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# New Public Excavations

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## *The City Performs an Autopsy*

### Keywords

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*The paper draws on recent salvage archaeological excavations in Melbourne, Australia that prompt questions on architectural concerns of 'site' in contemporary architectural discourse. For design practitioners, site is usually communicated in direct and straightforward ways, with some practical understanding of the physical forces that form the current site, but little of influencing political or cultural elements. This is particularly problematic in settler-colonial cities such as Melbourne which are built out of complex and contested environments. The urban archaeological excavation is therefore seen as a metaphorical 'autopsy,' a brief moment of pause when the site's history and composition can be*

*publicly examined and challenged. Crucially, the act exposes the significant and potent presence of ground and dirt as actants in the city. This paper examines archaeological and architectural texts and practices to explore the added meaning that a refocusing on dirt and ground as material and medium can add to the architectural reading and interpretation of site in the settler-colonial city.*

- 1 In Australian cities the commercial centre is known as the Central Business District, usually abbreviated to, and referred to henceforth in this paper as, 'the CBD.'
- 2 Elizabeth Willis, "Little Lon Collection in Museums Victoria Collections," 2010, Accessed 29 December 2020, <https://collections.museumsvictoria.com.au/articles/31>

## Preamble

In recent years the commercial centre (CBD) of Melbourne, Australia's second largest city, has been the site of actual and proposed large-scale and anomalous salvage archaeological excavations; urban digs that have paved the way for new infrastructure.<sup>1</sup> These include investigations linked to the construction of the City Link freeway (1999), the Metro Rail tunnel projects (2018) and new commercial and civic space at the Queen Victoria Market (various, most recently in 2019) and the Lonsdale St tower precincts (various digs between 1988 and 2003). At each site, acts of archaeological excavation have been a necessary precondition of the larger architectural or infrastructural project, unpacking and recording a site's material legacy before it is redeveloped. Further afield, at locations along Melbourne's regional periphery, archaeological investigations that have explored the area's mining past can further add to the discussion by expanding notions of the extremities and boundaries of site, and demystifying their physical makeup.

While the archaeological excavation seems ancillary to the development of buildings and real property, and no doubt hinders the pace of development because of protracted starts, salvage archaeology operations in Melbourne also provide moments of respite and reflection for those working and living in the city. Notable examples of this have occurred in the city centre at Little Lonsdale St, on the site of a buried nineteenth century slum, and multiple locations connected to the Metro Tunnel dig. The excavations are physically framed by explanatory notes on hoarding, with the public given glimpses of the archaeologists at work through portals and framed views. The emphasis seems less focussed on the artefact or the ruin and instead, as an counterpoint to urban development, passers-by see an alternate view of the city: dismantled, unbuilt and unpacked. Unlike the deep excavations of development work, the digging is shallow and by hand, fine-grained and slow-paced.

As an example, at the Metro Tunnel sites architectural ruins were observable but often limited to low-lying building foundations. Artefacts uncovered were small, and largely unseen by the public. At the Little Lonsdale precinct, large numbers of artefacts were found, with some integrated into displays on site or at museums.<sup>2</sup> Rarely, architectural or urban elements are preserved within the new developments. While these artefacts begin to tell the story of the city, they are decontextualized and focus on the human narrative potentially leaving wider environmental stories untold.

However these stories are not invisible. When the pavement and concrete is stripped away, the most conspicuous historic material is the dirt uncovered after decades of city building. Though not quite 'natural,' it offers an alternate urban materialism to the concrete, glass and bricks of the city. The dirt and excavation become a novelty or part of the spectacle. The Metro Tunnel excavations exemplified this, with public



fig. 1 Location of key archaeological excavations in the Melbourne CBD, Melbourne, 2021 (authors' drawing).

fig. 2 Swanston St archaeological excavation, Melbourne, 2018 (authors' photo).



- 3 Paul Lewis, Marc Tsurumaki, David J. Lewis, and ProQuest, *Manual of Section*, Kindle ed. 2016.
- 4 Lewis, Tsurumaki, *Manual of Section*, 3
- 5 Stephanie Carlisle and Nicholas Pevzner, "The Performative Ground: Rediscovering The Deep Section," *Scenario Journal* (blog), 24 March 2012, <https://scenariojournal.com/article/the-performative-ground/>.

tours conducted at and in the excavation – meaning the physical space and the newly observable dirt become the exhibited objects and the source of fascination and information. Although not as legible as the object-artefact, the dirt contains stories that cross millennia and events. Designers can learn from this additional perspective that supplements the archaeological artefact or ruin, spatialising the material culture of 'ground' and 'dirt.' Directing attention away from the object to a broader substrate prompts critical and relevant discussion around anthropogenic environmental change and allows the historic ailments of and injuries to the city's landscape to be assessed.

