

**Depicting Boom Urbanism:
A Critical Investigation of Kalgoorlie and Boulder,
Western Australia, 1893–1903**

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Abstract

Through a series of written and drawn investigations, this thesis considers the spaces, events and processes of boom urbanism and industrialisation in the East Goldfields of Western Australia between 1893 and 1903 as recorded in photographs and maps. Employing these media, underutilised in the writing of history of the built environment, the thesis will examine this lacuna in Australia's urban history.

Kalgoorlie and Boulder are the locations of the last great gold rush in Australia. The discovery of alluvial and then a deep reef of gold in the East Coolgardie Goldfield has long been acknowledged as a significant moment in Western Australian and Australian history. The industrial and urban transformation of an arid woodland at the very edge of the British Empire had profound economic, social, political, urban and architectural consequences with the movement of people, ideas and technologies from eastern Australia and around the world to Western Australia.

While Kalgoorlie and Boulder underwent an urban boom, the towns were concurrently influenced by a number of events that, in complex ways, affected the development of the towns in spatial terms. The thesis explores, describes and analyses a range of photo-textual and cartography objects drawn from the rich archive of visual material created during the period to understand the nature of this development. This is achieved in two stages. Firstly, the exploration of ten photo-textual objects establishes a broad spatial context of the goldfields and towns. Secondly, a more detailed examination of three ephemeral, quotidian and, until now, largely overlooked objects—a souvenir, a newspaper supplement and a series of maps—is undertaken to provide a nuanced understanding of these urban and industrial processes over time.

The research makes a number of findings. The first concerns the utilising of novel research methodologies, and the second relates to the new knowledge created through these techniques about the processes of boom urbanism. In the course of establishing and tracing serial and sequential relationships in the visual material

examined, the thesis offers lessons on how such material can be used as a source for urban history. In its foregrounding of time and process, as distinct from space and product, the research advocates that visual material demands a more central place in the field of urban history. The research yields new insights and understandings of the way the complex territory of town and mine developed, and through it, a more layered sense of the urban condition emerges. The research reinforces the idea that urbanisation (and industrialisation) needs to be read as temporal even when being explored through static depictions and fixed objects such as photographs, printed matter and maps.

The research establishes a series of methods and measures for investigation and understanding of boom urbanism that can be applied to, and tested against, other places, across time and space, that have undergone similar transformations.

Declaration

This is to certify that:

- (i) the thesis comprises only my own original work towards the degree, except where indicated in the preface
- (ii) due acknowledgement has been made in the text to all other materials used,
- (iii) the thesis is fewer than the maximum word limit in length, exclusive of tables, maps, bibliographies and appendices.

Signed:

Philip David Goldswain

Date: 17 August 2020

Preface

Parts of this thesis have been published or presented in the following publications:

- 'Tiny Jubilations: JJ Dwyer's Photographs and a Spatial Construction of the Western Australian Goldfields', *Celebration*, The 22nd Annual Conference of the Society of Architectural Historians, Australia New Zealand (SAHANZ) Conference, Napier, New Zealand, 2005.
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- 'Globalisation and the Gold Rush City', *Global Photographies: Histories, Theories, Practices*, Dun Laoghaire, Ireland, 2007.
- 'A Photographic City: JJ Dwyer and Kalgoorlie 1896–1917', *Victorian Beginnings*, Australasian Victorian Studies Association (AVSA) Conference, Perth, Western Australia, 2007.
- 'Silver and Gold: The Photographs of John Joseph 'Jack' Dwyer (1869–1928)', *FotoFreo 2008*, Fremantle, Western Australia, April 2008.
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- ‘ "Dipped into a bucket of pure Victoriana": The Spatial Transformation of Kalgoorlie, Western Australia, 1893–1903' & ' "A Memento of a Great and Interesting Event": A Souvenir Album, Photography and the Development of a Mining Town', The Supernumerary Conference of North American Victorian Studies Association, British Association of Victorian Studies and AVSA, Ca' Foscari University of Venice & Venice International University, Venice, Italy, 2013.
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- ‘BOOM: Mining, Photography, Landscape and the City’, *The New Critic: Journal of the Institute of Advanced Studies* 8 (September 2008).

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Figure 4.18b

'Hannan-street, East of Maritana-street', Hannan-street, West o' Maritana-street', The Western Argus, 2 June 1898, National Library of Australia, <https://trove.nla.gov.au/newspaper/page/4462601>

Figure 4.19a

'Intersection of Hannan & Maritana Streets', Joshua & Dwyer, The Western Argus, 3 November 1898, National Library of Australia, <https://trove.nla.gov.au/newspaper/page4463878>

Figure 4.19b

'Hannan's Street, Kalgoorlie', Biltoft Studio, 'General View of Kalgoorlie', W. Roy Millar, and 'Maritana Street, Kalgoorlie', Biltoft Studio, The Western Mail Christmas Number 1898, 24 December 1898, National Library of Australia, <https://trove.nla.gov.au/newspaper/page3739794>

Figure 4.20

'Crowd in Hannan Street, Kalgoorlie', Unknown Photographer, 1905, (Call number: 007033D) Series: Malcolm Uren collection of photographs BA1116, The State Library of Western Australia, Perth

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'The Bailey Gate Lucknow', The Western Australian Goldfield's Courier, 1898, 2 April 1898, National Library of Australia, <https://trove.nla.gov.au/newspaper/page/27846261>

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'The Residency at Lucknow, as left at the conclusion of the Indian Mutiny', The Western Australian Goldfield's Courier, 2 April 1898, National Library of Australia, <https://trove.nla.gov.au/newspaper/page/27846260>

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'The Old Curiosity Shop, Ballarat East, Victoria', 'View in Hannan Street, Kalgoorlie', J.J. Dwyer, The Western Argus, 10 June 1902, National Library of Australia, <https://trove.nla.gov.au/newspaper/page4127979>

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'View of Victor (Cripple Creek), Colorado', The Western Argus, 16 April 1901, National Library of Australia, <https://trove.nla.gov.au/newspaper/page4120920>

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'Cathedral of Notre Dame, Paris', The Western Argus, 10 June 1902, National Library of Australia, <https://trove.nla.gov.au/newspaper/page4127409>

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'Mays and Carrigg Plumbers, Coolgardie', Roy Miller, c1895/6, (Call number: 303532PD), The State Library of Western Australia, Perth

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'Mays and Carrigg Plumbers, Kalgoorlie', Unknown Photographer, c1897 (Call number: 303533PD), The State Library of Western Australia, Perth

Figure 4.27a

'Hannans Club, Kalgoorlie', Series F, Astral Stores Postcards, Alfred Moulton, c1900 (Call number: 007499D) Series: The Austral views of Perth, Fremantle and towns on the Goldfields 4224B, The State Library of Western Australia, Perth

Figure 4.27b

'Public Buildings, Kalgoorlie', Series F, Astral Stores Postcards, Alfred Moulton, c1900, (Call number: 007500D) Series: The Austral views of Perth, Fremantle and towns on the Goldfields 4224B, The State Library of Western Australia, Perth

Figure 4.27c

'Wardens Court, Coolgardie', Series F, Astral Stores Postcards, Alfred Moulton, c1900, (Call number: 007501D) Series: The Austral views of Perth, Fremantle and towns on the Goldfields 4224B, The State Library of Western Australia, Perth

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'Burt Street, Boulder City', Series F, Astral Stores Postcards, Alfred Moulton, c1900, (Call number: 007522D) Series: The Austral views of Perth, Fremantle and towns on the Goldfields 4224B, The State Library of Western Australia, Perth

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'Intersection of Hannans and Maritana Streets, Kalgoorlie', Series F, Astral Stores Postcards, Alfred Moulton, c1900, (Call number: 007521D) Series: The Austral views of Perth, Fremantle and towns on the Goldfields 4224B, The State Library of Western Australia, Perth

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'General View of Kalgoorlie', Series F, Astral Stores Postcards, Alfred Moulton, c1900 (Call number: 007523D) Series: The Austral views of Perth, Fremantle and towns on the Goldfields 4224B, The State Library of Western Australia, Perth

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'Hannans Street Looking West, Kalgoorlie' Series F, Astral Stores Postcards, Alfred Moulton, c1900, (Call number: 007524D) Series: The Austral views of Perth, Fremantle and towns on the Goldfields 4224B, The State Library of Western Australia, Perth

Figure 4.27h

‘Entrance to markets, Kalgoorlie’, Series G, Astral Stores Postcards, Alfred Moulton, c1900, (Call number: 007535D) Series: The Austral views of Perth, Fremantle and towns on the Goldfields 4224B, The State Library of Western Australia, Perth

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‘Hannans Street Looking East, Kalgoorlie’, Series G, Astral Stores Postcards, Alfred Moulton, c1900, (Call number: 007502D) Series: The Austral views of Perth, Fremantle and towns on the Goldfields 4224B, The State Library of Western Australia, Perth

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‘Palace Chambers, Kalgoorlie’, Series G, Astral Stores Postcards, Alfred Moulton, c1900, (Call number: 007503D) Series: The Austral views of Perth, Fremantle and towns on the Goldfields 4224B, The State Library of Western Australia, Perth

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CHAPTER 5

Figure 5.1

Layout of the 24 pages of the Special Anniversary Number, Kalgoorlie Illustrated, The Past to the Present, Supplement to *The Kalgoorlie Western Argus*, 17 June 1902, National Library of Australia, <https://trove.nla.gov.au/newspaper/page/4127926>

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CHAPTER 6

Figure 6.1

‘Sir John Forrest turning the tap at the Mt Charlotte Reservoir, Kalgoorlie, 24th January 1903’, ‘*Western Australia Goldfields Water Scheme: A Souvenir of the Official Opening and Visit to the Mines of the Golden Mile, 24th–26th January 1903*’, unpaginated, 8 December 1903, The Chamber Of Mines Of Western Australia (Incorporated), Kalgoorlie, Courtesy Australian Capital Equity. A digitised version of The Souvenir is available via the online catalogue of the State Library of Victoria. This digitised copy was used and cited in person in addition to the copy in the collection of Australian Capital Equity. <http://handle.slv.vic.gov.au/10381/107962>

Figure 6.2

Water pipe construction at Mt Charlotte, Kalgoorlie, Unknown photographer, ca.1902 (Call number: 001053D) Series: Album of photographs of the Goldfields Water Supply Scheme 3362B, The State Library of Western Australia, Perth

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‘Mt Charlotte Reservoir, Kalgoorlie on the day of opening 24 January 1903’, Unknown photographer, 1903, (Call number: 000861D) The State Library of Western Australia, Perth

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Bottom L-R, Great Boulder Perseverance Gold Mining Company Limited, Statistics and Visiting Party, *The Souvenir*, unpaginated, 1903, Courtesy Australian Capital Equity

The Kalgurli Gold Mines Limited, Statistics and Visiting Party, *The Souvenir*, unpaginated, 1903 Courtesy State Library of Victoria,
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Layout of *The Souvenir* and its organisation into ‘paratext’ and ‘textual’ elements

CHAPTER 7

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‘Map Shewing Gold Mining Leases at Kalgoorlie, Eastern Coolgardie GF’, Department of Mines, 1898–1901 (Call number: 24/7/15 RARE), The State Library of Western Australia, Perth

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Series 2168 townsite plans, Kalgoorlie townsite plans, Department of Lands and Surveys, 1894–1901 (Reference code: AU WA S2168- cons5698 827-835)

Figure 7.2b

Series 2168 townsite plans, Boulder townsite plans, Department of Lands and Surveys, 1896–1905 (Reference code: AU WA S2168- cons5698 0175-0183) The State Records Office of Western Australia, Perth

Figure 7.3

‘Boulder Townsite, Sheet 5’, Department of Lands and Surveys, 1899?–1901 (Reference code: AU WA S2168- cons5698 0180) The State Records Office of Western Australia, Perth

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'Townsite of Kalgoorlie', Department of Lands and Surveys, 1897 (Call number: 35/7/KALG(1897) RARE), The State Library of Western Australia, Perth
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Figure 7.11

The Kalgoorlie Townsite digital map files imported and arranged chronologically, at the same scale and orientation in Adobe Illustrator using Kalgoorlie townsite plans, Department of Lands and Surveys, 1894–1901 (Reference code: AU WA S2168- cons5698 827-835) The State Records Office of Western Australia, Perth

Figure 7.12a

Tracing of line elements on Kalgoorlie townsite plans, Department of Lands and Surveys, 1894–1901 (Reference code: AU WA S2168- cons5698 827-835) The State Records Office of Western Australia, Perth

Figure 7.12b

Detail of tracing of line elements on ‘Kalgoorlie Townsite, Sheet 4’, Department of Lands and Surveys, 1898–1899 (Reference code: AU WA S2168- cons5698 0830) The State Records Office of Western Australia, Perth

Figure 7.13a

Infill: colour highlighted areas on Kalgoorlie townsite plans, Department of Lands and Surveys, 1894–1901 (Reference code: AU WA S2168- cons5698 0827-0835) The State Records Office of Western Australia, Perth

Figure 7.13b

Detail of infill colour areas on ‘Kalgoorlie Townsite, Sheet 4’, Department of Lands and Surveys, 1898–1899 (Reference code: AU WA S2168- cons5698 0830) The State Records Office of Western Australia, Perth

Figure 7.14a

Signifiers: notation highlighting Urban Anomalies on Kalgoorlie townsite plans, Department of Lands and Surveys, 1894–1901 (Reference code: AU WA S2168- cons5698 0827-0835) The State Records Office of Western Australia, Perth

Figure 7.14b

Detail of notation highlighting Urban Anomalies on ‘Kalgoorlie Townsite, Sheet 4’, Department of Lands and Surveys, 1898–1899 (Reference code: AU WA S2168- cons5698 0830) The State Records Office of Western Australia, Perth

Figure 7.15a

Author map of notation found on Kalgoorlie townsite plans, Department of Lands and Surveys, 1894–1901 (Reference code: AU WA S2168- cons5698 827-835) The State Records Office of Western Australia, Perth

Figure 7.15b

Detail of author map of notation found on Kalgoorlie townsite plans, Department of Lands and Surveys, 1894–1901 (Reference code: AU WA S2168- cons5698 827-835) The State Records Office of Western Australia, Perth

Figure 7.15b

Detail of text notation on ‘Kalgoorlie Townsite, Sheet 4’, Department of Lands and Surveys, 1898–1899 (Reference code: AU WA S2168- cons5698 0830) The State Records Office of Western Australia, Perth

Figure 7.16a

Kalgoorlie Urban Anomalies: Type A, B and C, Author map based on Kalgoorlie townsite plans Sheets 1–9, Department of Lands and Surveys, 1894–1901 (Reference code: AU WA S2168- cons5698 0827-0835) The State Records Office of Western Australia, Perth

Figure 7.16b

Boulder Urban Anomalies: Type A, B and C, Author map based on Boulder townsite plans Sheets 1–9, Department of Lands and Surveys, 1896–1905 (Reference code: AU WA S2168- cons5698 0175-0183) The State Records Office of Western Australia, Perth

Figure 7.17a

Kalgoorlie Urban Anomalies, Type B: Temporary and Permanent change, Author map based on Kalgoorlie townsite plans Sheets 1–9, Department of Lands and Surveys, 1894–1901 (Reference code: AU WA S2168- cons5698 827–835) The State Records Office of Western Australia, Perth

Figure 7.17b

Boulder Urban Anomalies, Type B: Temporary and Permanent change, Author map based on Kalgoorlie townsite plans Sheets 1–9, Department of Lands and Surveys, 1894–1901 (Reference code: AU WA S2168- cons5698 827-835) The State Records Office of Western Australia, Perth

Figure 7.18

Urban Anomaly highlighted on detail of ‘Boulder Townsite Sheet 2’, Department of Lands and Surveys, 1898, (Reference code: AU WA S2168- cons5698 0177) The State Records Office of Western Australia, Perth

Figure 7.19a

Detail of ‘Boulder Townsite, Sheet 2’, Department of Lands and Surveys, 1897, (Reference code: AU WA S2168- cons5698 0177) The State Records Office of Western Australia, Perth

Figure 7.19b

Detail of ‘Boulder Townsite, Sheet 3’, Department of Lands and Surveys, 1898, (Reference code: AU WA S2168- cons5698 0178) The State Records Office of Western Australia, Perth

Figure 7.19c

Detail of 'Boulder Townsite, Sheet 5', Department of Lands and Surveys, 1899, (Reference code: AU WA S2168- cons5698 0180) The State Records Office of Western Australia, Perth

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Urban Anomalies on detail of 'Boulder Townsite, Sheet 1' with author overlay, Department of Lands and Surveys, 1896, (Reference code: AU WA S2168- cons5698 0175) The State Records Office of Western Australia, Perth

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Urban Anomaly 2, Author tracing of Boulder townsite plans, Sheets 1–9, Department of Lands and Surveys, 1896–1905 (Reference code: AU WA S2168- cons5698 0175-0183) The State Records Office of Western Australia, Perth

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Urban Anomaly 2, Detail of 'Boulder Townsite, Sheet 1' with author overlay, Department of Lands and Surveys, 1896, (Reference code: AU WA S2168- cons5698 0175) The State Records Office of Western Australia, Perth

Figure 7.22b

Urban Anomaly 2, Detail of author tracing on 'Boulder Townsite Sheet 2', Department of Lands and Surveys, 1897, (Reference code: AU WA S2168- cons5698 0176) The State Records Office of Western Australia, Perth

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Figure 7.22d

Urban Anomaly 2, Detail of author overlay on 'Boulder Townsite Sheet 5', Department of Lands and Surveys, 1899, (Reference code: AU WA S2168- cons5698 0179) The State Records Office of Western Australia, Perth

Figure 7.22e

Urban Anomaly 2, Detail of author overlay on 'Boulder Townsite Sheet 8' with author overlay, Department of Lands and Surveys, c1901–1905 (Reference code: AU WA S2168- cons5698 0183) The State Records Office of Western Australia, Perth

Figure 7.22f

Urban Anomaly 2, Detail of 'Boulder Townsite Sheet 8', (c1901–1905), Department of Lands and Surveys, c1901–1905 (Reference code: AU WA S2168- cons5698 0183) The State Records Office of Western Australia, Perth

Figure 7.23

'Boulder Townsite Sheet 5' with author overlay, Department of Lands and Surveys, 1899, (Reference code: AU WA S2168- cons5698 0180) The State Records Office of Western Australia, Perth

Figure 7.24

Urban Anomaly 3, Author tracing of Boulder townsite plans, Sheets 1–9, Department of Lands and Surveys, 1896–1905 (Reference code: AU WA S2168- cons5698 0175-0183) The State Records Office of Western Australia, Perth

Figure 7.24a

Urban Anomaly 3, Detail of 'Boulder Townsite Sheet 2' with author overlay, Department of Lands and Surveys, 1897, (Reference code: AU WA S2168- cons5698 0176) The State Records Office of Western Australia, Perth

Figure 7.24b

Urban Anomaly 3, Detail of 'Boulder Townsite Sheet 3' with author overlay, Department of Lands and Surveys, 1898, (Reference code: AU WA S2168- cons5698 0177) The State Records Office of Western Australia, Perth

Figure 7.24c

Urban Anomaly 3, Detail of 'Boulder Townsite Sheet 5' with of author overlay, Department of Lands and Surveys, 1899, (Reference code: AU WA S2168- cons5698 0179) The State Records Office of Western Australia, Perth

Figure 7.24d

Urban Anomaly 3, Detail of 'Boulder Townsite Sheet 8', (c1901–1905), Department of Lands and Surveys, c1901–1905 (Reference code: AU WA S2168- cons5698 0183) The State Records Office of Western Australia, Perth

Figure 7.25a

Urban Anomaly 4, Author map based on Kalgoorlie townsite plans Sheets 1–9, Department of Lands and Surveys, 1894–1901 (Reference code: AU WA S2168- cons5698 827-835) The State Records Office of Western Australia, Perth

Figure 7.25b

Urban Anomaly 4, Detail of 'Kalgoorlie Townsite, Sheet 3' with author overlay, Department of Lands and Surveys, 1897–1898 (Reference code: AU WA S2168- cons5698 0829) The State Records Office of Western Australia, Perth

Figure 7.26a

Urban Anomaly 4, Detail of author tracing of 'Kalgoorlie Townsite Sheet 3', Department of Lands and Surveys, 1897, (Reference code: AU WA S2168- cons5698 0829) The State Records Office of Western Australia, Perth

Figure 7.26b

Urban Anomaly 4, Detail of author tracing of 'Kalgoorlie Townsite Sheet 4', Department of Lands and Surveys, 1898, (Reference code: AU WA S2168- cons5698 0830) The State Records Office of Western Australia, Perth

Figure 7.26c

Urban Anomaly 4, Detail of author tracing of 'Kalgoorlie Townsite Sheet 5', Department of Lands and Surveys, 1899, (Reference code: AU WA S2168- cons5698 0831) The State Records Office of Western Australia, Perth

Figure 7.26d

Urban Anomaly 4, Detail of author tracing of 'Kalgoorlie Townsite Sheet 9', Department of Lands and Surveys, c1900, (Reference code: AU WA S2168- cons5698 0835) The State Records Office of Western Australia, Perth

Figure 7.27

Detail of 'Kalgoorlie Boulder Census, Map 12', Department of Lands and Surveys, Western Australia, 1901, Series: 'Census of Western Australia taken for the night of 31st March 1901', Printed by Census Office, Perth, W.A. 1901. (Call number: 3/2/12 (1901)) The State Library of Western Australia, Perth

Figure 7.28a

Growth rings, Author tracing of Boulder municipal boundary from Boulder Townsite Sheets 1, 3, 8, 9, Department of Lands and Surveys, 1898–1905, (Reference code: AU WA S2168- cons5698 0175, 0178, 0183, 0184) The State Records Office of Western Australia, Perth

Figure 7.28b

Author tracing of Boulder municipal boundary and mining leases from Boulder Townsite Sheets 1–9 Department of Lands and Surveys, 1898–1905, (Reference code: AU WA S2168- cons5698 0175- 0184) The State Records Office of Western Australia, Perth

Figure 7.29a

Reserve lots in Kalgoorlie, Author tracing of Kalgoorlie townsite plans, Sheets 1–9, Department of Lands and Surveys, 1896–1905 (Reference code: AU WA S2168- cons5698 0827-0835) The State Records Office of Western Australia, Perth

Figure 7.29b

Reserve lots across Boulder, Author tracing of Boulder townsite plans, Sheets 1–9, Department of Lands and Surveys, 1898–1905 (Reference code: AU WA S2168- cons5698 0175-0184) The State Records Office of Western Australia, Perth

