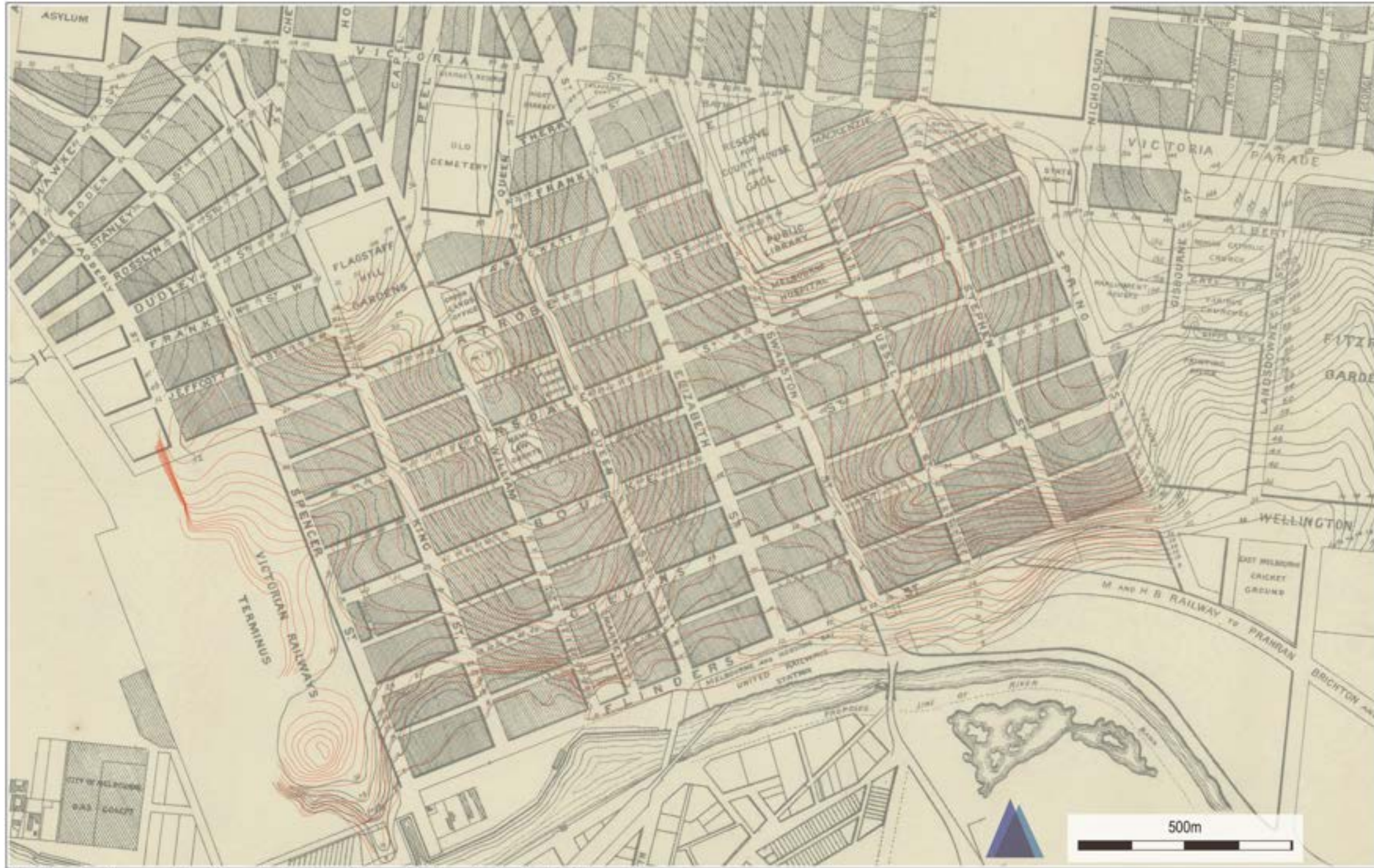


Figure 19 Munro's 1880 contour plan of Melbourne.



Red contour lines are derived from the 1853 Hodgkinson plan, base plan is the 1880 Munro plan

Figure 20 Plan showing the 1853 Hodgkinson contour line data set (in red) laid over the 1880 Munro plan.



Red contour lines are derived from the 1853 Hodgkinson plan, base plan is the 1880 Munro plan

Figure 21 Plan showing the 1853 Hodgkinson contour line data set (in red) laid over the 1880 Munro plan with green shading highlighting locations that may have been subject to filling.



Figure 22 Preliminary assess of the likely locations that filling may have been required, based on Darke's 1837 proposed street levels (Figure 3) and the 1853 contour data.