For design practitioners working in the built environment, an analysis and understanding of 'site' forms a key stage of a project's development. Working mainly with tangible forces such as legal boundaries, key infrastructures, existing topography and immediate neighbouring physical contexts, the designer responds to site – and ultimately constructs it – using the accepted language of the disciplines, including charting ground lines and elaborations of the *poché*, respectively representing vertical cuts through surface and subsurface. The origins of these drawing elements reflect a modern and therefore neutralized understanding of ground and site where the substrate is a conceptually uncomplicated platform for the city. The language of architecture emphasizes these perspectives: the ground line provides an unbroken and defined division between above and below the earth's surface. It communicates a sense of the topography, to varying degrees of detail, and expresses the relationship a building has with the ground.<sup>3</sup>

The *poché*, commonly represented by a hatch, an atmospheric blur, or a mass of solid white or black, describes an imagined space where the exact composition or politics of matter is less important than a graphic or stylistic decision. Typically, the *poché* is used as a signifier of substantive material thickness or, at an urban scale, where the building mass and below-ground space are put in direct relationship with each other.<sup>4</sup> While the *poché* conveys significant weight, it also represents a sense of the abstract or the undescribed – more so than the ground line. Landscape architects and academics Stephanie Carlisle and Nicholas Pevzner, in their discussion of the complexities of the 'deep section,' write;

"The use of *poché* – the hatched or shaded space inside the cutline – in sectional drawings indicates material or space which does not need to be considered... Architectural drawings routinely represent the ground, and everything below the cutline or outside of the building foundation as *poché*, implying that this material is beyond the scope of the project."<sup>5</sup>

The *poché* seems to naturalise a thinking of the ground being a neutral, but also fixed and consistent space – reduced to a simple, universal

- 6 Peter Eisenman, "Moving arrows, eros and other errors," in *Tracing Eisenman: Peter Eisenman complete works*, ed. Cynthia Davidson (London: Thames & Hudson, 2006) and Bernard Tschumi, *Architecture and disjunction* (Cambridge, Mass: MIT Press, 1994).
- 7 Rebecca Krinke, "Overview: design practice and manufactured sites," in *Manufactured sites*, ed. Niall Kirkwood (London: Spon Press, 2003), 128.

and apolitical value. The 'unconsidered' ground space is problematic, particularly in cities such as Melbourne and their peripheral regions, where the relationship between land and ground is loaded, and, as this paper will argue, ground is mobile and variable rather than stable. Aligning with this is the notion of the palimpsest. The palimpsest describes a condition whereby layers – in this instance city layers – are built up leaving traces of the underneath visible. The palimpsest was later popularised as a design and analytical tool by deconstructivist architects Peter Eisenmann and Bernard Tschumi.<sup>6</sup> The palimpsest came to be romanticised in architectural culture, disrupting a linear notion of strata, and emphasising their soft yet active traces and their historical value and significance.<sup>7</sup>

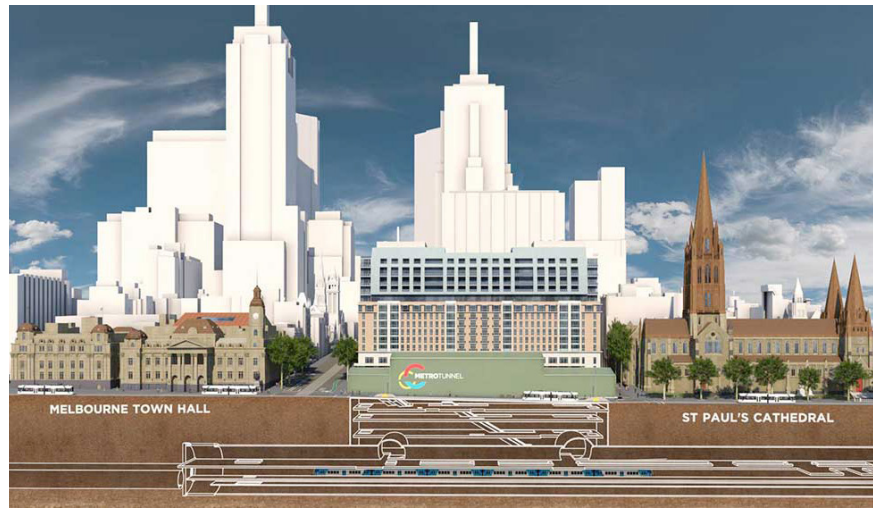
The ground line, *poché* and palimpsest communicate a singularity of ground and site where surfaces are determinable, and even complex overlapping histories become fixed and unmoving once they are charted and surveyed. With that understanding, this paper seeks to interrogate what site and ground might mean in a slowly decolonizing context. Drawing on the work of archaeologists and historians working with the archaeology of the city and its regions, this paper positions architects and archaeologists *in* the ground and in dialogue, in order to complexify the sites that the design drawings simplify. Urban salvage archaeology is seen as a metaphorical 'autopsy,' a brief moment of pause, of dissection, when the operations on and injuries to the city's substrate can be examined and publicly viewed before the construction of the city continues.