Figure 7.30a

Kalgoorlie Urban Anomalies: Type A, B and C and Reserve lots, Author map based on Kalgoorlie townsite plans Sheets 1–9, Department of Lands and Surveys, 1894–1901 (Reference code: AU WA S2168- cons5698 0827-0835) The State Records Office of Western Australia, Perth

Figure 7.30b

Boulder Urban Anomalies: Type A, B and C and Reserve lots, Author map based on Boulder townsite plans Sheets 1–9, Department of Lands and Surveys, 1896–1905 (Reference code: AU WA S2168- cons5698 0175-0183) The State Records Office of Western Australia, Perth

Figure 7.31a

Reserve lots, Detail of author tracing of ‘Boulder Townsite Sheet 2’, Department of Lands and Surveys, 1897, (Reference code: AU WA S2168- cons5698 0177) The State Records Office of Western Australia, Perth

Figure 7.31b

Reserve lots, Detail of author tracing of ‘Boulder Townsite Sheet 3’, Department of Lands and Surveys, 1898, (Reference code: AU WA S2168- cons5698 0178) The State Records Office of Western Australia, Perth

Figure 7.31c

Reserve lots, Detail of author tracing of ‘Boulder Townsite Sheet 5’, Department of Lands and Surveys, 1899, (Reference code: AU WA S2168- cons5698 0180) The State Records Office of Western Australia, Perth

Figure 7.31d

Reserve lots, Detail of author tracing of ‘Boulder Townsite Sheet 8’, Department of Lands and Surveys, c1901, (Reference code: AU WA S2168- cons5698 0183) The State Records Office of Western Australia, Perth

Figure 7.32a

Reserve lots, Detail of author tracing of ‘Kalgoorlie Townsite Sheet 3’, Department of Lands and Surveys, c1897, (Reference code: AU WA S2168- cons5698 0829) The State Records Office of Western Australia, Perth

Figure 7.32b

Reserve lots, Detail of author tracing of 'Kalgoorlie Townsite Sheet 4',
Department of Lands and Surveys, c1898, (Reference code: AU WA S2168-
cons5698 0830) The State Records Office of Western Australia, Perth

Figure 7.32c

Reserve lots, Detail of author tracing of 'Kalgoorlie Townsite Sheet 5',
Department of Lands and Surveys, c1899, (Reference code: AU WA S2168-
cons5698 0831) The State Records Office of Western Australia, Perth

Figure 7.32d

Kalgoorlie Townsite Sheet 9 (Detail)
Reserve lots, Detail of author tracing of 'Kalgoorlie Townsite Sheet 9',
Department of Lands and Surveys, c1900, (Reference code: AU WA S2168-
cons5698 0835) The State Records Office of Western Australia, Perth

CHAPTER 1: Introduction to the Thesis Research

Research Motivation

Today, the twin towns of Kalgoorlie and Boulder find themselves sitting at the edge of the largest open-pit goldmine in Australia (Figure 1.1). Despite measuring three kilometres long, more than kilometre wide and more than half a kilometre deep, the Super Pit is nevertheless surpassed by the extent of the underground workings that the mine has only partially subsumed since beginning in the 1980s (Figure 1.2). When the Pit finally closes in 2025, the mine will still be more than 500 metres short of the deepest underground workings that began in the gold rushes of the late-nineteenth century. Despite the enormous physical void created in the landscape of the Eastern Coolgardie Goldfields by the Super Pit, the open-cut extraction process has exposed the material and spatial reminders of underground mining that followed the rich gold-bearing seams. Like the cutting of an architectural section, but on a geological scale, the relentless nature of twenty-four-hour mining has exposed the space and infrastructure of the historical underground mining: the voids of tunnels and shafts, the forests of structural



Figure 1.1:
The twin towns of Kalgoorlie and Boulder find themselves sitting at the edge of the largest open-pit goldmine in Australia.

'Super Pit #4, Kalgoorlie, Western Australia, 2007', Edward Burtynsky, 2007,
The Western Australian Museum Collections, Perth, Western Australia



Figure 1.2: The north end of the Super Pit

'Super Pit #1, Kalgoorlie, Western Australia, 2007', Edward Burtynsky,
2007, The Western Australian Museum Collections, Perth, Western
Australia



Figure 1.3: The sorting of the detritus of underground mining in the area known colloquially as ‘The Sticks.’

‘Super Pit #5, Kalgoorlie, Western Australia, 2007’, Edward Burtynsky,
2007, The Western Australian Museum Collections



Figure 1.4:
The side of Super Pit wall where the open cut mining process has exposed the tunnels and ‘drives’ of underground mining. Photograph by the author.



Figure 1.5: Detail of tunnel opening where the open cut mining has exposed the infrastructure of the tunnels, and 'drives' of underground mining. Photograph by the author

timber that lined them, the railway lines that transported ore and the belongings of workers who once toiled there(Figure 1.3–1.5).¹

In addition to the industrial detritus excavated on the site, the other documentation of the development of the mines (and the two towns that flanked them) can be found through a remarkable archival record of maps, photographs, and drawings that documented the places, spaces and events of the Eastern Goldfields. It was the discovery of one of these extraordinary material artefacts that generated my interest in this thesis topic. In 1999, I was undertaking research at the State Library of Western Australia² and retrieved a map issued by the Department of Mines that showed the goldmining leases of Kalgoorlie that made up the Golden Mile in 1901 (Figure 1.6). The map, encased in a protective plastic sleeve, the edges torn from use and age, was distinguished from the previous maps I had seen by the cartographer's use of shades of green, orange, blue and yellow to differentiate the irregularly shaped groups of the almost 4,000 mining leases of the Golden Mile. Thick blue pencil marks, made presumably by the users of the map, appeared to indicate gold-bearing lodes of the reef (Figure 1.7). Beyond the initial striking graphic appearance of the map, what grabbed my attention was the density of information it contained about the goldfield. It showed the outline of the individual leases within consolidated mines as well as their exotic names, which evoked memory, mythology and migration, the area in acres they occupied and the dates of the cancellation of previous leases (Figure 1.8).

In addition to the meticulous delineation of the industrial field, what appeared unusual about the map was the detailed recording of the urban settlements of Kalgoorlie and Boulder on the western edge of the goldfield (Figure 1.9a–b). The map recorded streets names, town boundaries and the location of racecourses, slaughter yards, water reserves, railway stations, hospitals, suburban residential

¹ The sorting of the detritus of underground mining in the area known colloquially as 'The Sticks' is the only job undertaken by hand in the Super Pit. The timber, taken from the woodlands surrounding Kalgoorlie and Boulder, was soaked in arsenic before being used underground. There are anecdotes that miners in the Super Pit found a fully laid dinner table in the tunnels during the excavation process.

² I was working as a Research Associate for a National Council for the Centenary of Federation Grant called 'Visualising the Architecture of Federation' lead by Hannah Lewi, Emma Williamson and the late David Dolan at Curtin University between 1999 and 2000.



Figure 1.6: The density of information about industrial and urban Kalgoorlie and Boulder contained in in 1901 map.

'Map Shewing Gold Mining Leases at Kalgoorlie, Eastern Coolgardie GF', Department of Mines, 1898–1901 (Call number: 24/7/15 RARE), The State Library of Western Australia, Perth

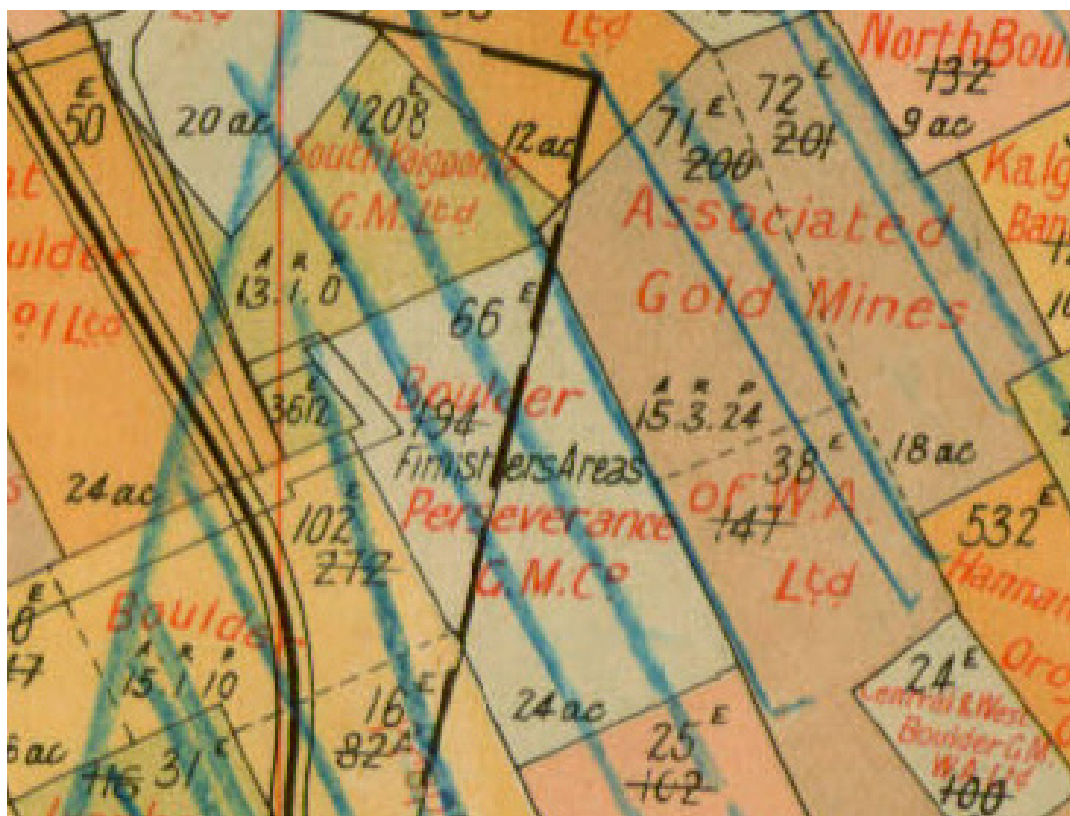


Figure 1.7: Blue pencil line indicating gold bearing seams.

Detail of 'Map Shewing Gold Mining Leases at Kalgoorlie, Eastern Coolgardie GF', Department of Mines, 1898-1901 (Call number: 24/7/15 RARE), The State Library of Western Australia, Perth

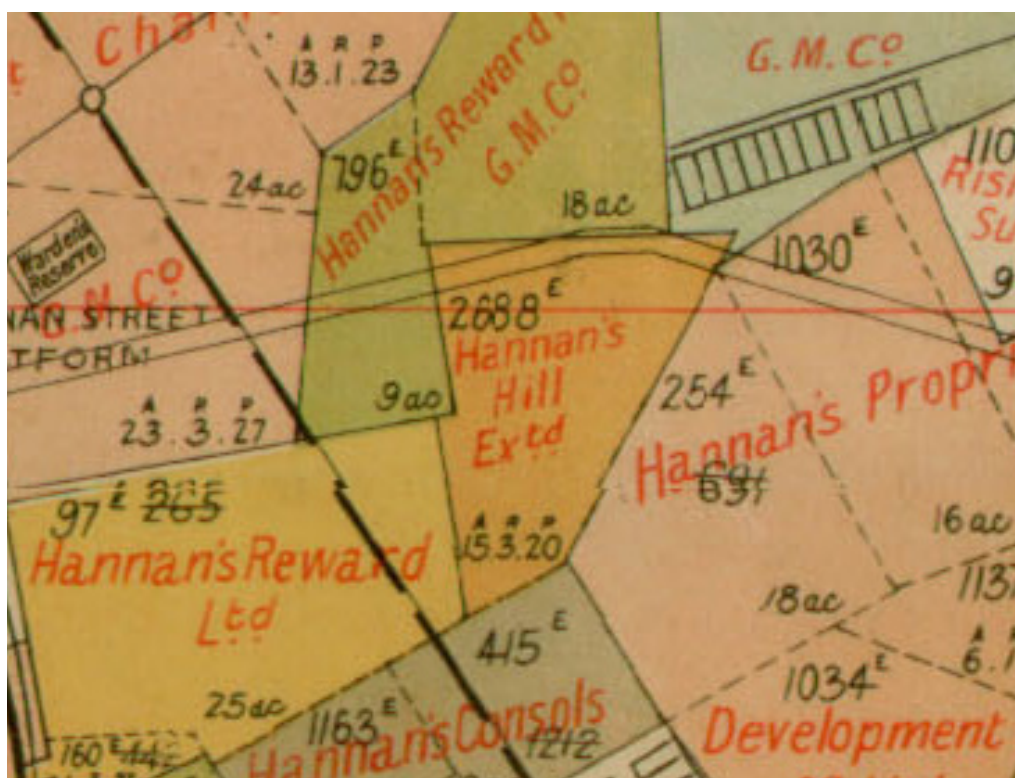


Figure 1.8: The name, areas and claim number of the gold mining leases

Detail of 'Map Shewing Gold Mining Leases at Kalgoorlie, Eastern Coolgardie GF',
Department of Mines, 1898–1901 (Call number: 24/7/15 RARE), The State Library of
Western Australia, Perth

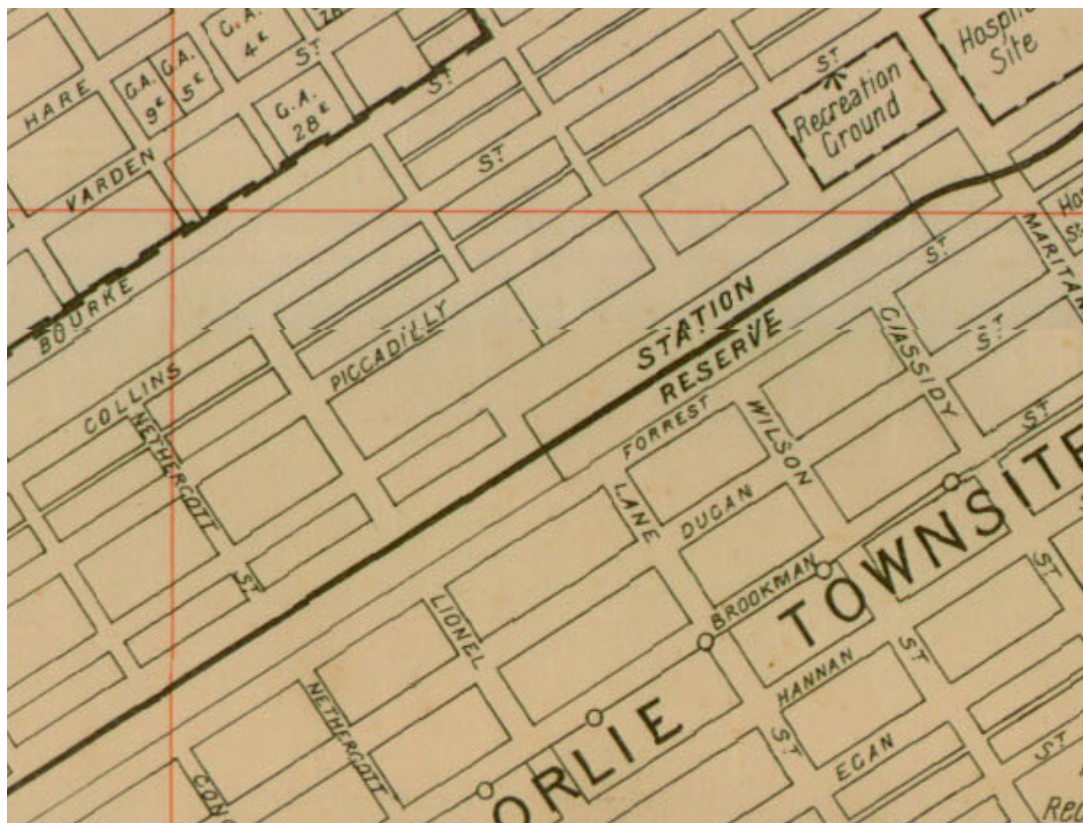


Figure 1.9a: The detailed recording of the urban settlements of Kalgoorlie and Boulder

Detail of 'Map Shewing Gold Mining Leases at Kalgoorlie, Eastern Coolgardie GF',
Department of Mines, 1898–1901 (Call number: 24/7/15 RARE), The State Library of Western Australia, Perth

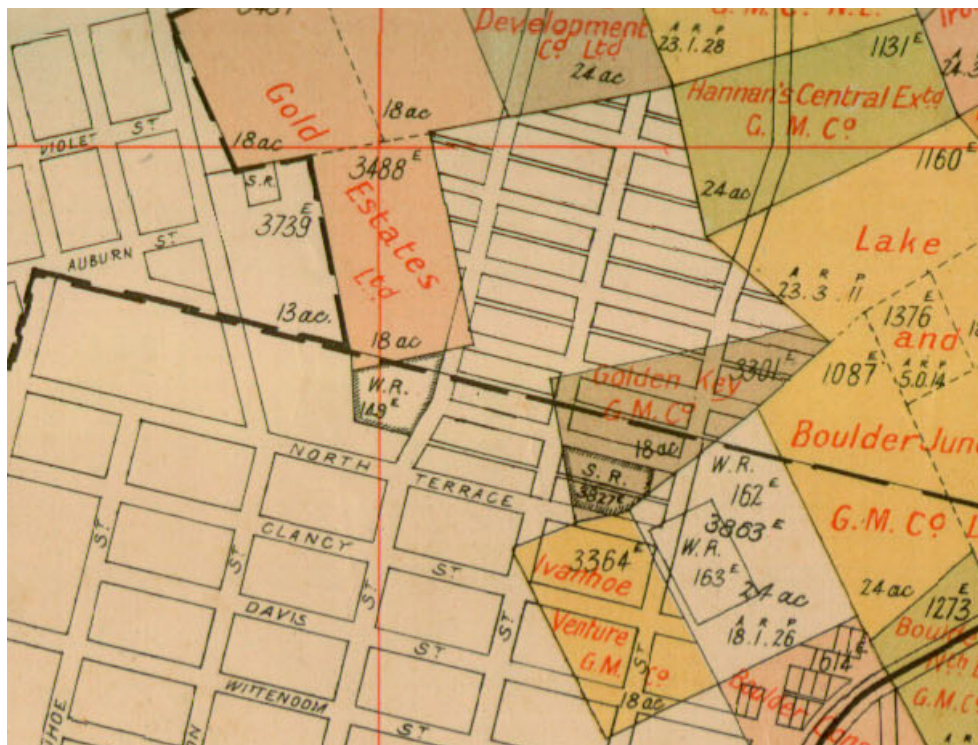


Figure 1.9b:

The intersection between these two highly detailed and defined 'orders' of the mining lease and the urban grid.

Detail of 'Map Shewing Gold Mining Leases at Kalgoorlie, Eastern Coolgardie GF',
Department of Mines, 1898–1901 (Call number: 24/7/15 RARE), The State Library of Western
Australia, Perth

areas and cemeteries, which suggested the very urban nature of the towns. Further, distinguishing the map was the intersection between these two highly detailed and defined 'orders' of the mining lease and the urban grid. The interface between industry and urbanity appeared to illustrate an inconsistent relationship; sometimes, there was a direct overlap, and in other locations, the urban grid appeared confined by the irregular contour of extinguished mining leases. Elsewhere, mining leases penetrated inside the urban grid or a suburban area would appear in the middle of the goldfield. This raised a number of questions: what generated the form of the mining lease? Why were the towns of Kalgoorlie and Boulder located and orientated that way? Why did a map whose obvious focus (and use) was centred on mining include such detailed urban information? How, if at all, did the two different orders of mining and urbanity coexist as they appeared on the map or did one extinguish the other?

As well as this example of detailed cartographic records, the gold rush and industrialisation and urbanisation that followed generated a substantial photographic archive. The extent of this documentation was made evident through another research project in 2004 when, as a new academic in the Faculty of Architecture, Landscape and Visual Arts at The University of Western Australia, I was invited by my colleague Bill Taylor to attend a meeting about the possible research projects. One suggestion was a project on the extensive archive of Kalgoorlie commercial photographer John Joseph Dwyer who was active between 1896 and 1917 (Figure 1.10). I knew of Dwyer's work from my previous archival research, during which I had encountered his photographic record of the buildings and streetscapes of Kalgoorlie. While I was familiar with Dwyer's architectural and urban images, I was not aware of his photographs of the people, mines, landscapes and events of the goldfields. The photographs illustrated the extraordinary material wealth of goldfields, its shops and well-stocked markets and the exuberant late-Victorian architecture that lined the streets. Dwyer's photographs showed the diversity of the social and community life; fancy dress roller-skating, orchestra, theatre groups and football clubs were all captured by his lens. Together, the Battye Library and the Western Australian Museum hold more than 10,000 of Dwyer's studio images with many more uncredited images that can



Figure 1.10: Kalgoorlie commercial photographer John Joseph Dwyer who was active between 1896 and 1917

'J. J. Dwyer', Joshua and Dwyer, c.1898, (Call number: 019067PD), Series: J. J. Dwyer collection 5816B, The State Library of Western Australia, Perth

only be found in printed material such as newspapers, books and journals. In contemporary Kalgoorlie, Dwyer's images are ubiquitous, their authorship largely unacknowledged, and they are found everywhere, hanging in historic pubs and fast-food restaurants. The motivation for the thesis, arising from these two initial 'events', could be summarised as an attempt to address the twin problems of 'content' and 'methodology'.

Historical Background

To address these two research concerns of 'content' and 'methodology', the thesis seeks firstly to tackle a lacuna within urban history; there are very few investigations of the nature of boom towns located at the sites of mineral extraction. Secondly, there is a dearth of literature that employs visual data as the primary resource for the exploration of urban change. No extended studies address the process of rapid urbanisation, the factors that shaped those forces of urbanisation nor boom urbanisation's interaction with the surrounding landscape whose resources prompted such hurried expansion. Missing are investigations of the effects of boom urbanism on the ultimate form of the city and how these changes were presented in media such as photography and cartography. While social histories of mineral-dependant boom towns exist, these do not place the towns in a context of other accounts of rapid urbanisation across time, and rely instead on a history of 'exceptionalism',³ which locates them in a 'cocoon of uniqueness'.⁴ Given the position of these 'tertiary' town and cities, located at the

³ The notion of 'exceptionalism', as used in regard to boom towns, is derived from the notions of American and Australian exceptionalism. The Dictionary of American Government and Politics defines 'American Exceptionalism' as 'The belief that American society and culture are exceptional in comparison with those of other advanced industrial countries ... It was the Frenchman, Alexis de Tocqueville (1805–59), who, in 1835, first wrote of 'American exceptionalism'. He saw the United States as 'a society uniquely different from the more traditional societies and status-bound nations of the Old World'. It was 'qualitatively different in its organising principles and political and religious institutions from ... other western societies', some of its distinguishing features being a relatively high level of social egalitarianism and social mobility, enthusiasm for religion, love of country, and ethnic and racial diversity.' Watts, Duncan, 'A', in *Dictionary of American Government and Politics* (Edinburgh: Edinburgh University Press, 2010) 10. Keith Dowding suggests that 'Australian exceptionalism is claimed in myriad ways from geography to biota, from history to culture, from economics to politics'. Keith Dowding, 'Australian Exceptionalism Reconsidered', *Australian Journal of Political Science* 52, no. 2 (2017): 166.

⁴ Oliver Knight, 'Toward an Understanding of the Western Town,' *The Western Historical Quarterly*, 4, no. 1 (1973): 29.

site of resource extraction, the interchange between the city-making and mining has been given little attention.

Concerning the methodological use of this visual data in the writing of architectural history, visual material such as photographs, maps and, to a lesser extent, architectural drawings are generally used as graphic examples that help to illustrate and supplement an argument substantiated from the architectural and urban artefact itself and then its various textual representations. Traditionally, the role of the photography, cartography and drawn media is considered 'passive' rather than 'active' in the construction of a history of buildings and spaces.⁵ This is particularly marked with regard to the discussion of the 'subgenre' of urban or architectural photography,⁶ which had remained mostly within a nineteenth-century conception of photography as an illustrative medium. Here, photography is considered a transparent window through which to view a subject rather than a medium that shaped the understanding of the scene depicted.⁷ This dilemma is due in part with the inherently ambiguous nature of the photographic medium. In much of early photography, the medium is construed as only evidentiary, where images are considered 'direct' recording of the object depicted. This might be considered the persistent theoretical 'indexicality' of photography that has problematised the medium.⁸ The sparsity of critical examination of architectural

⁵ James Ackerman wrote that 'photographic images cannot simply be read as reflections of reality but must depend on various elements of choice (of subject, position, framing, lighting, focus, etc.) and must reflect and address the ideology and taste of its time'. James Ackerman, 'On the Origins of Architectural Photography', in *This Is Not Architecture: Media Constructions*, ed. Kester Rattenbury (London: Routledge, 2002), 24.

⁶ Hugh Campbell, 'The Façade Fills the Frame: The Uses and Meanings of the Elevational View', *The Journal of Architecture* 21, no. 6 (2016): 861.

⁷ Ackerman argues that 'almost all photographers of the first half of the nineteenth century would have agreed with the statement by Fox Talbot to the effect that photographs make themselves—that is, that they are transparent records of what is in the world'. James Ackerman, 'Origins of Architectural Photography', 28.

⁸ Campbell and McManus argue that 'photography seems in many ways a direct and complete register of a given piece of the world. This particular quality of photography is often referred to as "indexical", following C.S. Peirce's famous trichotomy of sign relations (index, icon, symbol)', Dervela MacManus and Hugh Campbell, 'Illustrated Picturesquely and Architecturally in Photography: William J. Stillman and the Acropolis in Word and Image', *Architectural Histories* 3(1): 22, 1, DOI: <http://dx.doi.org/10.5334/ah.cw>. The nature of photography's indexicality is an ongoing debate in photographic theory as Campbell and MacManus point to James Elkin's 2007 book *Photography Theory*, which devotes 66 pages to the discussion around indexicality. James Elkins (ed), *Photography Theory* (New York, NY: Routledge, Taylor and Francis, 2007), 129–205. In the same book, Geoffrey Batchen calls indexicality one of the 'most abused terms in the photo-

and urban photography has been exacerbated by the consideration of 'architectural photography' as a discipline within commercial photography. Here, the medium is viewed as a means of advertising the products of architect's creativity, with something to 'sell' and correspondingly architectural photography has been categorised as low in the hierarchy of photographic subject matter and subdisciplines. The 'lowly' status of this discipline has meant that urban and architectural photography has not been the subject of sustained investigation and theorisation.⁹

Aim, Research Questions and Scope

Given the interests and motivation outlined above the aims, research question and scope are as follows.

Aim

To understand the development of Kalgoorlie, Boulder and the Eastern Coolgardie Goldfields in Western Australia through their depiction in photographs, maps and drawings.

Thesis Statement

Novel visual analysis methodologies can assist in interrogating rapid urban change as it is manifest in historical time and space. The close examination of photographs, maps and drawings, and the manner in which they are produced, distributed and received, reveal new patterns of development and settlement as well as the process of self-imagination of places.

lexicon'. Geoffrey Batchen, 'The Haunting' in *Photography Theory*, ed. Elkins (New York, NY: Routledge, Taylor and Francis, 2007), 130–55.

⁹ There are exceptions, such as Julius Shulman in architectural photography. The work of the Becher and Dusseldorf school alumnus such as Candida Hofer and Thomas Struth are exceptions, however, the work of these photographers is categorised as 'art' rather than 'architectural' photography.

Research Question

How do photographs and maps record the spatial and temporal events of the industrial boom towns and minefields of Kalgoorlie, Boulder and the Eastern Coolgardie Goldfields between 1893 and 1903?

Scope

Utilising a case study methodology, the thesis examines the representation of places and spaces created, and the events that occurred, between the discovery of gold by Hannan, Flannagan and Shea in 1893 and the opening of the Goldfields Water Scheme in 1903.¹⁰ During this period, both the town of Kalgoorlie and Boulder and the industrial field of the Golden Mile move from their earlier speculative and contingent beginnings to urban and industrial stability. Newspaper, postcards, souvenirs, panoramas and maps that record these events are produced towards the end of these 10 years that look back on the first decade of development of the urban and industrial landscapes. While the decade might appear to be a convenient round number of years in which to end the study, the celebration of the 10th-anniversary discovery of gold in 1903 by the contemporary publications allowed this study to consider objects such as newspaper supplements, souvenirs and other ephemera issued at that time and in doing so, develop a more nuanced understanding of the urban history of these places.

With regard to the development of the towns of Kalgoorlie and Boulder, the period 1893–1903 contains, in a condensed time frame, the expected urban, legal, governmental and infrastructural events that mark Kalgoorlie's transition from a camp to a town to a city and contribute to its establishment as a regional centre of immediate (and ongoing) significance. In framing the study as re-examination of goldfield urbanisation using visual data as the primary source, the research acknowledges that a significant body of theoretical and historical investigation has already informed the studies of colonialisation, industrialisation, capitalist

¹⁰ An argument could be made that the Transcontinental Railway connection linking Kalgoorlie to Adelaide (and the Eastern States) completed in 1917 was the last 'spatialising' event that connects Kalgoorlie. However, this occurred a decade after study period and has little impact on the town as this is a period of reduced gold production and stagnant urban development.

development which support most narratives of settlement during the period under examination. As the thesis looks to examine in detail principally visual data and test methodologies for its interpretation, these broader concerns sit outside the mandate of the current research. However, the findings from this research hold the potential to inform a revisitation of the broader theoretical context to enrich and problematise these previous readings.

Significance of the Study and Thesis Overview

The significance of the study is twofold. Firstly, the research, through the textual and graphic investigation of Kalgoorlie, Boulder and the Eastern Coolgardie Goldfields creates new knowledge and revises our existing knowledge about these towns that hold a significant place in Western Australian and Australian history. The study uses new and novel methodologies that organise, describe and analyse historical photographs, maps and drawings to gain new understanding by their re-examination and reorganisation. The study uses graphic techniques in a novel manner to analyse this material.

This research suggests new ways to consider the relationship between city-making and the extractive industry of mining through its examination of the processes of urbanisation and industrialisation in the Eastern Coolgardie Goldfields and its representation in photographs, drawings and maps. To this end, the study refines a category of urban development called 'boom urbanism', which considers the complicated relationship between mineral fields and urban environments. The study will propose novel ways to examine and understand the nature of a place as created in quotidian objects like newspapers, souvenirs and ephemera. The study will also propose innovative techniques to use photographs and maps as a means of understanding urban phenomena.

The thesis contains eight chapters. Following Chapter 1: Introduction, which sets out the background and aims of the research, Chapter 2: Critical Review establishes the historical and theoretical context in which the subject matter is located. Chapter 2 examines, firstly, the processes and forms of urbanisation and, secondly, the production and the reception of visual material. A number of terms

are investigated and defined. This is followed by Chapter 3, in which the parameters, approaches and research methods applied to the material under examination are outlined. Before beginning the case studies, Chapter 4 establishes a spatial history of Kalgoorlie, Boulder and the Eastern Coolgardie Goldfields through the description, analysis and contextualising of a number of selected photo-textual objects. Having established this framework, three case studies (presented in Chapters 5, 6 and 7, respectively) describe and examine in detail, through both drawn and written analysis, three photo-textual and cartographic objects—a newspaper supplement, a souvenir and a series map—to understand in detail how boom urbanism manifested in these documents and how they might be read and understood by a contemporary audience. Chapter 8 draws conclusions and findings from the case study research and proposes future applications of the methods and knowledge discovered.

CHAPTER 2: Critical Review

This chapter consists of a review of selected readings and authors that have informed important ideas, key terms and historical concepts for the thesis research. It unites a number of disciplines—urban history, photography, nineteenth-century studies, geography and media studies—to provide the context for the representation of the development of Kalgoorlie, Boulder and the Goldfields. The chapter serves as the basis for locating other places and processes from which comparison can be drawn with urban development as well as the visual representation of Kalgoorlie, Boulder and the Goldfields. This chapter is divided into two sections within which these related subjects are brought together for consideration:

- gold, urbanisation and landscape
- photography, representation and seriality.

As well as providing a review of the critical concepts informing the historical and theoretical concepts, the examination of visual material in the second section of this chapter and the manner in which it is produced, organised and received will also assist in framing aspects of the methodological approach of the research.

Goldmining and Urbanisation

This section outlines the impact of the discovery and exploitation of gold as 'landmark events' and 'turning points' in the country's economic and social history in the context of the transformation of the built environment.¹ Secondly, it looks at the processes of urbanisation in Australia alongside analogous locations elsewhere in the world. Thirdly, it will consider writing on the places created by the rapid urbanisation brought on by mineral discovery, such as boom towns and industrial landscapes. This chapter works operatively to provide the framework from which the development and representation of Kalgoorlie, Boulder and the Goldfields can be seen to align with or depart from established ideas of boom towns, industrial fields and their representations in photographs and maps.

Gold

There are a number of competing narratives that surround the impact of the discovery of gold on society, and subsequently, on urban development in Australia.² These can be broadly divided into two categories, which can be termed: 'accidental and disruptive' or the 'rational and integrated'. The first, common in social histories, emphasises the disorderly nature of the discovery of gold.³ This narrative of Australian gold history illustrates this disruptive effect of gold by highlighting that 'existing cultural elites and religious groupings ... were worried that gold would skew organic patterns of social development in favour of lawlessness and reckless ambition and the "sonic boom" of gold's discovery was as profound as disasters of war and famine'.⁴ The English novelist Anthony Trollope,

¹ Geoffrey Blainey. 'The Momentous Gold Rushes.' *Australian Economic History Review*, 50 no. 2, July 2010), 209.

² Iain McCalman, Iain, Andrew Reeves and Alexander Cook eds., *Gold: Forgotten Histories and Lost Objects of Australia* (Cambridge, England: Cambridge University Press, 2001) through their edited collection of essays present a range of these viewpoints. Some of these competing narratives are drawn together in Keir Reeves, Lionel Frost and Charles Fahey, 'Integrating the Historiography of the Nineteenth-Century Gold Rushes' in 'A World In Search of Gold', special issue, *Australian Economic History Review* 50, no. 2 (2010) and the essays collected in that special issue.

³ Karl Marx wrote to Frederick Engels in 1852 that 'California (1848) and Australia (1851) are two cases which are not provided for in the Manifesto: creation of great new markets out of nothing'. Cited in McCalman, Cook and Reeves, *Gold: Forgotten Histories*, 5.

⁴ McCalman, Reeves and Cook, *Gold: Forgotten Histories*, 12, 13.

writing contemporaneously in 1873 of the Victorian gold rushes, wrote that 'gold upheaves everything, and its disruptions are those of an earthquake'.⁵

Geoffrey Blainey's suggests, in *The Rush That Never Ended*, that Australia is a 'boom nation' that 'has been so quickly transformed by metals; the normal growth and achievement of several decades were crammed into one'.⁶ Blainey and other, such as David Goodman and Graeme Davison, integrates these gold discoveries into the broader economic circumstances of Australia's development at the time.⁷ In both these narratives, the impact of the discovery of gold in the nineteenth century in Australia was primarily told through social, economic and environmental history with little emphasis on the built environment. There is a lack of comprehensive writing on the spatial consequences of the condensed development that gold generates and of which the boom town might be one example. While environmental histories are now being, these studies ignore the urban and other aspects of the constructed environment.⁸ With regard to the narratives around the impact of gold on urban development most writing, as McCarty points out, has mainly been undertaken by 'keen but near-sighted local historians' who emphasised the extremities of the built environment: the 'rough, raw places' of the

⁵ As quoted in McCalman, Reeves and Cook, *Gold: Forgotten Histories*, 4.

⁶ Geoffrey Blainey, *The Rush That Never Ended: A History of Australian Mining* (Melbourne: Melbourne University Press, 1963), 61.

⁷ Geoffrey Blainey, 'A Theory of Mineral Discovery: Australia in the Nineteenth Century', *The Economic History Review* 23, 2 (1970): 298. Reeves, Frost and Fahey acknowledge that Blainey is one of the first historians to locate Australia's gold rushes within larger international economic factors which he first began with *The Rush That Never Ended*. Reeves, Frost and Fahey, 'Integrating the Historiography', 113. David Goodman, *Gold Seeking: Victoria and California in the 1850s* (St Leonards, New South Wales: Allen and Unwin, 1994). David Goodman, 'Making an Edgier History of Gold' in Iain McCalman, Iain, Andrew Reeves and Alexander Cook eds., *Gold: Forgotten Histories and Lost Objects of Australia* (Cambridge, England: Cambridge University Press, 2001).

⁸ Kathryn Taylor Morse, *The Nature of Gold: An Environmental History of the Klondike Gold Rush* (Seattle, Washington: The University of Washington Press, 2003) is a good example of environmental history of the impact of goldmining. Australian author Douglas Wilkie suggests that there have been a number of 'admirable studies of the impact of mining upon the environment; the environmental requirements of mining ... in studies by Libby Robin, Stephen J Pyne, Donald Garden ... and others'. Wilkie cites Tom Griffiths and Libby Robin eds., *Ecology and Empire: Environmental History of Settler Societies* (Edinburgh: Keele University Press 1997); Libby Robin, *How a Continent Created a Nation* (Sydney: University of New South Wales Press 2007), 121; Don Garden, *Australia, New Zealand, and the Pacific: An Environmental History* (Santa Barbara: ABC-CLIO, 2005), 77. None of these studies are solely focused on the environmental impact of goldmining. Douglas Wilkie, 'Earth, Wind, Fire, Water—Gold', *History Australia* 10, no. 2 (2013): 95–113, DOI: 10.1080/14490854.2013.11668463.

mining camp or the cosmopolitan nature of 'gateways cities'.⁹ Recent writings on the historiography of nineteenth-century gold rushes in Australia continue to make little connection between the discovery of gold and the processes of urbanisation and growth in Australian cities and towns that followed.¹⁰ Reeves, Frost and Fahey link the discoveries of gold to the appearance of two very different scaled built environments that occupy very different locations: firstly, embryonic mining camps at the site of mineral extraction and secondly, 'gateway cities' such as Melbourne and San Francisco, which acted as a landfall for mineral-rich hinterlands.¹¹ Blainey notes the final form of a number of Australian regional nineteenth-century cities were subjected to gold rushes:

Bendigo, Ballarat, and Kalgoorlie—still display in their main streets a concentrated collection of 'Late-Victorian' architecture and statuary such as it would be difficult to find in any European city holding fewer than 100,000 people—unless it was once a royal city.¹²

Architectural historian Max Freeland described the transformation of Perth and the towns of the goldfields after the discoveries of the 1890s:

In 1892, Perth had been a primitive frontier town with all the rawness and lack of style of a pioneer settlement. By 1900, it had been dipped bodily into a bucket of pure Victoriana and taken out, dripping plaster and spiked with towers and cupolas in a bewildering variety of shapes ... Perth, Fremantle, Coolgardie and Kalgoorlie blossomed with towers, domes, thumping arcades and twenty feet wide iron lace verandahs.¹³

⁹ J. W. McCarty, 'Suggestions for an Economic History of North American Mining in the Nineteenth Century' in *Pacific Circle: Proceedings of the Second Biennial Conference of the Australian and New Zealand American Studies Association*, ed. N. Harper (St. Lucia: University of Queensland Press, 1968), 91–92. As quoted by Reeves, Frost and Fahey, 'Integrating the Historiography of the Nineteenth-Century Gold Rushes', *Australian Economic History Review* 50, no. 2 (July 2010): 113.

¹⁰ David Goodman, *Gold Seeking: Victoria and California in the 1850s* (St Leonards, New South Wales: Allen and Unwin, 1994), 10–14. Keir Reeves, Lionel Frost and Charles Fahey, 'Integrating the Historiography of the Nineteenth-Century Gold Rushes' in 'A World In Search of Gold', special issue, *Australian Economic History Review* 50, no. 2 (2010).

¹¹ Reeves, Frost and Fahey, 'Integrating the Historiography'. Graeme Davison's *The Rise and Fall of Marvelous Melbourne* is the exemplar of the urban biographies of a gateway city.

¹² Blainey, *Momentous*, 211.

¹³ John Maxwell Freeland, *Architecture in Australia: A History* (Ringwood, Victoria: Penguin Books, 1968), 198.

Rather than the emphasis on the 'camp', the 'gateway' or the final form of the mining town, this thesis seeks to understand the nature of the 'boom town' as a place that rapidly transforms passes through many urban forms and stages.

Urbanisation and Boom

This subsection will provide a brief historical context of nineteenth-century urbanisation. The second half of the century saw a period of unprecedented (and at times rapid) urbanisation. These transformations occurred at a number of different urban scales and examining these modes of urbanisation will help to establish the context in which to locate this study's investigation of boom urbanism. Driven by economic and social forces, varying degrees of industrialisation and colonial expansion, the 'renewal' of European cities like Paris Vienna and Barcelona typifies the large-scale urbanisation of the second half of the nineteenth century. The 'creative destruction' of Paris under Haussmann (1853–1870), the development of the Ringstrasse in Vienna (opened in 1865) and Cerda's plan for the extension of Barcelona (1859) are among the most notable and emblematic examples of the renovation and expansion of what were essentially medieval cities.

Secondly, the rapid transformation of these European metropolises was matched (and in some instances was predated and surpassed) by the urbanisation of cities in several colonial 'Neo-Europes' in North and South America as well as Australia. The expansion of cities such as San Francisco, Chicago, Melbourne and Buenos Aires drew on the productivity of their agricultural or mineral-rich hinterlands and their location along transport corridors.¹⁴ Those cities whose growth was a direct result of mineral exploitation such as goldmining, in the case of Melbourne or San Francisco, might be thought of as 'gateway', 'emporium' or 'capital' cities from

¹⁴ Alfred W. Crosby defines the countries of the Neo-Europes not by their scattered locations, but by their shared latitude, as at least two-thirds of each country are within the temperate climatic zone north and south of the Equator. North America, southern South American, Australia and New Zealand all share a similar climate which allowed the relative ease of transferable agricultural production. These locations provide the conditions in which the plants and animals on which Europeans depended could flourish. As a consequence, these places were the target of European migration, and between 1820 and 1930, almost 50 million European migrated to the Neo-European lands. The 'pull' factors that attracted migrants from England, Spain and Germany were, per Crosby, 'biogeographical'. Alfred W Crosby, *Ecological Imperialism: The Biological Expansion of Europe, 900–1900* (Cambridge University Press, 2004), 1–7.

which resources, people or technologies departed on their way to the fields.¹⁵ A third, under-examined scale of urbanisation occurred at the towns and cities located at the sites of mineral-rich fields (often located in the abovementioned Neo-Europes). The location of these towns and the specificity of their relationship to mining meant that like mining, they were susceptible to the 'boom and bust' transience inherent in resource exploitation. The regional location and scale of boom towns like Kalgoorlie and Boulder in the goldfields of Western Australia, Ballarat and Bendigo in Victoria or Sutter's Mill and Comstock in the American West are typical of this tertiary scale of nineteenth-century urbanisation.

A significant body of academic literature exists on the economic, social and environmental (and even the artistic implications) of this period of urbanisation in the mid- to late-nineteenth century. The contextualising of the growth of these cities began even before the conclusion of the century with Adna Ferrin Weber's landmark study on the urbanisation of the nineteenth century published in 1899, which demonstrated the contemporary awareness of the changes that had occurred in the century's urban conditions.¹⁶ While scholarship on European cities has focused on the shift from previous urban forms, largely unchanged from the Middle Ages such as those found in Paris and Barcelona, the focus on 'middle order' Neo-European cities considered the transformation and adaptation of urban models as they are found in new locations. While the 'boom towns' have been recognised as a distinctly urban phenomenon in both Australia and internationally, the histories of mineral-dependant boom towns such as Kalgoorlie remain largely social and economic rather than urban histories.¹⁷ This is despite the ongoing

¹⁵ Graeme Davison argues that Melbourne should be considered an emporium/commercial city that serves as a 'natural gateway' to the goldfields. Davison, 'Gold Rush Melbourne', 53. A. F. Burghardt provides some useful definitions and characteristics of a gateway city: 'an entrance into (and necessarily an exit out of) some area', 'located eccentrically towards one end of a landmass', 'characterised by long distance trade connections' and 'located on a site of considerable transportational significance', with employment 'heavily committed to transportation and wholesaling'. A. F. Burghardt, 'A Hypothesis about Gateway Cities', *Annals of the Association of American Geographers* 61, no. 2 (June 1971): 269–70.

¹⁶ Adna Ferrin Weber, *The Growth of Cities in the Nineteenth Century: A Study in Statistics* (Ithaca, NY: Cornell University Press, 1963) (Original work published 1899).