The physical presence of individual archaeological digs in Melbourne is short lived, with sites eventually reclaimed once the construction stage of the infrastructure project commences, but while fleeting, this display allows for a greater understanding of the surface condition in the city. At such moments, archaeological excavations expose some key realisations around the nature of ground in the city conditions. First, that at a broadest level, and despite a history built on extractive industries, Melbourne's history of digging has its longest and most durable relationship not with the mining of minerals or stone but with the excavation and production of *dirt*. Secondly, the city's historic and contemporary landscapes are 'mobile' and thirdly, that the landscape's mobility causes 'messy' conditions that are not neatly layered, instead existing as jumbled *anti*-palimpsests.

In an urban context, architecture is often concerned with the idea of palimpsest within the site – the layering up of meaning through aggregate form. This has the tendency to render a reading of a site that reproduces a strict stratigraphy – a hierarchy of oldest to newest. In settler-colonial contexts this takes the paradoxical form of preserving and highlighting the ordinary artefacts of early colonisation as 'built heritage.' But this ignores the complicated, fragmented section that is cut through the city – the displaced and dislocated soil. Other disciplines have established methods for dealing with this complexity and assembling models from



fig. 3 Urban Circus and Rail Projects Victoria, *Metro Tunnel Illustration*, Melbourne, 2017. The city *poché* is evident in this section through the Melbourne Metro Tunnel site (Courtesy: Urban Circus and Rail Projects Victoria).



- 8 Sandrine Robert, "Revisiting the Dynamics Linking Society and Form; between Archeology and Geography," *Espace Géographique* (English Edition) 41, no. 4 (2012): 292.
- 9 Robert, "Revisiting the Dynamics Linking Society and Form," 297.
- 10 Roger LeB. Hooke, "On the history of humans as geomorphic agents," *Geology* (2000) 28 (9): 843–846. [https://doi.org/10.1130/0091-7613\(2000\)28<843:OTHOHA>2.0.CO;2](https://doi.org/10.1130/0091-7613(2000)28<843:OTHOHA>2.0.CO;2)

historical and material records. Archeo-geographers have charted a shift away from a stratigraphic reading of historical space – both in terms of a strict temporal layering, and a focus on ‘elite’ cultural product and artefacts. The superimposition of built and infrastructural layers led to cartographic tools like the ‘compiled’ map that co-locates and collapses differences between “natural and anthropogenic features.”<sup>8</sup> Instead, they shift towards a negotiated space that allows for dialogues, modifications and transmissions of qualities of spaces – with occupants “reinvesting forms with different functions... updat[ing] and transmit[ing] them.”<sup>9</sup> Although these readings tend towards the landscape and the infrastructural – and are situated in a longer ‘historical’ record – they present a useful model for the contingency and persistence of landscape conditions. Adopting some of their methodologies can reframe a reading of the short and violent settler-colonial interface that incorporates complexity and difference.

Recent studies have illuminated the construction industry’s role as an agent of vast geological change. Roger Hooke established an annual base-line figure of 30 tonnes of modified and shifted soil, rock and sand for every US citizen – an extreme figure, and one that incorporates both intentional removals, as well as the accidental depredation and erosion due to intensive agriculture.<sup>10</sup> The distinction between the two modes is important – as the former only really begins to outstrip the latter at the start of the industrial revolution - a moment that figures as one of the possible geological markers for the start of the Anthropocene. Still, a context where urban practices upset and intermingle soil is readily apparent. It makes for the most complicated of substrates – where

- 11 Simon J. Price, Jonathan R. Ford, Anthony H. Cooper and Catherine Neal, "Humans as major geological and geomorphological agents in the Anthropocene: the significance of artificial ground in Great Britain," *Phil. Trans. R. Soc. A* 369 (March 2011): 1064, <http://doi.org/10.1098/rsta.2010.0296>
- 12 Professor Alison Bashford (2013) "The Anthropocene is Modern History: Reflections on Climate and Australian Deep Time," *Australian Historical Studies*, 44:3 (2013): 343, <https://doi.org/10.1080/1031461X.2013.817454>
- 13 Bashford, "The Anthropocene is Modern History," 348.
- 14 Ibid.
- 15 Benjamin Mountford, *A Global History of Gold Rushes* (Oakland, California: University of California Press, 2018).

developments overlap and intersect. In the British context, Simon Price et al. note that "...successive phases of development have added to, or in some cases re-used and recycled, this artificial ground, leaving a complex 'stratigraphy' of deposits, including drains, middens, pits, cellars, foundations and trenches."<sup>11</sup>