¹⁷ There are a number of urban biographies of Kalgoorlie: Martyn Webb and Audrey Webb, *Golden Destiny: The Centenary History of Kalgoorlie–Boulder and the Eastern Goldfields of Western Australia* (Kalgoorlie–Boulder: City of Kalgoorlie–Boulder, 1993); Gavin Casey, *The Mile that Midas touched*. (Adelaide: Rigby, 1964); Helen Helga Wilson, *The Golden Miles* (Adelaide: Rigby, 1977); Malcolm

discussion of boom towns and the fact that the 'boom and bust' cycle of the Australia mining industry has been the focus of attention with the end of the most recent mineral and energy boom (namely iron and gas, 2005–2015). The Western Australian economy, due to its dependence on resource extraction, is disproportionately affected by these changes in economic fortune.¹⁸ However, these fluctuations can be considered part of a historical pattern of Australian economic development since the earliest gold rushes in Victoria in the 1840s. This has led to the description of Australia as a 'boom' nation, dependent on successive waves of iron, gas, gold and coal exploitation for its prosperity.¹⁹ The interest in locating mineral discovery's place and impact on Australian society has been led by figures such as Geoffrey Blainey and his succession of mining-focused books, which began with *The Rush That Never Ended* (1963). This remains a present-day concern and can still be found in contemporary history with books by academics like Erik Eklund as well as journalists and writers such as Paul Cleary, Malcolm Knox and David Hill.²⁰ This contemporary writing on Australian mining history can be located as part of a spectrum of the investigation into the nature of colonial settler societies, their status as 'Neo-European' settlements, the importance of their geographic locations and their contribution to the idea of nineteenth-century 'booms'. The work of scholars such as New Zealand historian James Belich, whose research locates and compares the booms of nineteenth-century Australasia, the Americas, and Southern Africa is a further example. What might be considered a subset of this research is the work that looks specifically at the 'Wests' of these Neo-European regions. These endeavours have emerged from the United States at centres like the Bill Lane Centre for the American West and the Spatial History Lab

Uren, *Glint of Gold: A Story of the Goldfields of Western Australia and the Men Who Found Them* (Melbourne: Robertson & Mullens, 1948).

¹⁸ The Western Australian Government Economic Profile from May 2019 showed that mining accounted for 30% of Gross State Product. The next two largest contributors were business and property services (9%) and construction (8%). WA Economic Profile May 2019. <https://www.jtsi.wa.gov.au/about-the-state/quality-of-life/economy>. Accessed 6 June 2019.

¹⁹ Blainey, *The Rush That Never Ended*.

²⁰ Malcolm Knox, *Boom: The Underground History of Australia, from Gold Rush to GFC* (Melbourne: Viking, 2013); Erik Carl Eklund, *Mining Towns: Making a Living, Making a Life* (Sydney: UNSW Press, 2012); Paul Cleary, *Mine-field: The Dark Side of Australia's Resources Rush* (Collingwood, Vic.: Black Inc., 2012); David Hill, *The Gold Rush* (North Sydney, New South Wales: William Heinemann Australia, 2011).

at Stanford University where their focus has been on the economic and spatial outcomes of enterprises such as railroad development.²¹

To understand the processes of boom urbanism, the thesis looked to broader patterns of nineteenth-century colonial settlement in Australia and elsewhere. The boom town and boom urbanisation should be considered against the long-held view of Australia's settlement and development as driven by 'urban' forces, as well as located in the broader context of other colonial settler locations such as those in North America.²² With regard to the process of urbanisation in Australia, Sean Glynn notes that the white settlement of the continent has occurred via cities and towns and, from these beginnings, a relatively large proportion of Australians had lived in urban areas.²³ According to Glynn, by the 1890s, two-thirds of all Australians lived in areas that could be classified as urban and Australian urbanisation was the reverse of the European model of agricultural people drawn into cities as the result of industrialisation.²⁴ In Australia, towns and cities developed in advance of both industrialisation, and rural settlement and played a vital role in channelling population movements and promoting these agricultural and industrial activities.²⁵ Helen Proudfoot suggests that settlement in Australia is by city-making (and its consolidation) rather than exploration.²⁶ She notes that this occurs from the initial European occupation where it was more than 30 years after the settlement of Botany Bay before any inland exploration took place.²⁷ Hamer proposed that the 'founding of a city' was how 'European settlement was initiated in most of the colonies of Australia'.²⁸ By the end of the nineteenth

²¹ Richard White's 'Shaping the West' project at the Stanford University Spatial History Project is an example of this. Richard White, *Railroaded: The Transcontinentals and the Making of Modern America* (New York: W.W. Norton & Co., 2011).

²² 'Urban history flourishes in Australia, where as early as 1970, an entire issue of the *Australian Economic History Review* was devoted to the subject'. W. Turrentine Jackson, 'A Brief Message for the Young and/or Ambitious: Comparable Frontiers as a Field for Investigation', *Western Historical Quarterly* 9 (1978): 17.

²³ Sean Glynn, *Urbanisation in Australian History, 1788–1900* (West Melbourne, Vic.: Thomas Nelson, 1975), 3.

²⁴ *Ibid.*, 3.

²⁵ *Ibid.*, 4.

²⁶ Helen Proudfoot, *Founding Cities in Nineteenth Century Australia*, in *The Australian Metropolis: A Planning History*, eds. Stephen Hamnett and Robert Freestone (Crows Nest: Allen and Unwin, 2000), 12.

²⁷ *Ibid.*, 13.

²⁸ David Hamer, *New Towns in the New World: Images and Perceptions of the Nineteenth-Century Urban Frontier* (New York: Columbia University Press, 1990), 141.

century, two-thirds of Australians lived in areas classified as urban, although this was considered at the time as 'an abnormal and unproductive concentration'.²⁹ There are a number of comparative economic histories, by Hamer, Frost, Goodman, Turner and Jackson that investigate or call attention to the comparative urban development of the east coast of Australia and the west coast of North America.³⁰ While these comparative studies do not extend their purview to the western third of Australia (nor are the conditions of Western Australian settlement directly analogous), these ideas have been useful as guides to thinking about urban history, as they provide insight into the processes of urbanisation.

Such analogous landscapes and urban locations in Eastern Australia and North America can help us understand the nature of the 'boom town' and its surrounding industrial field as it occurred in Kalgoorlie, Boulder and the Eastern Coolgardie Goldfields. Broader histories of the colonial boom town and investigations of American frontier development, which included mineral-dependant towns, have been instructive in developing approaches to these urban forms and landscapes. For instance, Günter Barth, in the broad historical introduction to his book *Instant Cities: Urbanization and the Rise of San Francisco and Denver*, points to two millennia of European boom towns and, more particularly, mineral-dependant towns from at least the twelfth century in central Europe. Barth identifies three categories of instant cities: the imperial, the emporium and the mining camp. The camp was the first stage of the instant city as a mining town and 'the constant flux of people, an essential ingredient in the creation of instant cities'.³¹ According to

²⁹ Glynn, *Urbanisation*, 3.

³⁰ Lionel Frost, *The New Urban Frontier: Urbanisation and City-building in Australasia and the American West before 1910* (Sydney: New South Wales University Press, 1991); David Goodman, *Gold Seeking: Victoria and California in the 1850s* (St Leonards, New South Wales: Allen and Unwin, 1994). 'If with our own methods of the occupation of the frontier we should compare those of other countries that have dealt with similar problems-such as Russia, Germany, and the English colonies in Canada, Australia, and Africa -we should undoubtedly find most fruitful results'. Frederick Jackson Turner, *The Significance of the Frontier in American History* (Ithaca, New York: Cornell University Press, 1956. Original essay 1893), 52. W. Turrentine Jackson posed the question some 70 years after Turner when he asked, 'Has Perth in Western Australia enjoyed a comparable relationship with the hinterland to the east as that of Seattle and Portland and also provided a similar gateway to Asian markets?' W. Turrentine Jackson, 'A Brief Message for the Young and/or Ambitious: Comparative Frontiers as a Field for Investigation', *The Western Historical Quarterly* 9, no. 1 (1978): 18.

³¹ Gunther Barth, *Instant Cities, Urbanization and the Rise of San Francisco and Denver* (New York: Oxford University Press, 1974), 20.

Barth's definition, these categories are not mutually exclusive and 'San Francisco and Denver combined the characteristics of [instant city as] mining town and [instant city as] emporium because new advances in technology and organization has linked them to major arteries of commerce'.³² The advantage, Barth suggests, is that the city's importance could be 'sustained not only by mining but also by commerce'.³³

While 'slower' growing agricultural colonies responded only indirectly to political, ecclesiastical and commercial activities, Barth notes that the boom town, through its institutions (and the ambitions of its inhabitants) was able to respond more 'quickly to the riches and large new influxes of people (to) quickly achieve ... full-blown forms of urban life'.³⁴ Similarly, Davison suggests that 'slower growing commercial centres develop in an organic relationship with their agricultural or pastoral hinterlands'.³⁵ Barth tracks San Francisco's 'inevitable transformation' from a city characterised by 'unplanned development and individualist temperament ... into an ordinary city regulated by custom and tradition'.³⁶ His categories are broad—he does not define 'quickness' or differentiate between new settlements and rapidly expanding existing cities.³⁷ Rodman Paul in *Mining Frontiers of the Far West 1848–1880* echoes this model of an accelerated but ultimately recognisable urban form when discussing the American frontier boom. Paul quotes an 1895 Colorado geologist who lists the characteristic of a mining camp in its early days as:

A boom [then] the 'off scourings' of the country with the saloon, dance hall and gambling hell next ... a murder to two ... lynch law ... then real estate men and lots are sold at fabulous prices ... a collapse follows [and]

³² Ibid., 30.

³³ Ibid., 30.

³⁴ Ibid., 20–21.

³⁵ Davison, Graeme, 'Goldrush Melbourne', in *Gold: Forgotten Histories and Lost Objects of Australia*, eds. Iain McCalman Andrew Reeves and Alexander Cook (Cambridge, England: Cambridge University Press, 2001), 53.

³⁶ Barth quoted in Goodman, *Gold Seeking*, 14.

³⁷ Corinne Lathrop Gilb, Review of Gunther Barth, *Instant Cities, Urbanization and the Rise of San Francisco and Denver* (New York: Oxford University Press, 1974 in *Reviews in American History*, Dec 1975), 429. Gilb, in a review of Barth's book, notes his shortcomings in giving a timeframe or scale to the size of an instant city. Gilb argues, 'but if a town has to grow large as well as fast to be an instant city, how large, how fast? Barth makes no fine distinctions on this point with no carefully differentiated comparisons'.

in time the town and camp assume their lawful proportions and business settles down to its lawful regime.³⁸

Countering this version of accelerated but ultimately recognisable urbanity are historians such as Davison, again in his discussion of mid-nineteenth century Melbourne, who suggested that the rapidity of urban development in the boom town often results in a very different kind of city. Davison noted that:

Cities borne under such extreme pressures often reacted in unusual ways, creating or improvising novel solutions to their problems. Sometimes they reverted to traditional ways once the emergency had passed: but sometimes, through inertia or expediency, these makeshift solutions became permanent features of their institutional life.³⁹

While Davison's reading of Melbourne is focused on its social history, from his reading there emerges an alternative measure of characteristics of the instant city that might be applied to its spatial form: the existence of 'improvising, novel solutions', where the makeshift becomes the permanent, and the private life is lived in the public realm because public infrastructure was unable to provide these basic services.⁴⁰ Davison provides helpful ideas about qualities that might characterise the contingent and instant city, such as 'the novel', 'the impermanent', the 'makeshift that becomes permanent', and the 'improvised'.⁴¹ While Davison does not explicitly examine the spatial and built outcomes of these characteristics, there exists the potential to apply these notions to other urban places and their constructed environments.

One of the few specific accounts of a boom town with an emphasis on the spatial implications of its rapid development is architectural academic Laura Harper's recent research on what she calls the 'gold rush urbanism' of Stawell/Stawell West

³⁸ Paul W. Rodman, *Mining Frontiers of the Far West, 1848-1880* (New York: Rinehart and Winston, 1963), 10.

³⁹ Graeme, 'Goldrush Melbourne', 53-57.

⁴⁰ Davison regards gold rush Melbourne as a 'public city' where people 'cooked, ate, drank, played, bathed and often slept away from home. Life was lived very largely under the eyes of others.' Ibid., 53.

⁴¹ Ibid., 53.

during the Victorian gold rush (1851).⁴² This research adds further understanding to the literature on the rapid development of settlements, and is one of the few examples of studies on the development of boom towns at the site of mineral discovery in an Australian context. While the scale, location, topography, environmental conditions and processes of gold extraction of Stawell/Stawell West are significantly different from the towns and landscapes at the centre of this study,⁴³ there are notions to be drawn from Harper's research that could be applied to other locations. For example, noting the colonial survey grid as an 'abstract construct—visible only on paper',⁴⁴ Harper highlights a number of 'alternative logics' that escaped ... 'the control and order imposed' by the survey, and she focuses on 'activity that developed unplanned'.⁴⁵ Her study is attentive to the 'characteristics and interdependencies between planned and unplanned' aspects of Stawell/Stawell West's development.⁴⁶ She extends her research from Stawell/Stawell West to several other surrounding towns to develop a series of 'characteristics', 'variations on a theme' and 'repeating logics' of the processes of urbanisation of the Victorian gold rush. Harper characterises these a 'two type urban structure [camp v. grid], the curving spine, converging streets, varied allotment patterns, and the correlation of public spaces to sites of ex-mining' as being key elements of 'Gold Rush urbanism'.⁴⁷ Together with Davison's notions about the 'improvised' nature of boom town Melbourne, Harper's characteristics of 'gold rush urbanism' provide another set of criteria to against which to selectively consider when examining the boom towns of Western Australia.

In addition to considering the growth of individuals towns, the consideration of the broader development of surrounding districts and towns is also important.

Davison suggests that gold rush Melbourne was an 'isolated but dependant' city

⁴² Laura Harper, 'Gold Rush Urbanism: Continuing Effects of Gold Mining on the Urban Form of Victoria', in *Proceedings of the Society of Architectural Historians, Australia and New Zealand*, eds. A. Brennan and P. Goad (Melbourne: Society of Architectural Historians, Australia and New Zealand (SAHANZ) 33, 2016), 236–48.

⁴³ Blainey notes, 'West (Australia's) disadvantages of aridity and isolation' in comparison to the Victorian goldfield's climate and proximity to Melbourne. Geoffrey Blainey, 'The Momentous Gold Rushes', *Australian Economic History Review* 50, no. 2 (2010): 212.

⁴⁴ Harper, 'Gold Rush Urbanism', 239.

⁴⁵ *Ibid.*, 246.

⁴⁶ *Ibid.*, 238.

⁴⁷ *Ibid.*, 247.

and its connections to other places were technological (rail, steamboat, sail and mail system) rather than spatial (proximity).⁴⁸ Davison's notion of the 'isolated and dependant' has echoes in Paul's reconsideration of the isolated gold or silver mining town in an American context, removed from the conventional Turnerian model of a continuous frontier.⁴⁹ Paul suggest that mining towns created a series of 'detached frontiers': isolated towns that over time become connected through transport and communication infrastructure into a more recognisable continuous frontier.⁵⁰ Paul notes, in the context of the American West, that following in the wake of miners were those who supplied their wants, such as 'merchants, packers, teamsters, stagecoach lines, and express companies [who] quickly brought their services to each new camp—arriving coincidentally with the speculators and promoters, but well after the saloon keepers and gamblers'.⁵¹ A variation to Paul's notion of the 'detached frontier' is articulated by Goodman, who suggests that many of these new towns could be considered part of the extended 'periphery' of major urban centres rather than 'frontiers'.⁵² Goodman points out that new urban settlements had characteristics that were 'recognisably a part of a metropolitan culture'.⁵³ Howard Lamar notes that 'the American West was part of a world frontier in which similar techniques were used everywhere, for trade is both a rational and rationalizing process'.⁵⁴ These authors describe the urban conditions of 'first order [colonial] cities' exemplified by Melbourne and San Francisco which acted effectively as 'gateway cities' and served as emporiums, staging posts and ports to mineral-rich hinterlands.⁵⁵

⁴⁸ Davison, 'Goldrush Melbourne', 60.

⁴⁹ Frederick Turner's thesis of the development of the American western frontier was that it was marked by successive waves of exploration, trapping and trading, and farming and settlement of villages which finally grew into towns and cities. This view has been challenged by historians such as John Reys, Rodman Paul and Jerome O. Steffen who point to a variety of factors such as 'mining, urban speculation, railroad building and the pioneer's desire to escape religious intolerance' as reason for the westward movement of the American frontier. James P. Delgado, *Gold Rush Port: The Maritime Archaeology of San Francisco's Waterfront* (Berkeley, California: University of California Press, 2009), 5.

⁵⁰ Paul quoted in Delgado, *Gold Rush Port*, 5.

⁵¹ Paul, *Mining Frontiers*, 2.

⁵² Goodman, *Gold Seeking*, xxiii.

⁵³ *Ibid*, xxiii.

⁵⁴ Howard R. Lamar, 'Persistent Frontier: The West in the Twentieth Century', *Western Historical Quarterly* 4, no. 1 (1973): 15.

⁵⁵ Reeves, Frost and Fahey, 'Historiography of Gold', 412.

There are limits to how we can apply the readings of Barth, Davison, Goodman, Harper and others to the conditions of the new towns of the Western Australian goldfields. Drawing from the literature review presented in this chapter, this thesis instead considers the drivers of the development and urbanisation in the Eastern Coolgardie Goldfields and applies the category of ‘instant city’ in which Kalgoorlie and Boulder might be classified and gauges the influence of surrounding towns. The unique conditions of Kalgoorlie—its distance from Perth and the ports of Fremantle, Albany and Esperance but its proximity to more localised (although smaller scale) gold discoveries that occurred earlier in Coolgardie (1892) and the Yilgarn Goldfield (1888)—complicate an understanding of the urbanisation and industrialisation of the Eastern Coolgardie Goldfields.

Grid

If urbanisation is the mode of settlement of Western Australia in the nineteenth century, then the grid is the predominate planning form used in that process. Drawing on and extending Margaret Pitt Morrison’s analysis in her contributions to *Western Towns and Buildings*, even a cursory survey of settlements illustrates the application of various permutations of the grid from York (1835), Bunbury (1841), Wonnerup (1851), Dongara (1873), Broome (1883), Southern Cross (1890) through to Coolgardie in 1893⁵⁶ (Figure 2.0). These grids address a range of different settlement scales and conditions from small coastal settlements to agricultural and mining towns in the interior and illustrate the adaptability of the form to its circumstances. As illustrated by the plans of Kalgoorlie and Boulder’s neighbouring town of Coolgardie and (slightly more distantly) Southern Cross, urbanisation in the goldfields occurs through the device of the grid.

This subsection will locate the applications and manipulations of the grid form in the broader historical framework to see how its use in the Western Australian goldfields might conform or diverge from these models. More broadly, the role of the grid, as noted by the geographer Rueben Rose-Redwood, has been the subject

⁵⁶ Western Australian architectural historian Margaret Pitt Morrison calls this a ‘regular grid pattern’.. Margaret Pitt Morison, ‘Country Towns’ in *Western Towns and Building*, eds Margaret Pitt Morison and John White, (Nedlands: University of Western Australia Press for the Education Committee, 1979) 233-246.

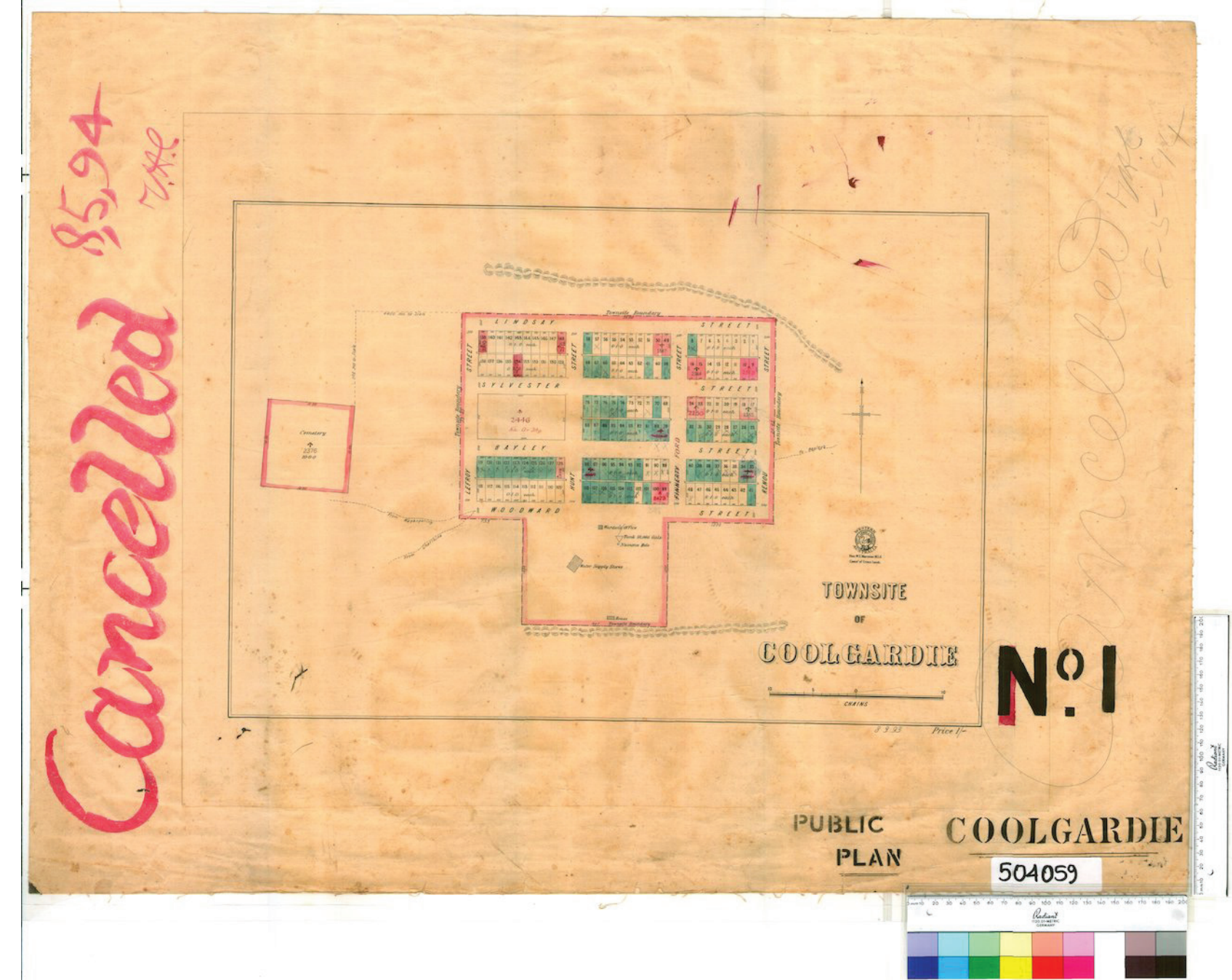


Figure 2.0 :Western Australian settlements that illustrates the application of various permutations of the grid from Dongara (1873), Broome (1883), through to Coolgardie in 1893

'Townsite of Broome', Department of Lands and Surveys, 1883 (Reference code: AU WA S2168- cons3868 049) The State Records Office of Western Australia, Perth

'Dongara', Department of Lands and Surveys, 1873 (Reference code: AU WA S2168- cons3868 098) The State Records Office of Western Australia, Perth

'Townsite of Coolgardie', Department of Lands and Surveys, 1893 (Reference code: AU WA S2168- cons5698 0149) The State Records Office of Western Australia, Perth

of investigation for scholars from an array of academic disciplines from contemporary art, graphic design and architecture to archaeology, urban history and geography.⁵⁷ For the purposes of this study, the research draws on a range of architectural historians, theorists, urban historians and geographers from Spiro Kostof, Dan Stanislawski, Paul Groth, Françoise Choay, John Reps and Joan Busquets who have recognised that the grid (and the variations of its nomenclatures such as grid pattern, street grid, gridiron, checkerboard and colonial checkerboard) is, as Kostof describes it, the 'commonest pattern for planned cities in history'.⁵⁸ Peter Marcuse offers a succinct definition of the gridiron city as 'street pattern consisting of parallel streets intersecting each other at right angles with regular spacing between streets'.⁵⁹ Kostof offers a similar definition but notes that even these strict qualities are variable as the form accommodates 'irregularities'.⁶⁰

Among others, Kostof, Marcuse, Stanislawski, Joseph Rykwert, Richard Sennett and Jill Grant have documented the grid's 5,000-year-old history and, citing similar precedents, tracked its use from 3000 BCE Mohenjo-Daro in the Indus Valley, Kahun in Egypt, ancient Babylon, its use by Hippodamus of Miletus as model for Greek colonial settlements, the typical Roman town, seventh century Ch'ang-an, ninth century Kyoto, French thirteenth century medieval bastides through to its application in four centuries of Spanish colonial urbanisation across Central and South America, French colonialism in the North America and mercantile ports of the Dutch Empire and the British colonial settlement.⁶¹ Busquets et al.'s historical

⁵⁷ Reps (1965); Castagnoli (1971); Johnson (1976); Hurlburt (1978); Krauss (1985); Williamson (1986); Carter (1988); Swann (1989); Rama (1996); Conzen (2001); Lucas (2001); Chadha (2002); Cameron (2003); Baird (2005).