This is no less complex in an Australian context. Historian Alison Bashford argues that Australian historians (and histories) are already orientated towards discussions of deep time. For Bashford; "Canonical works in Australian history have thought across and within extremely long time-scales, for better or worse, in a tradition of scholarship that has long complicated 'prehistory' and 'history.'"<sup>12</sup> Bashford also recognises the complicated – and often contentious – collision of history, ecology, and geology that undercuts the Australian context; a collision of deep time and recent time that mirrors the way in which one can conceive of a "foreshortened Anthropocene that follows vast geological eras."<sup>13</sup> This context presents a particular historiography characterised by "sharp ruptures that have interrupted very long stability and sustainability."<sup>14</sup>

While the architectural drawing reflects a simplification of the physically and conceptually complex space our buildings occupy, archaeological methods and their resulting excavations can better tell us about site, a critical area of interest in areas of architecture, as well as landscape and urban design and also provide a sense of vitality to the city's sub-surface. Using dirt as the key media, and spaces of archaeological and architectural overlap as an analytical process, designers working within the city can establish new readings of site, context and ground.

### **Ground as Artefact: The Making and Meaning of 'dirt' in Melbourne**

As a city that developed out of both a greater colonial project and the 'global goldrush' Melbourne's developmental history seems inherently connected to extractive and distributive processes.<sup>15</sup> Australia's second largest city was informally settled by the British in 1835 when competing pastoralists advantageously moved from the southern island colony of Tasmania to what is now Melbourne's Port Phillip Bay. Efforts to control, parcel and extract value from the land – the areas which now form the city's CBD and suburbs – began immediately and are evidenced by Robert Hoddle's 1837 survey of Melbourne, created to formalise the British settlement that had already developed around the Yarra River. This map is perhaps the defining historic drawing of the city; it documents a settlement strategy that ignored the physical challenges of the chosen site, with the town's grid draped uncompromisingly over the topography. Illustrated to mark out land for ownership and development, without reference to existing first nations occupation, the map is symbolic of British colony-building.

While Hoddle's is perhaps the best known of Melbourne's historic surveys, thirty years prior surveyor Charles Grimes along with

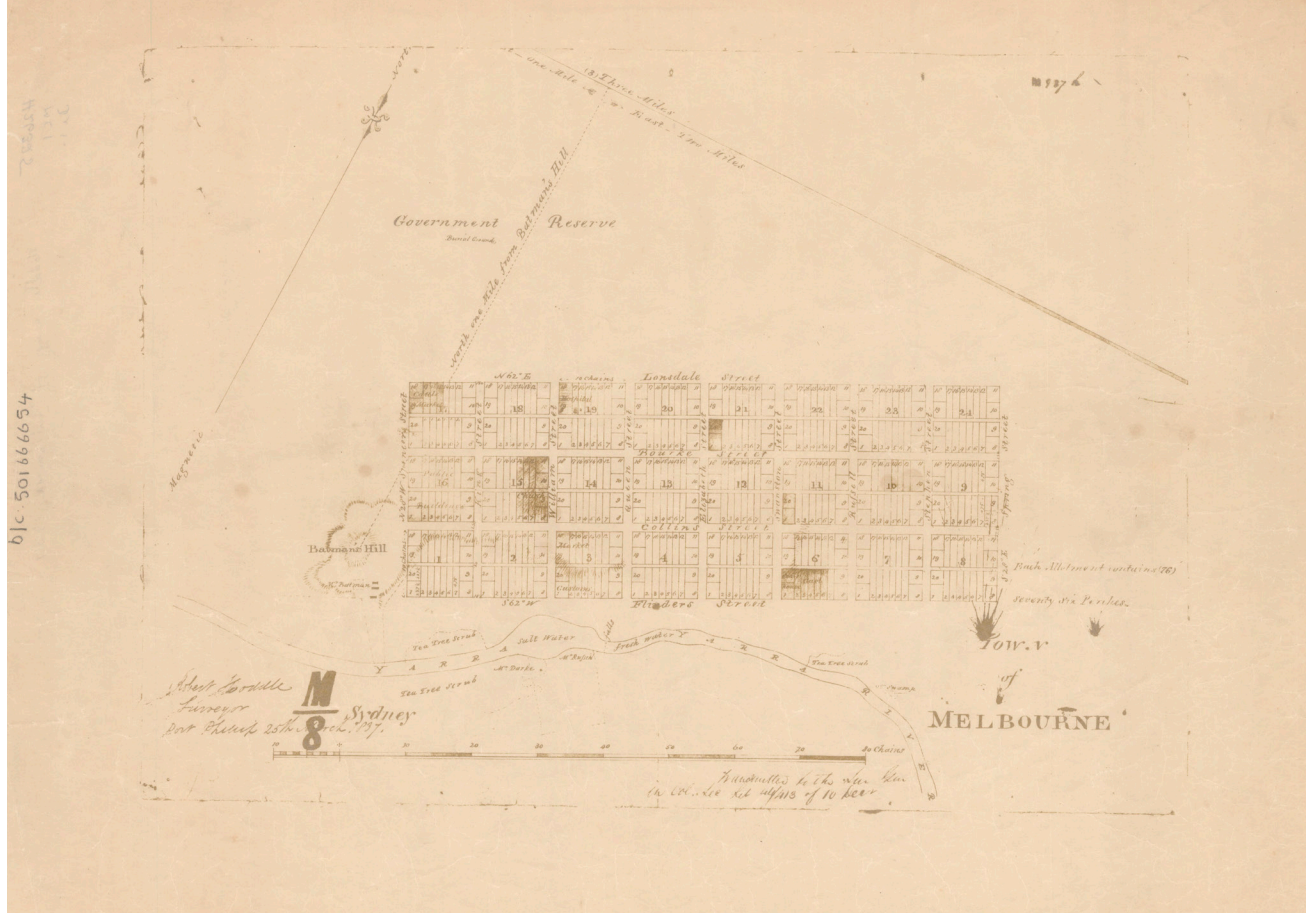


fig. 4 Robert Hoddle, Town of Melbourne, Port Phillip, 25th March, 1837 (held by the State Library of Victoria).

proto-botanist/pedologist James Flemming mapped Port Phillip Bay noting, amongst other useful information, the characteristics of soil types, and suggesting their future purposes – gravel, clay for bricks, sand. In doing so, Grimes was the author of an inadvertent inventory of city-building materials – and a sketch of the city yet to come. Melbourne’s soils; black, sandy, glutinous, or swampy, were deemed unsuitable for agriculture but were still valued and valuable as raw material and substrate. Before the land was even colonised formally by the British it had been marked out and identified as a location of digging and transformation. As a foundational drawing for the city, the Grimes survey is a reminder that Melbourne’s birth, development and continuing existence is deeply connected to the excavation, relocation and transformation of earth. This continued into the twentieth century when new city towers dislodged colonial-era dirt. That material became embankments for freeways and new grounds for parks, while dredged river soil became new suburbs. The ground becomes





fig. 5 Charles Grimes, detail of the Survey of Port Phillip (Melbourne, 1803). James Fleming's assessment of soil, apparent on this expedition map, had long-lasting effects on the settlement of Melbourne (Lithographed at the Department of Lands and Survey by T. Slater, 1879, held by the State Library of Victoria).

the key artefact, an archive of city-making processes and transgressions. These acts all begin to destabilise the neutrality, passiveness and uncomplexity of site as depicted by the ground line and *poché*.

After European settlement Melbourne's landscape changed rapidly, with topographies smoothed out, hills demolished, rivers reshaped and swamplands dried out and remade. Typical of frontier cities, such as those on the west coast of the United States – San Francisco, Seattle, Vancouver – as well as Auckland in New Zealand, the modifications to the landscape were swift, brazen and on an exceptionally large scale. Some of the excavations occurred as singular and memorable moments, for example the flattening of Flagstaff Hill and Batman's Hill and the subsequent redistribution and reformation of their materials. The city's river, the Yarra, had once been divided; with the slightest of waterfalls separating saltwater from fresh. A series of infrastructural projects led to the falls being dynamited, mingling the different waters, and allowing the

- 16 Gary Vines, Melbourne City Link Authority, and Victorian Living Museum of the West (Melbourne, 'Dudley Flats Archaeological Investigation: For Melbourne City Link Authority' (Melbourne, Vic. : Gary Vines, 1999). 13.
- 17 Pamela Ann Hazelton, B. W. Murphy, and Ebooks Corporation, *Understanding Soils in Urban Environments* (Collingwood, Vic.: London: CSIRO Pub.; Earthscan, 2011). 12-13.
- 18 Wendy Redfield, "The Suppressed Site," in *Site Matters: Design Concepts, Histories and Strategies*, ed. Carol Burns and Andrea Kahn (London: Routledge, 2004), 189.
- 19 Alan Colquhoun, 'Modern Architecture' (Oxford: Oxford University Press, 2002): 201.
- 20 Kenneth Frampton, "Towards a Critical Regionalism: Six Points for an Architecture of Resistance," in *The anti-aesthetic: essays on postmodern culture*, ed. Hal Foster (New York: New Press, 2002), 26.
- 21 In an early monograph on Murcutt, this connection with 'reverence' is made very explicit. Philip Drew writes that this aphorism "conveys a sense in which the landscape is seen to possess a sacred character... it says, walk on tip-toe..." See Philip Drew, *Leaves of Iron, Glenn Murcutt, pioneer of an Australian architectural form* (Sydney: Law Book Co., 1985), 54.
- 22 Calla Wahlquist, "Glenn Murcutt: touch the Earth lightly with your housing footprint," *The Guardian*, (2016), Accessed 29/12/2020 <https://www.theguardian.com/artanddesign/2016/aug/11/glenn-murcutt-touch-the-earth-lightly-with-your-housing-footprint>