⁵⁸ Spiro Kostof and Richard Tobias, *The City Shaped: Urban Patterns and Meanings through History* (London: Thames and Hudson, 1991); Spiro Kostof, *The City Assembled: The Elements of Urban Form through History* (1st North American ed., Boston: Little, Brown, ca. 1992); Dan Stanislawski, 'The Origin and Spread of the Grid-Pattern Town', *Geographical Review* 36, no. 1 (January 1946): 105–20; Paul Groth, 'Street Grid as Framework for Urban Variety', *The Harvard Architecture Review* 2 (Spring 1981), 68–88; Françoise Choay and Denise Bratton, *The Rule and the Model: On the Theory of Architecture and Urbanism* (Cambridge, MA: MIT Press, ca. 1997); John William Reps, *Town Planning in Frontier America* (Columbia, MO: University of Missouri Press, 1980); Joan Busquets, Dingliang Yang and Michael Keller, *Urban Grids: Handbook for Regular City Design* (Novato, California: ORO Editions, 2019), 178–93.

⁵⁹ Peter Marcuse, 'The Grid as City Plan: New York City and Laissez-faire Planning in the Nineteenth Century', *Planning Perspectives* 2, no. 3 (1987): 290.

⁶⁰ Kostof, *The City Shaped*, 96.

⁶¹ Dan Stanislawski, 'The Origin and Spread of the Grid-Pattern Town'.

survey focuses only on British colonial settlements in North America and the Caribbean from New Haven (1638) to Brunswick (1771), which they characterise as ‘controlling access to hinterland as well as settlement and agricultural production’.⁶² In their graphic analysis and history survey, Busquets et al. cite (and redraw in detail) a number of the grid forms in British settlements such as Kingston (1692), New Bern (1710), Fredericksburg (1721), Richmond (1737) and Georgetown (1729). The layout of settlements like Pennsylvania, while serving as ‘experiments for Enlightenment ideas in city planning’, (more importantly for this study) also served as a foundation for ‘later, more speculative development’ that ‘utilised the grid for its efficiency and equal land subdivision’.⁶³ A number of these historical survey of grids by Kostof, Stanislawski, Marcuse and Busquets et al. utilise a formal classification system to differentiate the application and uses of the grid form. While each of these authors offers variations of these classifications, with more or less fine-grained cataloguing,⁶⁴ these categories can be summed up by three overarching categories:

1. grid as idealised and symbolic form
2. grid as extending and linking existing urban form
3. grid as controlling territory.

Kostof notes several factors that might result in the ‘impure, composite or other sorts of hybrid uses’ of the grid that relate to various combinations of these categories of the grid.⁶⁵ Further, Marcuse offers a useful broad distinction of the grid being ‘open’ or ‘closed’, where the open grid is laid out with a ‘view towards expansion and reduplication, in one or more directions, theoretically without limit’.⁶⁶ Marcuse notes that the ‘closed’ grid, ‘bounded and limited in extent’ is

⁶² Busquet, Yang and Keller, *Urban Grids*.

⁶³ Ibid., 197.

⁶⁴ Joan Busquets, Dingliang Yang and Michael Keller’s recent handbook offers eight categories of how the grid might aspire to organised space: as a means of controlling territory, as an idealised urban form, as a means of framing territory, composing a city by fragments, extending the city, as a transformational device for an existing city, as a decentralised model and as a symbolic capital. In addition to their historical survey, the handbook also collates and analyse 101 contemporary grid cities, from Abu Dhabi to Zhengzhou, as a ‘manifestation of the urban grid form across the world’. In this ‘atlas’ of grid cities, the cities are classified and analysed through the lens of their ‘grid city type’: the accumulative city, the discontinuous city, the cellular city, the overlay city, the infinite city and the scalar city. Busquets, Yang and Keller, *Urban Grids*, 37–139, 178–93.

⁶⁵ Kostof, *The City Shaped*, 96.

⁶⁶ Marcuse, *The Grid as City Plan*, 291.

largely a 'precapitalist' form, whereas the open grid corresponds to 'laissez-faire' and 'mature' capitalism'.⁶⁷ In summarising the different approaches to the application of the grid, Busquets et al. note the 'utility of the grid to address difference' within a set of 'spatial protocols' and the 'repetitive logic to town planning and territorial expansion'.⁶⁸

In addition to the language of 'repetition' used to describe the 'infinite' grid cities, the grid's flexibility and adaptability are also noted. As Kostof suggests, the 'enormous' success of the grid is due to it being an 'exceedingly flexible and diverse system of planning'.⁶⁹ Citing a range of examples, Busquets's notes that in Almaty's grid 'variation is accommodated', in Kyoto the grid was 'modified and extend[ed] to introduce ... tramways and other infrastructure' while Messina's grid 'responds to shifts in topography .. shoreline and the spatial field wraps the harbour'.⁷⁰ Portland's grid is 'resilient' with 'open spaces formed through the subtraction of blocks' while Salt Lake City's layout was 'originally conceived to allow for the coexistence of agriculture with the city settlement'.⁷¹ Drawing on the same historical examples to frame an Australian context, Robert Freestone locates the 'girdiron town' (in what he calls a 'historical matrix of design ideas') in an ideology of 'authoritarianism' and 'uniformity', which had its antecedents, like the authors cited previously, in the American survey system and ultimately Roman military camps.⁷² Freestone cites Davison, Lewis Mumford and others to argue that the appeal of the grid rested on its characteristics of 'order, regularity, orientation in space and to the elements, simplicity and ease of navigation, speed of layout and adaptability of circumstance'.⁷³

Returning to Busquest's characterisation of the evolution of the grid, from Enlightenment ideas in city planning to 'later, more speculative development' that 'utilised the grid for its efficiency and equal land subdivision',⁷⁴ this coincides with

⁶⁷ Ibid., 293.

⁶⁸ Busquet, Yang and Keller, *Urban Grids*, 218.

⁶⁹ Kostof, *The City Shaped*, 96.

⁷⁰ Busquet, Yang and Keller, *Urban Grids*, 42, 83, 95.

⁷¹ Ibid., 111, 117, 197.

⁷² Stephen Hamnett and Robert Freestone eds., *The Australian Metropolis: A Planning History* (Crows Nest: Allen and Unwin, 2000), 48.

⁷³ Freestone, *Urban Nation*, 48.

⁷⁴ Busquet, Yang and Keller, *Urban Grids*, 197.

Choay's (and others including, as noted before, Marcuse's) description of the grid as an 'instrument of industrial capitalism' where there is no meaning attached to the form but it is simply an 'effective tool'.⁷⁵ This 'speculative' iteration of the colonial grid corresponds to what Sandra Phillips, Reps and others note is the grid's role in promoting the real estate speculation that often accompanied mining-driven urban development.⁷⁶ In the American historical context of mining and urbanisation, the use of the grid plan for new frontier towns has been regarded as expedient for its ease of layout and as a form that perfected, and encouraged, real estate speculation at the site of mineral extraction.⁷⁷ Phillips suggests that the grid city structure 'made property easy to sell, [and] became characteristic of the western city' and allowed citizens a 'convenient way to acquire property rapidly'.⁷⁸ Reps is more pointed in his characterisation of the grid form, as he considered it the:

Natural tool of the land speculator. No other plan was so easy to survey, and no other system of planning yielded so many uniform lots, easy to describe in deeds or to sell from the auctioneer's block.⁷⁹

Reps even deploys the metaphoric language of the gold rush to describe the selling of land when he suggests that 'everywhere there was gold in the land if it could be bought, subdivided, and sold, even in the hills, if promoted by a skilful operator'.⁸⁰ Reps, in recognising the potential of the grid to be exploited, suggests that there was not a more 'natural development' than the use of the grid for the 'laying out the cities of the California gold rush, itself a mad speculative scramble that for a time even eclipsed the mania for speculation in town lots'.⁸¹

⁷⁵ Chaoy, *The Rule and the Model*, 14.

⁷⁶ Sandra S. Phillips, 'To Subdue the Continent: Photographs of the Developing West' in *Crossing the Frontier: Photographs of the Developing West, 1849 to the Present*, eds. Sandra S Phillips et al. (San Francisco Museum of Modern Art: Chronicle Books, 1996); John William Reps, *The Making of Urban America. A History of Planning in the United States* (New Jersey: Princeton University Press, 1965, 1992).

⁷⁷ Reps, *The Making of Urban America*.

⁷⁸ Phillips, 'To Subdue the Continent', 34–35.

⁷⁹ Reps, *The Making of Urban America*, 302.

⁸⁰ Ibid., 302.

⁸¹ Ibid., 304.

While Choay and others disavow any symbolic meaning for the speculative grid, Hannah Lewi, noting the discussion of Rem Koolhaas, Krauss and Paul Carter, suggests that the perceived neutrality and lack of specificity of any grid schema is also an assumption that needs to be questioned.⁸² Lewi proposes, with regard to the grid's use in Melbourne, that the application of the geometry is nearly always a historically significant and an individualised economic, political and spatial technique. Lewi cites the example of Hoddle's original layout for Melbourne, where the very uniformity of straight lines, crossroads and blocks established a strategy for quickly marking difference and invention, and subsequently for the regulation and measurement of the progress of such place-making.⁸³ Kostof notes the overstating of the neutrality of the grid, noting that 'egalitarianism is no more natural to gridded patterns than to any other form' and questions that urban grids represent an 'equal system of land distribution'.⁸⁴ Freek Schmidt, in reviewing a study of earlier premodern European grid plan cities, also notes the overused 'positivist assumption that chaos and disorder can be mastered through the use of geometry and the practice of measuring'.⁸⁵

The historical survey, and the examples cited by Reps, Busquets, Kostof and others, highlight the issues surrounding the application of the grid and its variations. From this survey, the manner in which the grid is applied in Western Australia can be recognised: the orientation and proportion of blocks and grids, the relationship between primary street and secondary lane and in the manner in which the grid encountered and accommodated topography and other natural features. These qualities of the grid and its implementation—efficiency, predictability, uniform but ability to adjust for irregularities, flexibility—offers the opportunity to consider how that pattern of developments occurred in Kalgoorlie–Boulder as it interacted with the development of the Goldfields. The form of the grid helps to facilitate boom growth as well as register the change and deformations to the grid. The

⁸² Hannah Lewi, 'Foreword', in *Curtain Call: Melbourne's Mid-Century Curtain Walls*, ed. Marika Neustupny (Melbourne: RMIT University Press 2006), 2.

⁸³ *Ibid.*, 2.

⁸⁴ Kostof, *The City Shaped*, 100.

⁸⁵ Freek Schmidt, 'Of Grids, Ideals and Myths: A Review of "Early Modern Urbanism and the Grid: Town Planning in the Low Countries in International Context, Exchanges in Theory and Practice 1550–1800"', *Architectural Histories* 1, no. 1 (2013): 15.

variation of the grid, the manner and scale of its growth and deformation as well as the grid's interaction with the landscapes of mining and industrial development have the potential to make legible the otherwise indecipherable aspects of the boom town's development.

Landscape

This subsection is concerned with the industrialised landscape that emerged alongside the mineral-dependant boom town. If the research is to understand the interaction between the urban grid and industrial development, then the nature of that industrial landscape needs to be understood. The new industrial topography created in the Eastern Coolgardie Goldfields could best be described by what the landscape theorist John Brinckerhoff Jackson called a 'vernacular' or 'synthetic landscape' whose form is produced by 'spatial reorganization'.⁸⁶ Jackson refers to topographical, industrial and agricultural interventions that produced new landscapes, emphasising terrains such as the cultivated lands of the Po Valley or the polders of Holland, in suggesting a new way of defining what might be considered a 'landscape'. Originally, the term 'landscape' was understood to be 'a portion of land that can be comprehended at a glance'.⁸⁷ Instead, Jackson proposes a new definition of landscape as 'a composition of man-made or man-modified spaces to serve as infrastructure or background for our collective existence'.⁸⁸ Building on this idea, Kathryn Morse, in her ecological critique of the history of goldmining in North America, describes it as a 'process of disassembly'.⁸⁹ This synthetic landscape of mining is determined by the sophistication of technology applied to it, the gauge of the machine, the properties of a desired material and the geology of the ore that within. An inevitable corollary to this 'process of disassembly' is what I would like to think of as a 'process of re-assembly', which reorganises the mined materials, and the ground that they come from, into another very deliberate structure. This new 'synthetic landscape' of mining is determined by the nature of materials and the gauge of the machines that extract it: the ore

⁸⁶ John Brinckerhoff Jackson, *Discovering the Vernacular Landscape* (New Haven, Connecticut: Yale University Press, 1984), 8.

⁸⁷ *Ibid.*, 8.

⁸⁸ *Ibid.*, 8.

⁸⁹ Morse, *The Nature of Gold*, 92.

carrying capacity of a swivel truck, the height and angle of a tailings elevator, the dirt's angle of repose, the fineness that ore can be crushed into.⁹⁰ These factors become the new determinants of the landscape that emerged as a by-product of the processes utilised for the extraction of gold adjacent to Kalgoorlie and Boulder.

The synthetic mining landscape, as described by Morse and Jackson, refers to the new surface terrain of 'by-product' material and industrial infrastructure. While alluvial surface goldmining created dramatic landscape transformations in Kalgoorlie and Boulder (and rivalled those created by techniques such as water sluicing that had been utilised during the Californian gold rush), these changes were dwarfed by the residual landscape generated by the process of underground reef mining. While this thesis research will not directly address the space of the underground mine in Kalgoorlie, it is useful to discuss the relationship between the industrial space of the subterranean mine and the city above.

While there is a body of work on the nature of the underground in the nineteenth century, its interest is mostly in the metaphoric and literary aspects of new subterranean worlds.⁹¹ Rosalind Williams's book *Notes on the Underground* views 'mining' as a metaphor for an artificially engineered space. She views the great infrastructure projects of nineteenth-century London and Paris as a process whereby 'mining comes out of the hinterlands into the very heart of the city'.⁹² Williams adopts Lewis Mumford's distinction between the natural world and the artificial world where the underground mine is the:

⁹⁰ The interest in the photographic recording of these types of landscape has not diminished since the late nineteenth century. There is a strong contemporary interest in recording the landscape effects of the what might best be termed the Anthropocene in the work of photographers like Edward Burtynsky, Richard Misrach and others.

⁹¹ See David L. Pike. *Metropolis on the Styx: The Underworlds of Modern Urban Culture, 1880–2001* (Ithaca, New York: Cornell University Press, 2007); Rosalind Williams, *Notes on the Underground. An Essay on Technology, Society, and the Imagination* (Melbourne: RMIT Press, 1990); Wendy Lesser, *The Life Below The Ground: A Study of the Subterranean in Literature and History* (Boston: Faber and Faber, 1987).

⁹² Williams argues that in the nineteenth century, through the works of infrastructure, 'mining came to the metropolis', whereas previously it was 'set apart from ordinary life and labour, since it was usually performed in remote and isolated locations'. After the industrial revolution, underground enterprises became 'proximate, central and large scale rather than remote, peripheral, and small scale'. Williams, *Notes on the Underground*, 52.

First completely inorganic environment to be created and lived in by man ... the miner must work by artificial light even though the sun be shining outside; still further down in the seams, he must work by artificial ventilation, too: a triumph of the 'manufactured environment'.⁹³

In addition to the photographic images that recorded the newly created topography of the goldmining industry, another series of cartographic documents recorded the mine's legal and social construction. The detailed surfaces of maps, which set out the spatial limits of the leases, especially in the 'early' maps of the gold rush, also reveal a social history of goldmining as described by the naming of the leases, which illustrate a trajectory of international migration, the mythical allure of gold and the histories of other rushes. The primary methods through which the processes of urbanisation, the spaces and urban forms that are created, the interaction between the grid and the manufactured landscape of industry are all made visible is through photography and cartography. The next section will examine how these mediums record and construct an understanding of the built environment.

Photography, Representation and Seriality

This section investigates how the taking of photographs and the drawing of maps depicts space, time and change and how making, assembling and distributing these media shape an understanding of a place. An appraisal of the relevant critical writing about these topics is presented in subsections. The first will review writing on photography's relationship to the representation of space, time and change. The second will investigate how photographs, other images and text are serially organised to make claims and arguments for a subject. Finally, cartography and its construction of space will be discussed.

⁹³ Lewis Mumford. *Technics and Civilization* (Chicago: University of Chicago Press, 2010. Harcourt, 1934), 69–70 quoted in Williams, *Notes on the Underground*, 5. David Pike's *Metropolis on the Styx* recognises the limitations of William's argument and her distinction between the natural and the artificial, suggesting this is a false dichotomy with the impossibility of the wholly natural or the completely artificial. The metropolitan infrastructure project and regional mine are very different spatial concerns. The experience of the activity of 'work', as illustrated by the labourer in the street is not a metaphor for social upheaval, as Williams argues, but in the boom town becomes a measure of progress. Williams, *Notes on the Underground*, 54.

Photography, Imagination and Description

The connection between architecture and photography has both etymological and technical origins: 'camera' is the Latin word for 'room' and the pre-photographic technology of the *camera obscura* were often large enough to be inhabited by the user/viewer. Many 'dark rooms' were portable and able to be used in situ in the landscape. A number of the claimants to the title of the 'first' chemically fixed images have architectural or urban subject matter: Joseph Nicéphore Niépce's roofscape of the village of Le Gras (c1826), William Henry Fox Talbot's paper negative of windows of his home (1835), Louis-Jacque Mandé Daguerre's view of the Boulevard du Temple in Paris (1838) (Figure 2.11). Though the selection of these architectural and urban subjects could be considered simply images of 'convenience' (as a subject matter that was stationary during the long exposure times required of early photography) the early connection between photography and the constructed environment remains. This relationship developed further in the 'topographic' beginnings of nineteenth-century urban photography in the depiction of metropolitan environments of the photographic centres like Paris, San Francisco and London. After the French government announced the daguerreotype process in Paris in 1839, the medium spread rapidly, including to the American West.⁹⁴ Further, the argument has been made that North American urbanisation and photographic development go hand in hand.⁹⁵ The stages of urban development of gold rush San Francisco are recorded in successive technological developments of photography, so while the 1849 city of gold seekers is recorded in just five overlapping daguerreotypes plates, some 30 years later Eadweard

⁹⁴ Francios Arago described the detail of Daguerre's process at a meeting of Academie des Sciences on 19 August 1839. By 20 September, the first American daguerreotype of St Paul's Church, New York, had been taken. Keith I. Adamson, '1839—The year of Daguerre', *History of Photography* 13, no. 3 (1989): 200, DOI: 10.1080/03087298.1989.10441188.

⁹⁵ While introducing the New Topographics movement of the mid-1970s, American photographic historian Jonathan Green suggests that the early photographers of the American frontier stood with the 'civilized world behind them and looked out toward the wilderness', with the implication that view was photographic and that civilization was the development of cities. Jonathen Green, *American Photography: A Critical History 1945 to the Present* (New York, NY: Harry N Abrams, 1984), 163. Hales argues that 'urban photographers were visual explorers of the rapidly evolving urban environment'. Peter Bacon Hales, *Silver Cities: Photographing American Urbanization, 1839–1939* (Albuquerque: University of New Mexico Press, 2005), 4.



Figure 2.11: Louis-Jacque Mandé Daguerre's view of the Boulevard du Temple in Paris (1838)

Untitled 'point de vue', Joseph Nicéphore Niépce, 1827, (Object number: 964:0000:0001)
Gernsheim Collection, Harry Ransom Centre, The University of Texas, Houston

Muybridge's more technically proficient 'Panorama of San Francisco from Nob Hill' depicts the explosive growth of the city (Figure 2.12–13) .

In the last decade, there has been a growing interest in the collection and study of aspects of photography that have previously sat outside the attention of academic scholarship. These include elements of the medium that have been labelled as 'commercial', 'folk', 'vernacular' and 'amateur' as illustrated by commercial postcards, family photographs and their collection together into albums as well as the work of commercial studios, amateur photographic clubs and survey movements.⁹⁶ This chapter acknowledges that the histories of photography have often been generated by the medium's pluralistic (and ambiguous) use as an imaging technology deployed by a range of disciplines. Sri-Kartini Leet describes this phenomenon as photography's 'role in and function within a variety of cultural contexts, covering a diverse range of image production and consumption'.⁹⁷ Given the voluminous writing on photographic history and theory that its cross-disciplinary history has generated since the medium's 'discovery' in the late 1830s, this review is limited in its scope. As commercial photographers created the photographic record of Kalgoorlie, Boulder and the Goldfields, the focus is placed on this aspect of the photographic imagination and its 'production and reception' as described in the mid- to late-nineteenth century.⁹⁸ To this end, in the Eastern Coolgardie Goldfields, photography is the subject of commercial exchange rather than an instrument of governmentality.⁹⁹

⁹⁶ Examples include Luc Sante, *Folk Photography: The American Real-Photo Postcard 1905–1930* (Portland: Yeti Books, 2009); Jeff Rosenheim, *Walker Evans and the Picture Postcard* (Gottingen, Germany: Steidl Verlag, 2009); Verna Posever Curtis, *Photographic Memory: The Album in The Age of Photography* (Washington DC, New York: Library of Congress & Aperture, 2011); Elizabeth Edwards, *The Camera as Historian: Amateur Photographers and Historical Imagination, 1885–1918* (Durham, North Carolina: Duke University Press Books, 2012).