free flow of pollutants into drinking water. While these events become notable because of the erasure of visible landforms, other alterations to the topography were flatter and more diffuse in their boundaries. The West Melbourne Swamp for example was dried out, erased from the map in what was, as archaeologist Gary Vines noted, "...probably the greatest earth moving operation undertaken in the colony at that time".<sup>16</sup> These were infrastructural and political-colonial projects of extraordinary magnitude; ecologies changed as earth was loosened and soil became dirt.

Cycles of city excavation and redistribution of material continue, meaning that the existing condition is a strange mix of anthropogenic dirt and rubble and that the contemporary city sits on a platform of disturbed and unnatural ground.<sup>17</sup> Architects are trained to take interest in 'site' – constructing the *poché* and drawing the ground line as a certain and unbroken datum – neatly circumscribing edge and interior. This language, however, seems less than useful when the site is so disrupted and disturbed, and potentially complicit in masking aggressive acts relating to the city's topographies. This is to be expected, as in the twentieth century two competing notions of architectural site emerged. The first, that appeared from an approach that negated topography, was, as Wendy Redfield notes, built out of the creation of a new 'ground plane' that ignored local context. This early modernist interest in the plinth and the raised piloti alike suggested, effectively, that site "does not matter."<sup>18</sup> A second strand – representing what architectural historians would term 'critical regionalism' – inverted this notion.<sup>19</sup> In this practice, site was ever-present and integrated into the design decision – a mode that critic Kenneth Frampton framed, amongst many other considerations – as a difference between the 'technocratic' gesture of flattening a site, and the responsive 'cultivation' of a site response by cutting and terracing.<sup>20</sup>

The Australian architect Glen Murcutt is known for a regional architecture that responds to climate and site, or the oft-quoted, but apparently misquoted maxim "touching the earth lightly."<sup>21</sup> The fact that the quote is, as Murcutt notes, often misrepresented, suggests that there is a desire in Australian architectural milieu to mystify 'earth' and 'site,' implying a pristine and unbroken quality that might not always be true. Worse – it implies a strict design response that can fix and solve the problem of the site by elevating and lifting the proposed structure. Murcutt extends his own maxim to include the origin of site fill, the 'damage' done by excavation, and the proposal to return fill to the 'earth' and restore where possible.<sup>22</sup>

Archaeologists' exploration of the makeup of the ground below this helps to demystify ground in the post-colonial context. In a postcolonial context this necessarily has to extend beyond the cadastral boundaries of the site and across timescales. It's not the ruins or the artefacts that are of interest here – these are poorly displayed anyway – but the dirt – or the mix of material that these objects sit in.

- 23 Professor Mary Douglas, *Purity and Danger: An Analysis of Concepts of Pollution and Taboo* (London: Routledge, 2002). ProQuest Ebook Central.
- 24 Ferdinand von Mueller, *Annual Report of the Government Botanist and Director of the Botanic Garden* (Melbourne: Govt. Printer, 1858). <https://www.biodiversitylibrary.org/item/217349>, 3.
- 25 Susan Lawrence and Peter Davies, *Sludge: Disaster on Victoria's Goldfields* (Carlton, Vic: a Trobe University Press in conjunction with Black Inc, 2019).

Archaeologists find the remains of these in the current city, forming, in the end, another layer of ‘digging’ in Melbourne that can draw direct attention to the ground in a city with colonial and extractive histories. In Melbourne, archaeology, architecture, and infrastructure are inherently linked. Examining the treatment of earth in the colonial city, the repeated acts of excavation that have shaped the city both physically and in the imaginary, and the way salvage archaeology, as a subset discipline, can provide designers with an alternate sense of site, its politics and nature in the decolonisation of the city.

### Melbourne’s ‘Mobile’ Landscapes

The ethnographer Mary Douglas noted that ‘dirt is matter out of place’ – as much a context of perspective as any strict definitional model.<sup>23</sup> Building on this, Melbourne, like other colonial cities was – and is – adept at creating dirt because its landscapes are regularly displaced and remade and therefore incredibly ‘mobile’ – able to change place but also able to change *meaning and value*. From early on in British settlement, material was dug up and unsettled. It was compacted, crushed and moulded. But it was also moved across the city, often in exchange, one ecology for another. The mobility of these landscapes seems implicitly understood by archaeologists but again destabilises the notion of the architect’s *poché*, ground line and palimpsest. The architect relies on aforementioned responses to site – that it can either be ignored or valorised, but never complicated.