⁹⁷ Sri-Kartini Leet, *Reading Photography: A Sourcebook of Critical Texts, 1921–2000* (Farnham, London: Lund Humphries, 2011), xi.

⁹⁸ Robin E. Kelsey, 'Viewing the Archive: Timothy O'Sullivan's Photographs for the Wheeler Survey, 1871–74', *The Art Bulletin* 85, no. 4 (2003): 702.

⁹⁹ Unlike that which occurred later in documenting industry in the state's north, there are no government photographers or agencies that used photography to document the gold rush in Kalgoorlie. For example, Joanna Sassoon has written on E. L. Mitchell, a commercial photographer who was commissioned by the Western Australian Government Printer to record aspects of life in Broome, with emphasis on its pearl industry, in the 1920s. See Joanna Sassoon, 'E. L. Mitchell and the Imaginary Broome', *History of Photography*, 23, no. 2 (1999): 149–56. Joanna Sassoon, 'The Politics of Pictures: A Cultural History of the Western Australian Government Print Photograph



Figure 2.12: San Francisco 1852, a city of gold seekers, with a harbour full of their abandoned ships, was recorded by William Shew in just five overlapping multiple daguerreotypes plates.

Detail of 'Untitled', William Shew'. 1852. The daguerreotype shows the 1852 city of gold seekers, with a harbour full of their abandoned ships, as recorded by William Shew in just five overlapping multiple plates. (Id number: PG.000159), The National Museum of American History, Washington DC, https://americanhistory.si.edu/collections/search/object/nmah_1000880



Figure 2.13: 30 years later the thirteen plates of Edward Muybridge's technically proficient 'Panorama of San Francisco from Nob Hill' (1878) depicts the 'explosive growth' of the city and the elaborate architecture that accompanied it.

'Panorama of San Francisco from Nob Hill', Edward Muybridge, (Object Number: 80.35) The Target Collection of American Photography, The Museum of Fine Arts, Houston

Given the rapidity of the urban and industrial development of Kalgoorlie, Boulder and the Goldfields and the dramatic change in nature of these environments, it is unsurprising that the space of the towns and their industrial fields were represented by a number of different photographic 'genres' that documented the compressed time of the boom town. These 'genres', (which are defined as their consistent compositional and technical approach), are not discreet from one another. In this thesis, three modes of spatial representation are considered. They are defined as the 'colonial survey', the 'booster' and the 'topographical'.¹⁰⁰ Each of these modes sits within its own critical discourse, which will be addressed here. Regardless of the disciplinary use of photography, within most discourses around the medium exists the similar tension: the 'truth value' of photography. How does the medium reconcile its role as one of imaginative construction or factual record?

Martha Sandweiss notes that 'despite the illusive realism of the image ... the photograph is a not a self-evident transcription of fact'.¹⁰¹ Similarly, Paul Burke describes photographs as having the 'temptation of realism'.¹⁰² Hales labels

Collection', *Australian Historical Studies*, 35, no. 123 (2004): 16–36. While the area around Kalgoorlie and Boulder was traversed, assessed and mapped by Alexander Forrest and others for agricultural purposes in the mid-nineteenth century, there were no photographers within the party of six. See Alexander Forrest, 'Account of an Expedition to Explore South-Western Australia, Eastward of the Settled Districts, and beyond Hampton Plains', *The Journal of the Royal Geographical Society of London* 42 (1872): 388–90. Instead, it was the travelling or commercial photographers of the neighbouring goldmining town of Coolgardie (and the broader Coolgardie goldfields) that made the first images of the miner's camp that eventually become Kalgoorlie. Given the context of the role of the commercial photographer imaging the beginning of the towns, it is important to acknowledge recent scholarship focusing on the overlooked forms of commercial image-making. The focus of this research is varied in emphasis and timeframe and includes the reappraisal of the relationship between the aesthetic of picture postcard and the work of 'auteur'/artists photographers such as Walker Evans or Stephen Shore and Luc Sante's analysis of personal collections of 'folk' postcards. See Jeff L. Rosenheim, *Walker Evans and the Picture Postcard* (Gottingen: The Metropolitan Museum of Art New York with Steidl & Partners, 2009); Stephen Shore, *A Road Trip Journal* (London: Phaidon Press, 2008); Luc Sante, *Folk Photography: The American Real-Photo Postcard 1905–1930* (Portland: Yeti Books, 2009).

¹⁰⁰ The distinction between these genres is often not made. For example, the entry on 'Survey Photography' in *The Encyclopedia of Nineteenth Century Photography* collapses these genres of photography together to include geographical surveys such as the Clarence King-led surveys of the 40th Parallel (with photographer Timothy O'Sullivan) with the French architectural patrimony surveys such as the *Mission Heliographique* which sent Edouard Baldus, Hippolyte Bayard, Henri Le Secq and Gustave Le Gray on 'campaign' to record the architecture of France. John Hannavy, ed., *Encyclopaedia of Nineteenth Century Photography*. (New York, London: Routledge Taylor and Francis Group, 2008), 1360–63.

¹⁰¹ Martha A. Sandweiss, *Print the Legend, Photography and the American West* (New Haven, Connecticut: Yale University Press, 2002), 8.

¹⁰² Peter Burke, *Eyewitnessing: The Uses of Images as Historical Evidence* (Ithaca, New York: Cornell University Press, 2001), 2.

Trachtenberg's own utilisation of photographs to write historical narrative as the 'historical interpretation of the artefacts of imagination'.¹⁰³ Sandweiss also suggests that photographs need to be understood as 'constructions of the human imagination'¹⁰⁴ that are a 'result of selective attention to a particular subject'¹⁰⁵— what Jordan Bear describes as 'uneasily allied tasks of verification and imagination that constituted photographic referentiality'.¹⁰⁶ Alan Sekula, in a similar vein, points out that photographs are 'fragmentary and incomplete utterances'.¹⁰⁷ Trachtenberg calls for a balance between the 'reproductive and the constructive' in the making of history and photography.¹⁰⁸ John Berger notes that as 'the language in which photography deals is the language of events' and that 'photography bears witness to human choice ... this choice is not between photographing x and y: but between photographing at x moment and y moment'.¹⁰⁹ This challenges the notions of the photographic assumption of truth and the direct relationship between the object and its photographic depiction.¹¹⁰ Gillian Rose suggests that photographers' 'descriptive work in fact also articulated a quite specific ideological position'.¹¹¹ In analysing photographs (and groups of photographs) of Kalgoorlie and Boulder that were produced by photographers who worked in or visited the towns, the viewer needs to consider the manner in which each photographer combined 'realism' and 'imagination' in the depiction of the places, spaces and events and how together these photographic records constructed what might be called the 'urban imaginaries' of the boom towns. This chapter will return to the discussion of the term 'urban imaginary' and its usage later.

¹⁰³ Peter Bacon Hales, 'Review: "Reading American Photographs: Images as History, Mathew Brady to Walker Evans by Alan Trachtenberg"', *The Journal of American History* 77, no.1 (1990), 268–70.

¹⁰⁴ Sandweiss, *Print the Legend*, 7.

¹⁰⁵ *Ibid*, 8.

¹⁰⁶ Jordan Bear, 'Introduction: Photography's "And/Or" Nature', *Visual Resources: An International Journal on Images and Their Uses* 26, no. 2 (2010), 91.

¹⁰⁷ Alan Sekula, 'Reading an Archive: Photography between Labour and Capital', in *Blasted Allegories: An Anthology of Writings by Contemporary Artists*, ed. Brian Wallis (New York: New Museum of Contemporary Art; Cambridge, MA: MIT Press, 1987), 117.

¹⁰⁸ Alan Trachtenberg, *Reading American Photographs: Images as History, Mathew Brady to Walker Evans* (New York: Hill and Wang, 1985), xiv.

¹⁰⁹ John Berger, 'Understanding a Photograph' in *Reading Photography: A Sourcebook of Critical Texts, 1921–2000*, ed. Sri-Kartini Leet (Farnham: Lund Humphries, 2011), 85.

¹¹⁰ Andrew Higgott and Timothy Wray eds., *The Camera Constructs: Photography, Architecture and the Modern City* (Burlington, VT and Surrey, United Kingdom: Ashgate, 2012), 3.

¹¹¹ Gillian Rose, 'Visual Culture, Photography and the Urban: An Interpretive Framework', *Przegląd Kulturoznawczy Kraków* 17 (2013): 194.

Sekula, Berger and Trachtenberg's ideas on the construction of meaning through the imaginative and descriptive act of photography (which we might now term as the 'urban imaginary') also hinge on how the photographic image is received by its audience. Trachtenberg is interested in the 'point of view of the photograph itself, the interpretation it allows viewers to make of its subject'.¹¹² While Trachtenberg acknowledges that the camera has shown us the 'actual look of things and persons' what is still problematic is 'how we make sense of what we see'.¹¹³ Trachtenberg suggests that instead of considering individual images, it is 'constructions, groups or images shaped or edited as albums, books or photo-stories' should be used as a 'resources ... for making sense of ... life in front of the lens'.¹¹⁴ Sekula suggests that photographic meaning is 'always directed by layout, captions, text and site and mode of presentation'.¹¹⁵ Hales suggest that the creation of photo-textual objects, such as books, that transcend the 'problem of context, which single photographs inevitably created'.¹¹⁶ These ideas of Hales, Sekula and Trachtenberg have framed the way photographs have been used to investigate and the manner in which these photographs are analysed in the thesis. The work of these authors has also underpinned consideration of the media in which these photographs were reproduced.

Public Photographs

The relationship between the commercial photography studio, its audience and the media through which photographs were exchanged is important to consider. As the commercial photographer relied on an understanding of the taste of their customer for their own commercial success, we can look at the production of these studios as indicative of the popular visual taste of the time. As Elizabeth Anne McCauley notes, a 'successful [commercial] print ... hinged on its intended use and audience' and that 'even with the uniformity of commercial production ... [these

¹¹² Alan Trachtenberg, *Reading American Photographs: Images as History, Mathew Brady to Walker Evans* (New York: Hill and Wang, 1985), xiii.

¹¹³ *Ibid.*, xiv.

¹¹⁴ Trachtenberg, *Reading American Photographs*, xv.

¹¹⁵ Alan Sekula, 'Reading an Archive: Photography between Labour and Capital', in *Blasted Allegories: An Anthology of Writings by Contemporary Artists*, ed. Brian Wallis (New York: New Museum of Contemporary Art; Cambridge, MA: MIT Press, 1987), 117.

¹¹⁶ Hales, *Silver Cities*, 53–54.

images] are clues to a society's values and self-conceptions'.¹¹⁷ The nature of commercial photography, McCauley suggests, meant that those photographers undertook 'specific tasks for hire or generating images for the free market, dealt more with the material realities of everyday life' such as 'work, the transforming urban environment, the up-to-the-minute and the modish'.¹¹⁸ Miles Orvell notes that 'commercial photography during the latter decades of the nineteenth century had specialised in industrial subjects and railroads as part of a regional catalogue of sights that would interest the tourist or represent region features'.¹¹⁹ As early as the late 1970s, Joan Schwartz advocated for the recognition of the role of the commercial photographer, and noted the difficulties of attribution in image-making that had to be 'sensitive to the popular market'.¹²⁰ However, she also cautions about the writing of history from just these visual resources. Many of the images that we see of Kalgoorlie, Boulder and the Goldfields can be considered part of a category of images that historian Martha Sandweiss calls 'public photographs'.¹²¹ These images produced by commercial photography studios were made with an 'awareness of the marketplace'. They were 'designed for widespread consumption and intended to pass before the eyes and into the hands of strangers'.¹²² The photographers who took these images and the editors or publishers who commissioned them and eventually printed them understood that they were constructing an image of themselves and the landscape that they inhabited for consumption by a local, national and international audience. This process of self-imagination, with its many steps of selecting, editing and publishing, offers the opportunity to question and analyse each of these stages: why this focus? Why that framing? Why this caption and grouping in a newspaper? This allows an in-depth understanding of the manner in which this identity was constructed.

¹¹⁷ Elizabeth Anne McCauley, *Industrial Madness. Commercial Photography in Paris, 1848–1871* (New Haven: Yale University Press, 1994), 5.

¹¹⁸ *Ibid.*, 6.

¹¹⁹ Miles Orvell, *The Real Thing: Imitation and Authenticity in American Culture, 1880–1940* (Chapel Hill & London: The University of North Carolina Press, 1989), 206.

¹²⁰ Joan Schwartz, 'The Photographic Record of Pre-Confederation British Columbia', *Archivaria* (Winter 1977–78): 17.

¹²¹ Sandweiss, *Print the Legend*, 4.

¹²² *Ibid.*, 6.

One of the ways in which other information that surrounded ‘public photographs’ shaped their reception might to consider their broader ‘paratextual’ context. This term, defined by French literary theorist Gérard Genette and elaborated on by others, proposes the idea that paratext helps to shape an understanding of a narrative text before the reading of the text itself. Genette suggests it is the paratext that enables a ‘text to become a book and to be offered as such to its readers and to the public.’¹²³ Macksey defines paratextual element as ‘liminal devices’ and cites titles, signs of authorship, dedications, epigraphs, prefaces, notes, intertitles and epilogues as examples of such devices which ‘mediates the relations between text and reader.’¹²⁴ Genette quotes Philippe Lejeune who describes the ‘name of author, title, subtitle, name of series, name of publisher, even the ambiguous game of prefaces’ as a ‘fringe of the printed text which in reality controls one’s whole reading of the text.’¹²⁵ The function of these elements is to ‘surround and contextualize the text.’¹²⁶ In suggesting the paratext be thought of as a ‘vestibule,’ Genette notes that it is:

‘a zone not only of transition but also of transaction ...of an influence on the public, an influence that - whether well or poorly understood and achieved - is at the service of a better reception for the text and a more pertinent reading of it.’¹²⁷

Further Genette suggests that ‘just as the presence of paratextual elements is not uniformly obligatory, so, too, the public and the reader are not unvaryingly and uniformly obligated’ to read the text in such a manner.¹²⁸ Genette’s taxonomy breaks down the paratextual into the detailed examination of each of the device as well as additional subcategories of material that sits around and outside a text. While these, and the detailed investigation of such textual element aren’t applicable for this research, the broad definitions offer by Genette and the

¹²³ Ibid., 16.

¹²⁴ Richard Macksey, “Foreword” in Gerard Genette, *Paratexts: Thresholds of Interpretation*, trans Jane E. Lewin (Cambridge: Cambridge, University Press, 1997), xi.

¹²⁵ Genette, *Paratexts*, 2 and note 5, 2.

¹²⁶ Macksey, “Foreword,” xii.

¹²⁷ Genette, *Paratexts*, 2.

¹²⁸ Ibid., 4.

extensions of his ideas by others suggest a manner in which they might be applied to the examining other types of media such as those that are the focus of this study. For example, Helen Smith in her study of Renaissance architectural treatises, responds to and extends Genette's notion of what might be considered paratextual to more explicitly visual matter.¹²⁹ Citing Genette's characterisation of the paratext as an appropriately architectural metaphor of the vestibule, Smith points to the elaborate title page of the architectural manuscripts as an example of such a device that through image and text, influences the manner in which the reader might understand the text that followed. Citing examples as early as the late medieval period, Smith notes elaborately engraved frontispieces that include intricate architectural frames, composite classical orders and triumphal arches, that in addition to the author's text shape the reception of the material that followed. These idea of the paratextual elements will be on when considering how photographs, maps and drawings are located in printed matter in Chapter 4 and the Case Studies.

Colonial Survey Photography

As suggested earlier, there are a number of different 'genres' of photography that imagine Kalgoorlie, Boulder and the Goldfields and the compressed time of its urban and industrial development. The first of these genres, colonial survey, is discussed in this subsection. Within the photographic history of Kalgoorlie, Boulder and the Goldfields, the early images of Hannan's Camp align with the aims of 'colonial', 'survey' or 'frontier' or 'expedition' photography that characterised the use of the medium in the context of the American frontier or the British Empire. This is despite this genre of photography predating this thesis research period by nearly 20 to 30 years. In this mode of photography, the medium served the disciplines of surveying, geography and geology, recording territory to understand its potential as a landscape for exploitation. Cross-disciplinary writing in collections such as the James Ryan and Joan Schwartz's *Picturing Place: Geography and the Photographic Imagination*, which compiled contributions from

¹²⁹ Helen Smith, "Paratext" in Mari Hvattum and Anne Hultzsch, *The Printed and the Built: Architecture, Print Culture and Public Debate in the Nineteenth Century* (London: Bloomsbury Visual Arts, 2018), 251.

architectural and art historians, sociologists, anthropologists, historians, archivists and geographers, has generated much of the discourse on colonial or 'survey' photography.¹³⁰

In the context of the 'colonial', photography makes a permanent record of the landscape. Ryan sees photography allied with cartography and geology as one element of what he calls the 'geographical imagination'.¹³¹ As surveying proscribed a ground and demarcated a series of limits, there are spatial implications for the geographer that photography was adept at recording. Writing about its colonial context, Jeremy Foster suggests that 'photography [was] ... perhaps the nineteenth century's most insidious agent of social spatialization'.¹³² Ryan suggests that photography was implicated in the discourse of geography and the developing geographical science that took as its *raison d'être* the exploration and conquest of space and 'seeing, knowing, defining the world'.¹³³

While the 'colonial' camera might be applicable to describe the use of photography in the European colonial context, the role of the camera in the American West is closely linked to the 'survey' or 'expedition' photography of the 1870s. These images, as Kelsey argued, aligned photography and the projects of Manifest Destiny, industrialisation and nationalism.¹³⁴ American nineteenth-century photographers such as Carleton Watkins and Timothy O'Sullivan combined the depiction of the built, natural and industrial environments as they photographed the railway and national parks and as well as landscapes that were to be mined. Sandra Phillips writes that photography was 'technology introduced and practiced by settlers; it was an industrial tool used to record the larger industrialisation of the land'.¹³⁵ However, this relationship between photography and industrialisation

¹³⁰ James Ryan and Joan Schwartz eds., *Picturing Place: Geography and the Photographic Imagination* (London, New York: IB Taurus, 2006).

¹³¹ Ryan, 'Introduction' in *Ibid.*, 4.

¹³² Jeremy Foster, 'Capturing and Losing the "Lie of the Land": Railway Photography and Colonial Nationalism in Early Twentieth-Century South Africa', in *Picturing Place: Photography and the Geographical Imagination*, eds. Joan M. Schwartz and James R. Ryan (London, New York: IB Taurus, 2003 reprinted 2006), 141.

¹³³ Ryan, 'Introduction', 4.

¹³⁴ Although outside the scope of this research project, Kelsey argues for a more nuanced reconsideration of this link between photography and national identity in his article 'Viewing the Archive', 719.

¹³⁵ Phillips, *To Subdue the Continent*, 13.

is nuanced. For example, as illustrated by Watkin's oeuvre, photography was utilised for illustrating the prospectus for Los Mariposa mine, (1860) as well as the creation of the Yosemite National Park (1864). Photographs are used equally to make a visual argument for the preservation of a particular landscape (the national park) and the transformation of another (the mine) and reveal them both to be photographic constructions. Joel Synder, noting the connection between the production and consumption of photographs, suggests that commercial photographers served a community that aligned itself with technological progress.¹³⁶

While Foster's discussion is concerned with the role of photography and the railways, he notes that the practitioners took advantage of the medium's 'transparency, clarity and precision', which 'made it the obvious form of representation for corporations whose power was founded on technology and modernity'.¹³⁷ Douglas Nickel locates a characteristic trope in nineteenth-century photography criticism which suggested that photographs functioned like 'mobile windows', which allow 'pictorial transparency'.¹³⁸ By the 1970s, American 'survey' photography, as epitomised by the work of Timothy O'Sullivan, was the contested subject of debates. There was disagreement about whether these photographs sat in the 'discursive space' of art or science (to use Rosalind Krauss's nomenclature) and how these images might be located within the historiography of 'modernist' photography.¹³⁹ Kelsey, less concerned for the boundaries between these disciplines, argues for the value of their ability to crossover disciplines in the expedition parties such as that of the Wheeler Survey, where the 'deep embeddedness of photographer' resulted in similarities with other visual and graphic disciplines such as cartography.¹⁴⁰ With photography's use in the survey

¹³⁶ Joel Synder, 'Territorial Photography', in *Landscape and Power*, ed. W. T. J. Mitchell (Chicago, MI: Chicago University Press, 1994), 182. McCauley makes the same connection between the audience of photography and the images produced by commercial photography. She argues that 'the photograph provided the standard of objectivity against which all industrialising countries could measure their material accomplishments'. Macauley, *Industrial Madness*, 8.

¹³⁷ Foster, 'Lie of the Land', 141.

¹³⁸ Douglas R. Nickel, 'An Art of Perception', in *Carleton Watkins: The Art of Perception*, ed. Douglas R Nickel (San Francisco: San Francisco Museum of Modern Art, 1999), 21.

¹³⁹ Rosalind Krauss, 'Photography's Discursive Spaces: Landscape', *Art Journal, Special Issue: The Crisis in the Discipline*, 42, no. 4 (1982): 311–19.

¹⁴⁰ Robin E. Kelsey, 'Viewing the Archive: Timothy O'Sullivan's Photographs for the Wheeler Survey, 1871–74', *The Art Bulletin* 85, no. 4 (2003): 723.

expedition, 'exactness' becomes the measure of the 'best' photograph, as the intent of the survey was to make 'clear reports of things visible in the world'.¹⁴¹ Alan Trachtenberg contends the aims of the survey was not just to 'discover what lay beneath the surface but to describe the surface—to analyze and to map'.¹⁴² The combination of the 'colonial' and 'survey' genres of photography offers the opportunity to bring together the photographic representation of nascent industrialisation, infrastructure, and the settlement patterns that occur in Kalgoorlie, Boulder and the Goldfields. Here, photography's role is to make clear the translation of territory into space, made available for industrial and urban development.