Melbourne’s ‘mobile’ landscapes are imagined as large-scale exchanges of material, occurring not in isolation but as large-scale controlled ‘design’ projects. The ‘mobile’ landscapes are imagined modifications and alterations to Melbourne’s landscapes are not occurring in isolation but as a collective movement and exchanges across a large area. As previously noted, the Yarra River has undergone extensive reshaping; at the time of Melbourne’s goldrush the reshaping plays an interesting role not only in the areas of the economy and industry but in its civic life and in the making of a civic identity. Excavated material from the Yarra River’s remodelling had to go somewhere, and at least some of its more fertile sediments and silts were dumped at the Botanic Gardens, with the first director of the gardens, Ferdinand von Mueller noting in his annual reports that those soils were used to resurface and reshape the gardens, creating new topographies and vistas for the city.<sup>24</sup> The city’s surface therefore immediately became a three-dimensional, but critically *moving* patchwork of materials rather than a stable surface composed by naturally occurring forces.

Framing the landscape as mobile has automatic implications for conceptualising the scale and boundaries of site. At Melbourne’s periphery mining materials, waste and pollutants flowed across the land, with archaeologists foregrounding the mobility of material and highlighting the vast movement of landscape matter across regions.<sup>25</sup> In addition to blurring the distinction between city and region, and expanding the physical

- 26 Stephanie Trigg, "Bluestone and the City: Writing an Emotional History," *Melbourne Historical Journal* (2017), 44 (1): 41-53.
- 27 Robin Dripps, "Groundwork," in Carol Burns and Andrea Kahn, *Site Matters: Design Concepts, Histories and Strategies* (London: Routledge, 2004), 61.
- 28 Shannon Christine Mattern, *Code + clay ... data + dirt: five thousand years of urban media* (University of Minnesota Press, Minneapolis, 2017).
- 29 Sharon Lane and Alyssa Gilchrist, 'Heritage in Ruins: An Investigation into Melbourne's 'buried Blocks': Report to the Heritage Council Victoria (Project PR180502)' (Melbourne: Alliance Archaeology, 2019).

boundaries of site, these narratives destabilise romanticized notions of 'natural' and pristine sites.

Landscapes also became globally mobile, with cities like Melbourne, London, San Francisco and Auckland connected via the transferral of people, knowledge, technology and trade. Many of these cities developed in a mirrored way and could be seen as a kind of dislocated 'meta' city through which landscapes moved locally and globally. Mining material is an obvious example but archaeologists also note that stones from demolished landscapes were used as ballast for ships leaving Melbourne and were eventually offloaded in London and Paris.<sup>26</sup> The widespread dispersal of those landscapes highlights the complexity of the ground into which the city is anchored and challenges the way designers might view the extremities, extents and disturbances of site.

Robin Dripps, in Burns and Kahn's *Site Matters*, provides a relevant discussion of the distinction between ground and site.

"A site, in contrast to a ground, is quite simple. This is undoubtedly why the idea of a site becomes so appealing to architects and planners. A site possesses a reassuring degree of certainty, whereas the ground is always in flux. A site's edges are known and a center can always be found. Connections to the world beyond are limited and tightly controlled. Sites can be owned."<sup>27</sup>

It's here that the value of the public archaeological excavation can be witnessed – expanding the discussion of site to better include ground, shifting from the opportunistically boundaried to the diffuse and fluid. Refocusing on dirt re-imagines the city – its built and topographic form – as churned up and not so neatly stacked. There is a conflict of information embedded and mixed into every cut.<sup>28</sup> Each slice reveals something about the settler-colonial city. The excavation, then, has a critical ambivalence; a tool of both concealment and exposure, of construction and deconstruction.

### **Messy Stratigraphies: Excavation and Making New Ground in Melbourne**

In a settler-colonial region, site and ground are complicated by the cyclical nature of excavations. Ground is not dug up and moved once, but multiple times. Architects also employ and romanticize the notion of palimpsest, which views the continued construction and reformation cities as neat sequential layers, where the past coexists, still politely visible under the present. In these cities, things were being built so quickly there was little space for thorough demolition; houses were being buried and fill dumped on top – often irregularly and out of sequence.<sup>29</sup> Soil in this space becomes an amalgam – a mix of spoil, and waste and dust – but a necessary tool for flattening, ordering, and organizing the city.



- 30 Jane Hutton, *Reciprocal Landscapes: Tracing Materials Between New York City and Beyond* (Milton: Routledge, 2019), 66.
- 31 Vines, 'Dudley Flats Archaeological Investigation.'

It is important to remember that vast topographic changes are designed and intentional, and as Jane Hutton notes, "initially aimed at lubricating the flow of capital and the rapid construction of buildings and landscapes alongside it."<sup>30</sup> But such processes, on a vast scale and committed with violence, erase and confuse the collective memory. Melbourne, along with other cities with similar historical, political and economic contexts, was built on unceded lands; developed out of empire-building exercises in the 19th century. Their continued existence necessitates an ongoing relationship with contested territories and contexts. Examining the city's earth, soil and dirt allows for an exploration of the methods and manner in which excavation and the redistribution of excavated material has proven integral to the development of image, identity and wealth in the larger colonial project. It aims to invert implied histories of simple stratigraphic burial, foregrounding cycles of excavation as an ongoing material process in these spaces.

Archaeological excavations in Melbourne continue to reiterate this point. Development at the Queen Victoria Market, a city focal point, is made somewhat easier by the known but underexplored cemetery that is buried beneath the market stalls. The nature of the site, highly contested and sensitive, a mixture of earth, human remains, artefacts and building rubble tells the story of a city whose guilty narratives are not quite clear and certainly not confident. In short, it reveals the effective complexity of all sites in the city – which are otherwise treated as straightforward and uncomplicated.

The built legacy of the gold rush is clear; rail, port and road infrastructure connecting the city to its gold fields, and ornate 'boom' styles that reflected the incredible wealth of the city, replacing or perhaps sitting aside the precarious and temporary miners' dwellings. Newspapers of the day note them as being dirty and chaotic, as tents. "Canvas Town," as it was dubbed, appeared like a "confused swarm" of structures and by extension set in opposition to the heroic, civic and infrastructural aspects of the city. But examining these cities their environmental histories illustrates their repeated and similar engagement with excavation and subsurface material – not the buildings, but the surface the city sits on and in, and the way it has been reshaped, moved around.

Consistently, in Melbourne, excavation and dirt redistribution has acted as a layered repetitive force; cuts appear over others, surfaces are remodelled and moved on multiple occasions. Alongside infrastructural and urban projects, other early excavations occurred via efforts to dry out and 'hygienise' wet areas and boggy landscapes. Swamps were filled with rubble and rubbish in an attempt to make landscapes functional and traversable.<sup>31</sup> But with each cut and scrape through soil, sand and clay, materials and ecologies became further entangled. It is not (and never was) the neutral space depicted in the architect's drawings, and it quickly lost the clear delineation shown in the surveyors' maps. The range of excavation,

- 32 Penelope Edmonds, *Urbanizing frontiers: Indigenous peoples and settlers in 19th-century Pacific Rim cities* (Vancouver BC: UBC Press, 2010).
- 33 Gray Brechin, *Imperial San Francisco: Urban Power, Earthly Ruin* (Berkeley: University of California Press, 1999).

filling and remaking play a complex role in the construction and formation of the image of the city, from slicing transects through the first excavations that formed those gold rush foundations, to the forensic incisions that allow controlled and mediated construction of prescribed histories and the unlocking of capital in the form of speculative real estate and infrastructure mega-projects. Because the projects are linked, and earth moves from one site to the other, the action can help catalyse discussions around site and foreground in the urban realm.

There is growing interest in linkages between underground and urban processes. Likewise there is an increasing awareness of the need to write histories that acknowledge and foreground settler practices that mine, alter, extract and occupy, or to build other complex narratives or shared histories.<sup>32</sup> But there is less of a focus on practices that sit at the intersection of these spaces – work that occurs not on the deep structure and the city’s geology, but with the matter immediately below the city surface. For example, while we know topographies were altered and reshaped we are less aware of where the excavated material went, and how that redistribution of material shaped new narratives and images of the city. But, while some authors have established links to the technological impact that mining infrastructure had on goldrush gateway cities,<sup>33</sup> there has been less examination around broader consequences of an awareness of excavation as a material practice as a catalyst for shaping the identity and narratives of the city.

### Conclusion

While true extractive industries move out of the city, Melbourne continues to mine its landscape for material and meaning. As archaeologists sift through sites in the city’s CBD it becomes apparent that while larger remnants such as building foundations can be briefly viewed, most objects found are small and will never be seen or readily accessed by the public. As the city’s pavements are peeled back, the exposed dirt becomes a key point of interest, and the archaeological excavation itself becomes performative. The lesson is as much around the narrative of the dig and the exposed *dirt*, as the artefacts themselves. Changes to the way that the architectural and urban disciplines are engaging with environment and environmental histories foreground the significance of this dirt. This paper has identified ways in which dirt complicates contemporary urban and architectural design practices, and points to particular transdisciplinary practices that might continue to hold value to practitioners working in these contested settle colonial contexts. The paper seeks to put forward the notion that there is a relationship between the act of digging and the act of building – and unpacking – the image of the urban. The project stems from a design practitioner’s interest in site and ground in a postcolonial context but draws on archaeological knowledges to situate design practices in place, examining the impact of the churning up, displacement, refilling of the substrate in urban environments in a particular antipodean location.