Booster Urban Photography

The second genre of photography that imagines Kalgoorlie, Boulder and the Goldfields is that of 'booster' photography, which describes the early phases of development of the town and is a medium used to promote the town and attract investors. These images were as much for town inhabitants as for external audiences, and intended to record the current state of a place but with a 'booster' intention to shape 'the perceptions of the future possibilities'.¹⁴³ Peter Bacon Hales equates the nineteenth-century American photographers with architects and landscape designers 'as the reworker[s] of the visual city'.¹⁴⁴ He sees the work of Theodore Lilienthal in New Orleans (1860s) or Watkins and Muybridge in San Francisco (1870s) resulting in the direct connection between 'formal order and civic order', which Hales describes as the Grand Urban Style¹⁴⁵ (Figure 2.1). Bruce Kahler succinctly defines this as a type of photography that 'eliminated all evidence of uncontrolled growth and lower class poverty, emphasizing instead scenes of geographical unity, social, order and architectural monumentality'.¹⁴⁶

¹⁴¹ Trachtenberg, *Reading American Photographs*, 131.

¹⁴² *Ibid.*, 124.

¹⁴³ M. Kammen, 'How the West was Seen: The Conquest of Space, Time, and Vision', in *Print the Legend: Photography and the American West*, ed. Martha A. Sandweiss (New Haven, CT: Yale University Press, 2002); 'River of Shadows: Eadweard Muybridge and the Technological Wild West by Rebecca Solnit (Book review)', *Reviews in American History* 31, no. 3 (September 2003), 406–13.

¹⁴⁴ Hales, *Silver Cities*, 93.

¹⁴⁵ *Ibid.*, 93.

¹⁴⁶ Bruce R. Kahler, 'Review of *Silver Cities: The Photography of American Urbanization, 1839–1915* by Peter Bacon Hales', *Winterthur Portfolio* 20, no. 4 (1985), 308.



Figure 2.1: An example of what Hales describes as the Grand Urban Style of 'booster' photograph.

'The Golden Gate', Carleton E. Watkins, 1868–69, printed ca. 1876, (Accession Number: 1986.1189.9), The Metropolitan Museum of Art, New York



Figure 2.2: An example of the 'topographical' or 'documentary' mode by the English photographer Francis Frith

'Pylon Gateway at Medinet-Haboo', 1857, Francis Frith, (Object Number: 84.XB.1296.23) The J. Paul Getty Museum, Los Angeles

Hales identifies this type of 'imaging' as being predominately concerned with economic 'boosterism'.¹⁴⁷ Hale's suggests that 'boosterist' photographers became 'deeply involved in the process of finding order in the urban chaos, of imposing or creating that order'.¹⁴⁸ These photographs allow the city to be equated with order, amenity, structure and stability, as well as the qualities that most benefited these urban states—economic development, real estate speculation and investment. Hales further links urbanisation, 'boosterism' and image-making when he notes that the 'photographic studio [was] a stimulus for urban development',¹⁴⁹ where depictions of American cities were 'visual fruits of technology pioneered, produced and marketed there—themselves pride and proof of American urban progress'.¹⁵⁰ Hales suggests photography was 'deeply involved in the process of mastering the city and in the concomitant process of creating new ordering principles by which the city could be understood, made to yield its virtues and symbolize the success of its controllers'.¹⁵¹ Here, photography was used as a medium for 'defining, comprehending, and communicating the city'.¹⁵² Further, Hales points out that 'urban photography in the last three decades of the nineteenth century had developed an aloof, transparent visually-opulent style that overlaid a rigid system for classifying or organizing its subjects'.¹⁵³

The urban form of many of the boom towns of the Australian and American wests provided particular opportunities for the urban booster photography through the medium's ability to reproduce a facsimile of perspective space and to convey an image of municipal order and amenity. While this relationship between a specific urban form and photography is reinforced by many of the images of Kalgoorlie and Boulder (especially the main urban streets of the two towns), this symbiotic relationship between urban form, its mode of relationship and the intention of the

¹⁴⁷ Hales, *Silver Cities*, 45.

¹⁴⁸ Ibid., 95.

¹⁴⁹ Hales, *Silver Cities*, 98. The second edition of *Silver Cities* contains a new chapter that focuses solely on the role of the photographic studio both as an archive and physical entity in the city.

¹⁵⁰ Hales, *Silver Cities*, 105.

¹⁵¹ Ibid., 93.

¹⁵² Ibid., 1st edition, 64.

¹⁵³ Ibid., 2nd edition, 64.

pictorial image needs to be problematised especially as in the depiction of urban form that does not conform to the regulatory order of surveyor's grid plan town.

Topographical Photography

The last photographic genre under consideration in this chapter is the 'topographical' or 'documentary' mode. Although the term 'documentary' only came into usage in the early twentieth century, this is a useful description to categorise some of images that were taken in Kalgoorlie, Boulder and the Goldfields during the research period.¹⁵⁴ This 'matter of fact' mode of photographic recordings could be applied to images taken in several fields: archaeology, architecture and anthropology as well as in depictions of urban environments. In the field of archaeology, the photographs of John Beazley Greene (French, 1832–1856), Maxime du Camp (French, 1822–1894), Francis Frith (English, 1822–1898) of the monuments of ancient Egypt and the Near East, and Ernst Herzfeld (1879–1948) in the Persepolis and the Middle East (Figure 2.2) characterise the desire for an 'objective' photographic recording.

Urban 'topographical' photography was utilised to record the state of cities both before and after their transformation in the mid-nineteenth century. Thomas Annan in his pre-demolition depiction of the tenements of Glasgow (1861–1871) (Figure 2.3) or Charles Marville and his documentation of Paris pre-Haussmannisation (Figure 2.4) shared a type of photography practice that depicted the cities of Paris, Barcelona and Vienna after the urbanisation projects of the mid-nineteenth century. This photography recorded the buildings, street and urban amenities that accompanied the development of the 'new city'. Jacob Riis's documentation of New York's underclass and their living conditions are recognised by John Tagg and others as the beginning of a social documentary tradition.¹⁵⁵

¹⁵⁴ According to John Tagg, the name for the art form comes from a usage coined by the film critic and documentary pioneer John Grierson in 1926. John Grierson, 'Review of Moana', *New York Sun*, 8 February 1926. See John Tagg, *The Burden of Representation: Essays on Photographies and Histories* (Minneapolis: University of Minnesota Press, 1993), 8; Desley Deacon, 'Films as Foreign Offices: Transnationalism at Paramount in the Twenties and Early Thirties', in *Connected Worlds: History in Transnational Perspective*, eds. Ann Curthoys and Marilyn Lake (Canberra: ANU Press, 2005), 151.

¹⁵⁵ John Tagg, *The Burden of Representation: Essays on Photographies and Histories* (Minneapolis: University of Minnesota Press, 1993), 5.



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'Pylon Gateway at Medinet-Haboo', 1857, Francis Frith, (Object Number: 84.XB.1296.23) The J. Paul Getty Museum, Los Angeles



Rue de l'Arcade (de la rue St. Lazare) .

Figure 2.3: Urban 'topographical' photography was utilised to record the state of cities both before and after their transformation in the mid-nineteenth century.

Rue de l'Arcade (de la rue St. Lazare)', c.1877, Charles Marville, (Call number: PCLTWEF 17.1 33-6) The State Library of Victoria, Melbourne



Figure 2.4: Urban 'topographical' photography was utilised to record the state of cities both before and after their transformation in the mid-nineteenth century

'View of Close No. 65, High Street, Glasgow, Scotland', 1868–1871, Thomas Annan, (Reference number: PH1980:0358:006) Canadian Centre for Architecture, Montreal

This kind of ‘straight’ photographic recording aligned with the documentation of urban infrastructure and engineering projects that occurred during the same period—the bridging of bridges, railways and water infrastructure. In recording the great engineering projects of the mid- to late-nineteenth century, the camera had two roles: the celebration of the completion of the schemes and acting as the surrogate for the absent foreman, or ‘agent of control’ during the construction of the projects.¹⁵⁶ The ability of photography to act as ‘an accurate record of engineering works’ was recognised almost immediately.¹⁵⁷ Writing about English engineering photographs, Chrimes suggests that ‘most civil engineering projects were recorded on camera, either by professionals or amateurs’.¹⁵⁸ Additionally, Chrimes notes that the commercial success of Robert Howlett’s photographs of the works of English engineer Isambard Kingdom Brunel must have meant ‘professional photographers would have looked favourably on further commissions, to record engineers either as a construction record, or with a view to publicity or both’¹⁵⁹ (Figure 2.5). McCauley devotes a chapter of her pioneering work on French commercial photographers, *Industrial Madness: Commercial Photography in Paris 1848–1871*, to the relationship between Hippolyte Collard (French, 1812–c1885) and the engineering corps with whom the photographer worked closely to produce albums of their structures¹⁶⁰ (Figure 2.6). McCauley suggests that Collard’s photographs strove for the ‘frontality and flatness’ of the elevation in engineering drawing. She notes that even the tonality of Collard’s photographs echoed the water coloured drawings produced by the draftsman of the *Ecoles des Ponts et Chaussées*.¹⁶¹ An understanding of these three modes of photography—colonial survey, urban booster and the topographic—allows the contemporary viewer to begin to ascribe ‘intent’ to the historical archive of individual photographic images produced in the boom town. The colonial survey served as a means of recording territory with the view to its future exploitation, the urban booster selectively photographed nascent towns to promote their

¹⁵⁶ McCauley, *Industrial Madness*, 204.

¹⁵⁷ Mike Chrimes, *Civil Engineering 1839–1889: A Photographic History* (Stroud: Sutton Publishing Ltd, 1991).

¹⁵⁸ *Ibid.*, 9.

¹⁵⁹ *Ibid.*, 9.

¹⁶⁰ McCauley, ‘Collard, the Machine and the State’, in *Industrial Madness*, ed. McCauley, 195–232.

¹⁶¹ McCauley, *Industrial Madness*, 212.

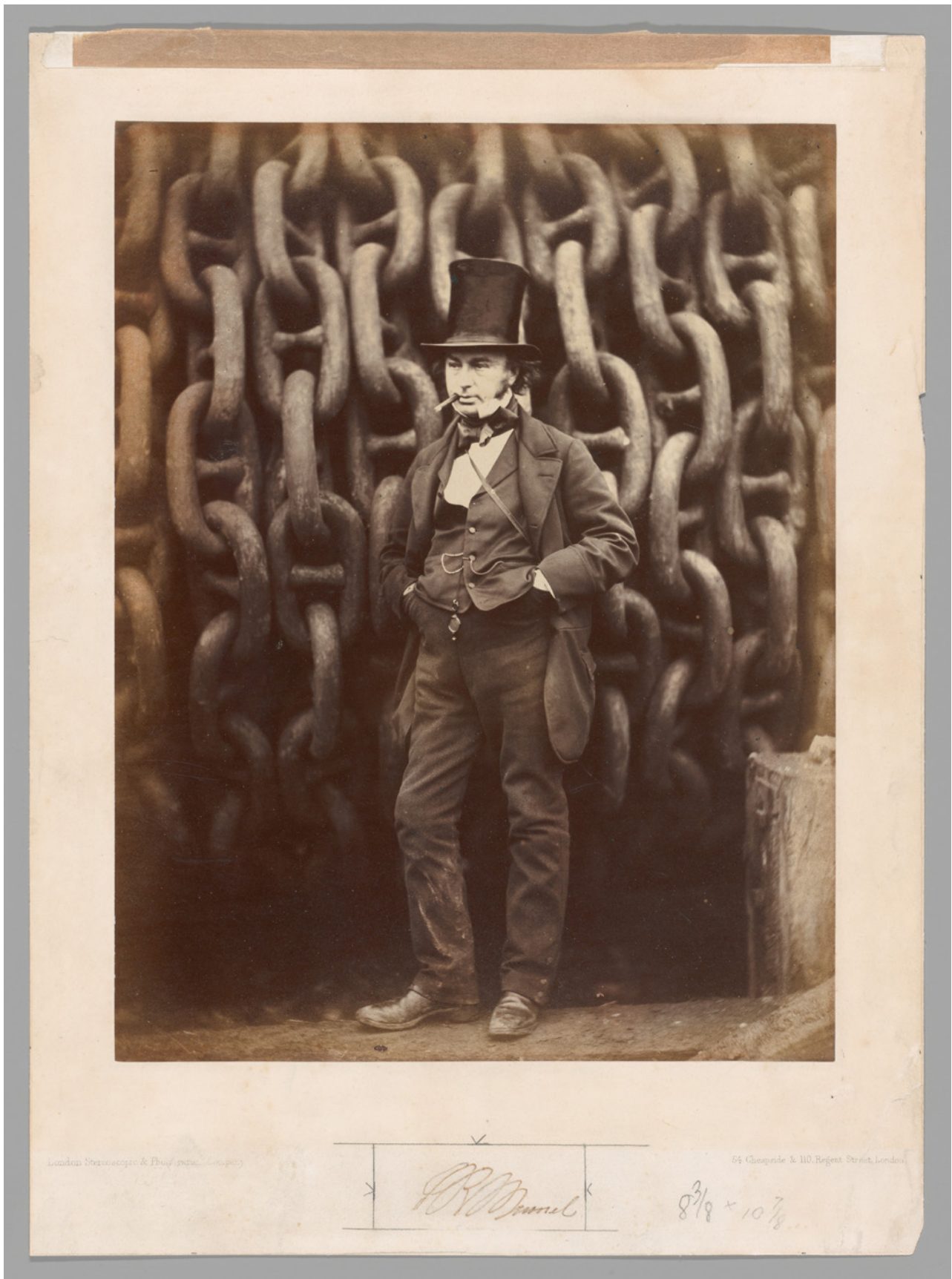


Figure 2.5: Robert Howlett's photographs of the works (and portrait) of English engineer Isambard Kingdom Brunel

'Isambard Kingdom Brunel Standing before the Launching Chains of the Great Eastern', 1857, printed 1863–64, Robert Howlett, (Accession Number: 2005.100.11) The Metropolitan Museum of Art, New York

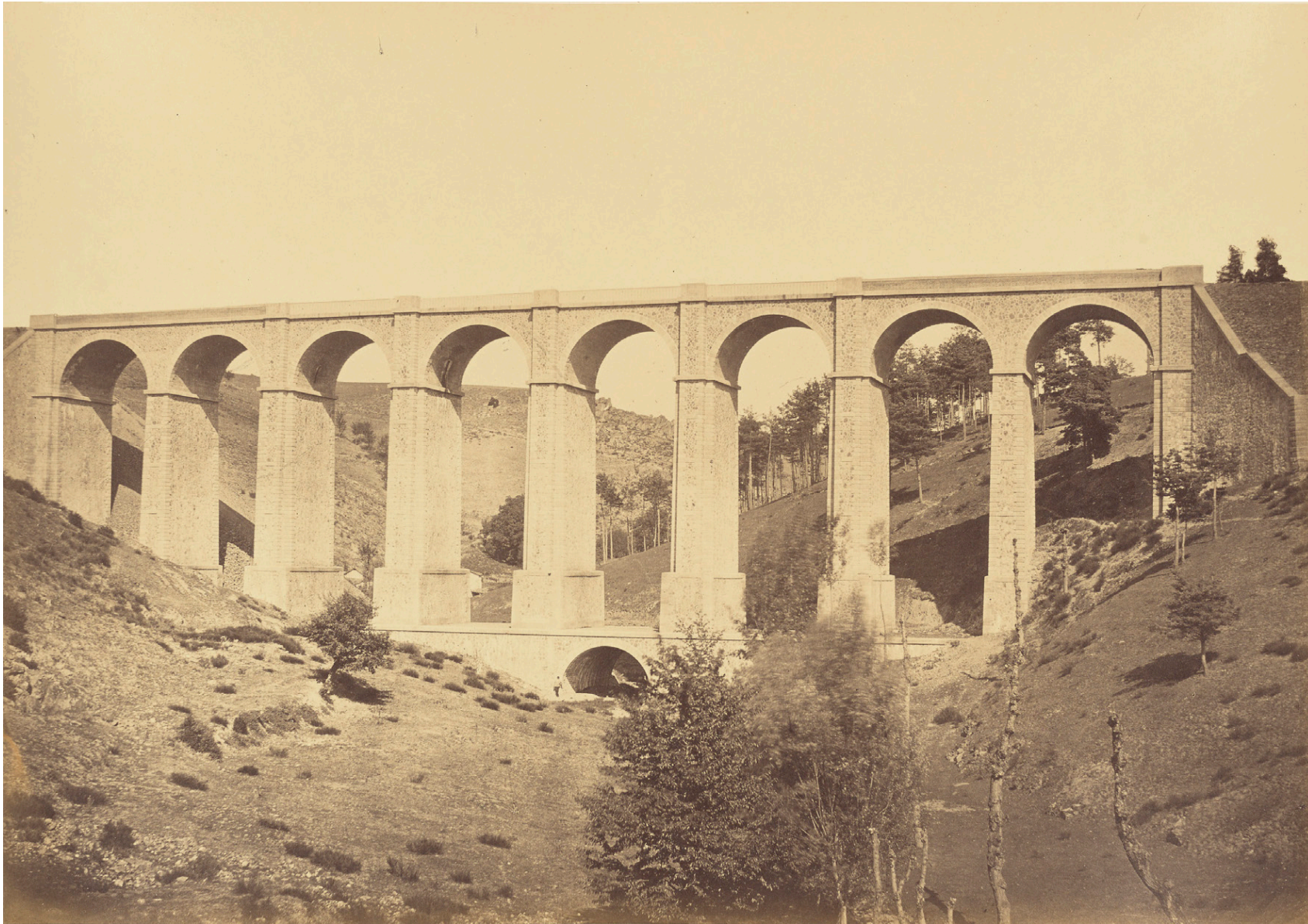


Figure 2.6: The photographer Hippolyte Collard worked closely engineering corps to produce albums that recorded their structures

'Viaduc de la Revoute (Près de Balbigny)', 1865, Auguste Hippolyte Collard, (Object Number: 84.XM.407.55) The J. Paul Getty Museum, Los Angeles

development, while the topographic mode recorded the attainment of urban amenity.

Urban Imaginary

As mentioned earlier in this chapter, the 'urban imaginary' is a term, originating in literary studies, that describes 'multiple perspectives and subjects' and 'great variety of spatial practices' that make up the image of a city.¹⁶² Andreas Huyssen suggests that the fictional exemplar of the 'urban imaginary' is Italo Calvino's *Invisible Cities*, which 'beyond its fictional premise ... suggests that no real city can ever be grasped in its present or past totality by any single person'.¹⁶³ Cinar and Bender note that the 'city is nevertheless imagined as at once indefinite and a singular space ... shared by a population with various cultural commitments and translocal attachments and yet understood as a distinct entity'.¹⁶⁴ Further, they suggest that the 'social and physical space is *imagined* and thus made into urban culture'.¹⁶⁵ James McDonald argues a similar point when he suggests that the 'city constitutes an imagined environment'.¹⁶⁶ Anthony King point out that urban imaginaries are also about the 'construction of imaginary identities'.¹⁶⁷ If we take photography as a medium that combines both imaginative and documentary elements, the urban imaginary as a collective term allows us to bring together the different 'genres' of photography, its multiple practices and viewpoints, and the manner in which photographs are organised together as 'public images'. The urban imaginary provides a useful term to organise a range of representations, such as photography and (as will be examined later in this chapter) cartography as well as their presentation and reception.

¹⁶² Andreas Huyssen, 'Introduction', in *Other Cities, Other Worlds: Urban Imaginaries in a Globalizing Age*, ed. Andreas Huyssen (Durham North Carolina: Duke University Press), 2008, 3.

¹⁶³ *Ibid.*, 3.

¹⁶⁴ Alev Cinar and Thomas Bender eds., *Urban Imaginaries: Locating the Modern City* (Minneapolis: University of Minnesota Press, 2007), xi.

¹⁶⁵ *Ibid.*, x. My emphasis.

¹⁶⁶ James Donald, 'Metropolis: The City as Text', in *Social and Cultural Forms of Modernity*, eds. Robert Boccock and Kenneth Thompson (Cambridge: Polity Press, 1992), 427.

¹⁶⁷ Anthony D. King, 'Boundaries, Networks, And Cities: Playing And Replaying Diasporas and Histories', in *Urban Imaginaries: Locating the Modern City*, eds. Alev Cinar and Thomas Bender (Minneapolis: University of Minnesota Press, 2007) 8.

Series, Serial, Seriality and the Sequential

This subsection will explore and define a working position for the terms 'series', 'serial', 'seriality' and the 'sequential' as they are used in the thesis. These terms are used to describe a broad range of both methods of the production and the reception of images, texts and objects across a diverse range of disciplines. For instance, the Oxford English Dictionary defines the serial broadly as 'a sequence in time and of conceptual order' and list 15 definitions for the term as an adjective and noun (and with additional compound forms of both) used in disciplines including biology, literature, publishing, broadcasting, education, psychology, linguistics, criminology, music, computing and the military.¹⁶⁸ Importantly for this research, the dictionary further lists another 32 definitions for 'series', again from a diverse range of disciplines; soil science, physics, chemistry, electronics, geology, meteorology, manufacturing, mathematics, minerology, computing, phonetics, education studies, literature, linguistics, music, the Anglican Church and sport.¹⁶⁹ This thesis is interested in seriality in modes of production: the creation of work that would sit in series and sequences as well as in the serial manner of its reception—the consumption of material by an audience. This subsection will draw on examples and definitions from several disciplines that utilise 'series', 'serial', 'seriality' and the 'sequential' modes of production and reception, with an emphasis on those that utilise visual representation. It should be noted, however, that in the discussion of these terms rarely are precise definitions given and often they are used interchangeably. Drawing on the use of the terms in the study of print culture, art (especially photography) and science, this subsection will draw a number working definitions as they will be used in the thesis.

One of the most frequent uses of the terms 'series', 'serial' and 'seriality' occurs in their application to the production, reception (and ongoing influence) of nineteenth-century print culture: the publication and reading of popular press, the

¹⁶⁸ 'serial, adj. and n.' OED Online, March 2018, Oxford University Press, <http://www.oed.com.ezproxy.library.uwa.edu.au/view/Entry/176428?redirectedFrom=serial> (accessed 11 April 2018).

¹⁶⁹ 'series, n.' OED Online, March 2018, Oxford University Press, <http://www.oed.com.ezproxy.library.uwa.edu.au/view/Entry/176458?rskey=zKm2Lz&result=2&isAdvanced=false> (accessed 11 April 2018).

emergence of illustrated magazines, newspapers, journals, novels, manuals, albums and guidebooks. Jennifer Hayward states 'a serial is, by definition, an ongoing narrative released in successive parts' and suggests 'the serial has been a dominant mode of narrative presentation in Western culture-if not in fact the dominant mode'.¹⁷⁰ Graham Law and Robert L. Patten provide a useful definition of 'serial publications' as two related practices: firstly, 'the publishing of periodicals with miscellaneous contents' and, secondly, 'the issuing of unified texts at intervals in independent fascicles or parts'.¹⁷¹ Hughes and Lund suggest that the serial was 'a literary form attuned to the fundamental tendencies in the age at large'.¹⁷² Further, Proudhon notes that the very formation of the printed word was both material and serial, 'the typographic case is nothing but a series whose moveable units can serve indistinguishably to reproduce all imaginable words'.¹⁷³ Law and Patten locate their argument alongside that of Hughes and Lund and recognise the importance of 'mechanisms of serial publishing but also the art of serial composition and the psychology of serial reading' of the early- to mid-nineteenth century.¹⁷⁴ Here, the serial is a form (the newspaper, magazine, novel) as well as a method of publishing material across time. The serial also had a 'layering effect over time, putting down first one layer of story then another as part succeeded part'.¹⁷⁵

As well as a method of production, these publications created an audience (despite new 'technologies and systems of knowledge production and communication' such as the telegraph, which rendered more instantaneous access to information) that

¹⁷⁰ Jennifer Hayward, *Consuming Pleasures: Active Audiences and Serial Fictions from Dickens to Soap Opera* (Lexington: The University Press of Kentucky, 1997), 3. Hayward extends her argument to comics, soap operas and television series such as *The Sopranos*.

¹⁷¹ Graham Law and Robert L. Patten, 'The Serial Revolution', in *The Cambridge History of the Book in Britain. Vol. 6. 1830–1914*, ed. David McKitterick (Cambridge: Cambridge University Press, 2009), 144.

¹⁷² Linda K Hughes and Michael Lund, *The Victorian Serial* (Charlottesville: University of Virginia Press, 1991), 8.

¹⁷³ Pierre Jean Proudhon, 'De la creation de l'ordre dans l'humanité' 1843 (Antony, 2000), 300 as cited in John Tresch, 'The Order of the Prophets: Series in Early French Social Science and Socialism', *History of Science* 48, no. 3–4 (2010), 316. Asa Briggs suggests Victorian themselves described their age not only as an age of coal and of iron, but as an age of paper. Asa Briggs, *Victorian Things* (Chicago: University of Chicago Press, 1989), 22.

¹⁷⁴ Law and Patten, 'The Serial', 147.

¹⁷⁵ Hughes and Lund, *The Victorian Serial*, 6.

had become accustomed to the extended narrative of serial publications.¹⁷⁶ Hughes and Lund note that the publication of the serial created relationships to other stories and images in a single publication where the serial story 'was not always a self-contained ... entity' but a 'reading process embedded in a specific material framework that shaped response'.¹⁷⁷ The Victorian serial literary text was 'surrounded by other texts and pictures that inspired a more complex, multifarious response'.¹⁷⁸ Extending the ideas of seriality in print culture, John Tresch argues for a more encompassing 'serial imagination of society'¹⁷⁹ that was grounded in the experience of serial publications. Additionally, he notes the scientific use of seriality in the nineteenth century was concerned with temporality, classification and continuity. Hopwood, Schaffer and Secord, in their special issue of the *History of Science on the Seriality and Scientific Objects in the Nineteenth Century*, note that seriality is not an homogenous concept but should be seen as a 'range of practices' that pose a set of 'pervasive and prominent questions about continuity versus discontinuity, the play of difference through standardised objects and the sequential display versus the array that could be seen at a glance'.¹⁸⁰ Importantly, Hopwood, Schaffer and Secord describe 'seriality' as being 'polemic ... [wher]traces, images and samples ... were worked into arguments'.¹⁸¹ As well as the examples given by Hopwood, Schaffer and Secord in their introductory essay, other contributors, such as Chitra Ramalingam and Nathan Schlanger illustrate their contributions with scientific illustrations that utilise serial imagery (Figure

¹⁷⁶ Hopwood, Schaffer and Secord, *Seriality*, 252.

¹⁷⁷ Hughes and Lund, *The Victorian Serial*, 9.

¹⁷⁸ *Ibid.*, 10.

¹⁷⁹ Tresch, 'The Order', 317.

¹⁸⁰ Nick Hopwood, Simon Schaffer and Jim Secord, 'Seriality, and Scientific Objects in the Nineteenth Century', *History of Science* 48, no. 3–4 (Special double issue) (2010), 252. The special issue of *The History of Science* published eight articles on the divergent and pervasive use of seriality in nineteenth-century science. The articles covered the fields of medicine, astronomy, archeology, physics and paleontology as they were studied in Europe. See Alex Csiszar, 'Seriality and the Search for Order: Scientific Print and its Problems during the Late Nineteenth Century', *History of Science* 48, no. 3–4 (2010): 399–434; Volker Hess and J. Andrew Mendelsohn Hess, 'Case and Series: Medical Knowledge and Paper Technology, 1600–1900', *History of Science* 48, no. 3–4 (2010): 287–314; Nathan Schlanger, 'Series in Progress: Antiquities of Nature, Numismatics and Stone Implements in the Emergence of Prehistoric Archaeology', *History of Science* 48, no. 3–4 (2010): 251–85; Chitra Ramalingam, 'Natural History in the Dark: Seriality and the Electric Discharge in Victorian Physics', *History of Science* 48, no. 3–4 (2010): 371–98. See Axel C. Hüntelmann, 'Seriality and Standardization in the Production of "606"', *History of Science; An Annual Review of Literature, Research and Teaching* 48, no. 3–4 (2010): 435–60; Marianne Sommer, 'Seriality in the Making: The Osborn-Knight Restorations of Evolutionary History', *History of Science* 48, no. 3–4 (2010): 461–82.

¹⁸¹ Hopwood, Schaffer and Secord, *Seriality*, 252.

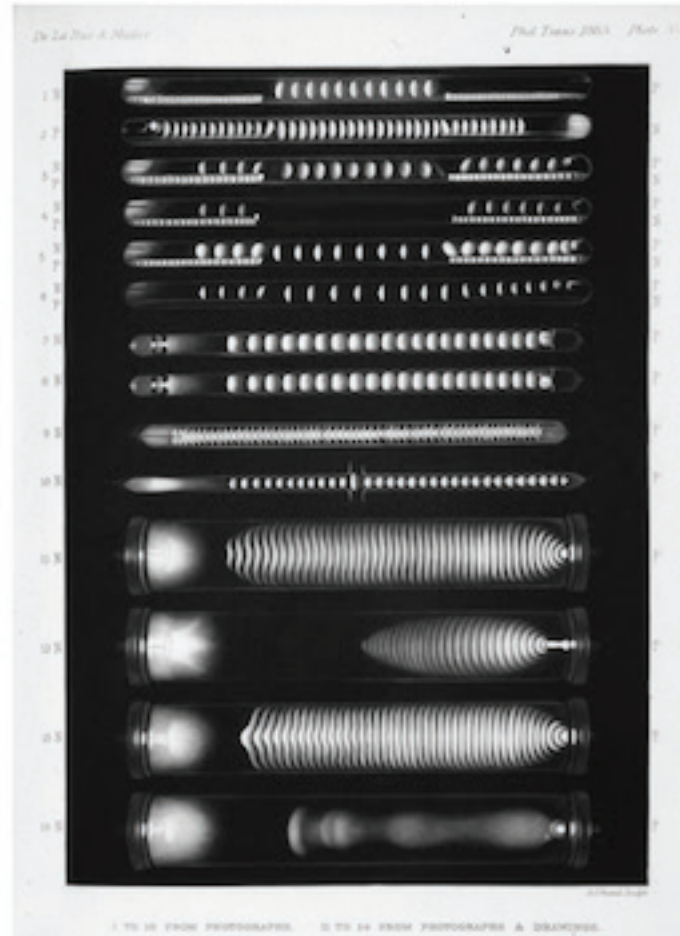


FIG. 1. Photographs of electric strata, arranged in series. From Warren De la Rue and Hugo Müller, "Experimental researches on the electric discharge with the chloride of silver battery. Part IV", *Philosophical transactions*, cxxix (1883), 477–517, Plate 35. Reproduced by kind permission of the Syndics of Cambridge University Library (shelfmark T340.1.8.85, vol. 74).

If in the search for a solution of the mystery of electricity there be one element more deserving our attention rather than another, it is that of time.... All operations of nature take place in time. It is in the time-sequence of phases, often apparently simultaneous, but in reality successive, that we may hope to strike the origin of many complicated phenomena. Time is the ocean beneath whose waves and whose currents the secret fountains of truth are to be sought. Time is the ocean whose mighty stream encircles our life. Time is the ocean whose 'countless smiles' gave birth to Venus and the Nereids and all the infinite forms of beauty and brightness which play around our youth. Time is the ocean from whence sprang also the steeds of Neptune, typical of the strength of our more mature years. Time is the ocean in whose loving arms we fall asleep, when the sun sinks low on the horizon, and the shades of night are creeping over the heavens, and all things tell us that our course is run.⁴

Spottiswoode's ode to the importance of time as an element in experimental physics juxtaposed temporalities in a peculiar way: the minute "time-sequence of phases" making up the structure of electrical events, the perceived instantaneity behind which those phases were concealed, the life cycle of the individual, and the cosmological time of humankind. His was not the only prominent voice at the BAAS meeting to call for scientists to grapple with many time-scales at once. Three days earlier Spottiswoode's close friend and fellow X Club member, Thomas Henry Huxley, had delivered the first evening address. This provocative lecture on "The rise and progress of palaeontology" also pinned the future of science on the piecing together of sequences of events that occurred over time-scales incomprehensibly remote to ordinary experience.⁵ Surveying the previous five decades of palaeontology for this anniversary occasion, Huxley called attention to an important transformation in the aims of stratigraphy, the science that concerned itself with the order of the successive layers of the earth's surface. In those fifty years, the stratigraphic sequence had been decisively temporalized. Geological strata were now routinely deciphered not as elements of a static, spatial arrangement but as items in a chronological sequence, a serial record of the history of the earth. It was now beyond doubt, he declared, that the spatial succession of strata and their characteristic fossil contents attested to a historical succession of animal and vegetable species over millions of years. The task of the modern palaeontologist was to uncover the relationships between the successive species, "by comparing, stage by stage, the series of forms presented by one and the same type throughout a long space of time."⁶ The ordering of a contingent sequence of events in time was, of course, the distinctive method of history, and Huxley quoted Buffon approvingly on the parallels between "civil history" and natural history, both of which served as "our only means of fixing some points in the immensity of space, and of setting a certain number of waymarks along the eternal path of time."⁷

Producing a sequential account of the events making up an inconceivably rapid electric discharge required profoundly different methods from those necessary to tackle the vast expanse of geological time. But attending to Huxley and Spottiswoode's

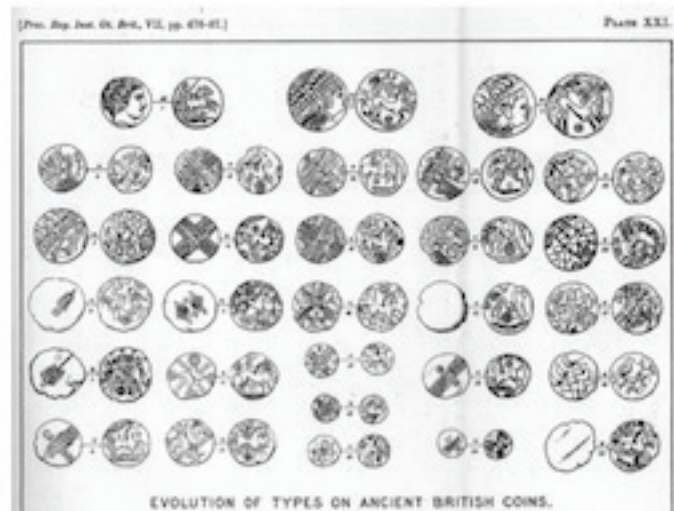


FIG. 6. "Evolution of types on ancient British coins", reproduced from John Evans, "The coinage of the Ancient Britons and natural selection", *Notices of the proceedings of the Royal Institution of Great Britain*, vii (1875), as Plate XXI in Pitt Rivers, "On the principles of classification adopted in the arrangement of his anthropological collection, now exhibited in the Bethnal Green Museum", *Journal of the Anthropological Institute*, iv (1874), here reproduced from Pitt Rivers, *The evolution of culture and other essays* (Oxford, 1906).

The series began (items 1–11 in Figure 7) with the Drift type, with specimens from Saint-Acheul, from England and Europe, and beyond from Babylonia, Madras and the Cape of Good Hope. Instead of their usual classification as "pointed" and "oval", Pitt Rivers proposed "a distinction more clearly embodying a principle of progress" according to their hafting potential (base left rough; items 1–7, or worked, items 8–11). It was however form (or rather outline) that let him conjecture a gradual transition from the Drift to the Celt type (beginning with item 12, from Cissbury): "By selecting specimens, and arranging them in order from left to right, I have endeavoured to trace the transition from the drift type to the almond-shaped celt type", showing how "almost imperceptibly" they pass through "numerous gradations of form", so that, "in casting the eye from left to right along the upper row of diagram No. 1 (Plate XII), it will puzzle the acutest observer to determine where the Drift type ends, and that of the celt begins".⁸ Upon this visual sweep, Pitt Rivers appears to have touched on the essence of seriality:



FIG. 7. "Transition from the Drift to the Celt type", Plate XII (diagram 1) in Pitt Rivers, "Primitive warfare, Part II: On the resemblance of the weapons of early man, their variation, continuity, and development of form", *Journal of the Royal United Services Institution*, xii (1868), reproduced from Pitt Rivers, *The evolution of culture and other essays* (Oxford, 1906).

I have dealt somewhat at length upon this part of my subject, owing to the circumstance of its presenting some features of novelty in the study of flint implements, and being therefore open to criticism on the part of those who are more favourable to the principles of classification than of continuity, with all the important concomitants, of division *versus* unity, which those principles involve.⁹

CONCLUSION: SERIAL CONTINUITIES IN PREHISTORIC ARCHAEOLOGY

Evans could not let such claims go unchallenged. His 1872 *Ancient stone implements* included some specific rejoinders to Pitt Rivers.¹⁰ The radical distinction between Drift and Celt implements was adamantly maintained on technological, morphological and functional grounds. Far from "affording every link of connexion", the supposedly transitional types identified by Pitt Rivers at Cissbury were explicitly rejected as mere coincidence among a mass of unmistakably Neolithic forms. Evans also called on visual impressions, but in his case to assert that "a glance at the figure will at once show how different in character they are", in shape and in mode of manufacture. They exhibited a "complete gap between the River-drift and the Surface Stone Periods, so far as any intermediate forms of implements are concerned", a gap that in turn reinforced the historicist hypothesis of a complete population replacement between the Palaeolithic and Neolithic inhabitants of the country.¹¹

Together with that, Evans remained ambivalent about the wider expectations of continuous evolution championed by Pitt Rivers. Attentive as he was to variability in stone implements, we have already recorded his predilection, derived from numismatics, for expedient interpretations in terms of manufacture or of function rather than history and development. He thus considered it "unwarrantable" (with respect

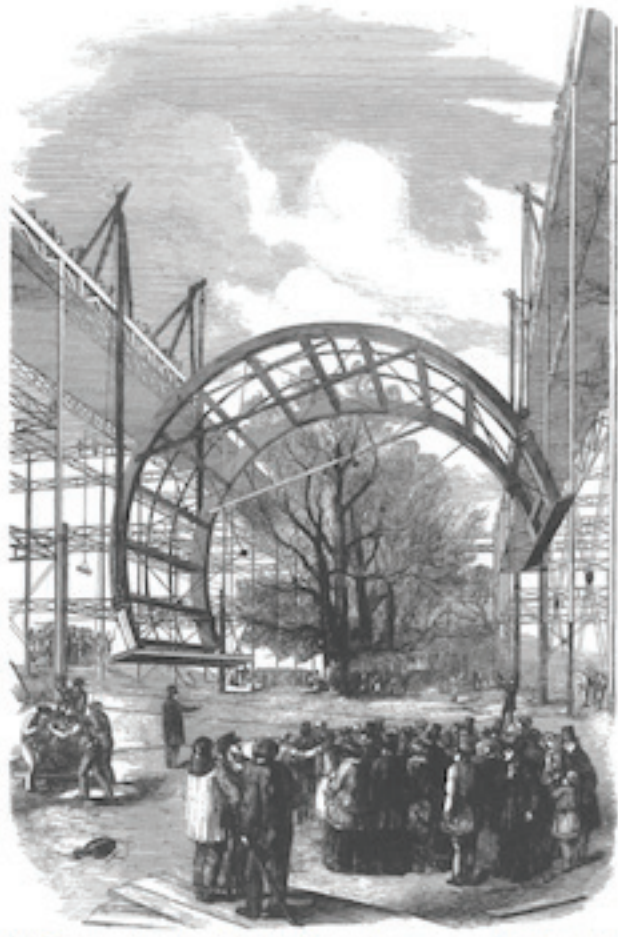


FIG. 6. The experience of seriality in exhibitions. In this wood engraving, a group of onlookers in London's Hyde Park marvel at the pioneering use of modular construction in building the gigantic iron and glass structure that would become known as the 'Crystal Palace'. The *Illustrated London news*, with its large format pictures, offered middle-class families a sense of direct participation. From *Illustrated London news*, xvii, issue of 14 Dec. 1850, 453.

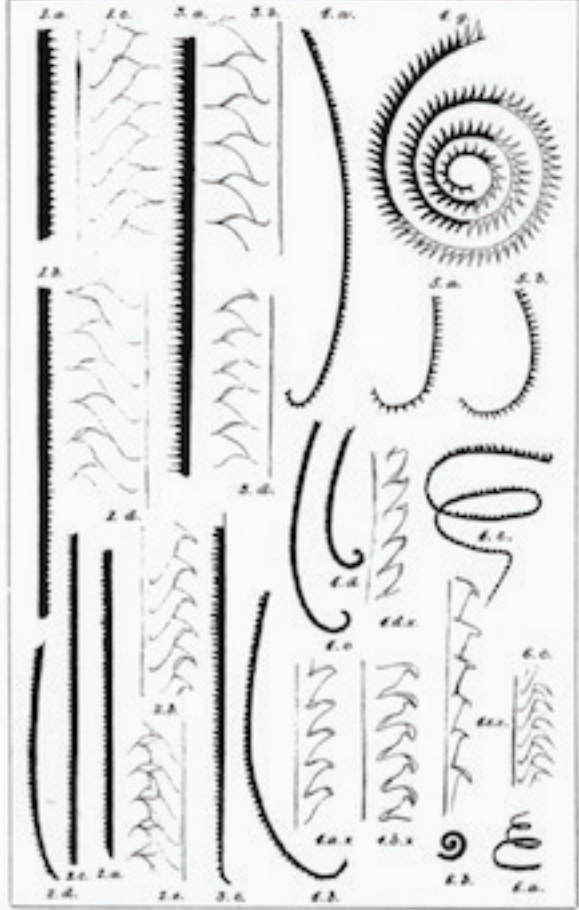


FIG. 7. Graptolites from the Lower Palaeozoic of Scotland, as illustrated by the geologist Charles Lapworth. Close study of slightly varying forms of these obscure fossils made it possible to trace sequences of strata with great precision during the final decades of the nineteenth century. Later work attempted to order the forms in evolutionary series. From Charles Lapworth, "On Scottish Monograptidae", *Geological magazine*, 2nd decade, iii (1876), Plate 13, by permission of the Syndics of Cambridge University Library.

Figure 2.14: Scientific illustration used to make visual arguments

Ramalingam, Chitra. 'Natural History in the Dark: Seriality and the Electric Discharge in Victorian Physics'. *History of Science* 48, no. 3–4 (2010): 371–398.

Schlanger, Nathan. 'Series in Progress: Antiquities of Nature, Numismatics and Stone Implements in the Emergence of Prehistoric Archaeology'. *History of Science* 48, no. 3–4 (2010): 343–

2.14). Importantly, while Hopwood, Schaffer and Secord point out that in the history of science, serial ordering and its creation of visual 'arguments' lead to 'claim making', seriality was as important to illustrate 'gaps and discontinuity as much as continuity'.¹⁸² Aligned to the notion of seriality was the development of cataloguing through statistical analysis, with the first statistical dictionary produced in 1884.¹⁸³ These notions are Anglo-centric but also serialisation is commonplace in nineteenth French education, where, for instance, engineers were 'classed, ranked, and placed in numerical order from their entrance exams to their daily mathematics drills and military exercise'.¹⁸⁴ Hopwood, Schaffer and Secord state that the nineteenth-century English, French and German scientific uses of the term 'series', *série* and *reihe* correlate. Schlager argues for the transposition of serial methodologies between the disciplines where the practices of scientific inquiry were 'transformed, amplified, indeed naturalized [and] found their way back into the methods of human history'.¹⁸⁵

This chapter's survey of print and scientific practices in the nineteenth century, produced contemporaneously to the urbanisation and industrialisation of the Western Australian goldfields, illustrates the different uses of seriality in production and reception of images and texts during this period. The organising of information, and important images, together on the pages of journals and across issues of magazines, constructed narratives, made arguments, pointed to continuity and differences as well as creating methods of classification. The serialisation of images and text was an integral part of print culture and shaped reading practices and the reception of printed matter. These modes of production and reception informed how the images and text produced in the Western Australian goldfields were considered for this study.

The second area of focus in this chapter's discussion on series, serials, seriality and the sequential is the use of these terms in art history and theoretical discourse beginning in the 1960s. This subsection will locate seriality in a number of disciplines and, due to the emphasis of the case studies on photographic material,

¹⁸² Ibid., 253.

¹⁸³ Briggs, *Victorian Things*, 36.

¹⁸⁴ Tresch, 'The Order', 319.

¹⁸⁵ Schlanger, 'Series in Progress', 344.

how these terms were deployed in relation to this visual medium. Artist and critic Mel Bochner, in his text 'The Serial Attitude' (1967), notes a broad range of artists and the examples of their work, across time, genres and media, that 'employing serial logics'.¹⁸⁶ Drawing on photography, drawing, painting and sculpture, Bochner cites Edward Muybridge's photographs, Thomas Eakins' drawn perspective studies, Jasper Johns' numerals, Alfred Jensen's polyptychs, Larry Poons' circles, dots and ellipsoids, Donald Judd's painted wall pieces and Sol LeWitt's orthogonal multi-part floor structures as divergent examples of these 'logics'.¹⁸⁷ A definition of these 'logics' is not provided. A similar diversity of 'serialities' can be found in painting where the concept of 'painting in series', John Klein points out, has a long history citing work as earlier as Camillo Pissarro and Andre Derain in the 1890s and extending through to Yves Klein, Andy Warhol and Roy Lichtenstein.¹⁸⁸ John Coplan, in the introduction to his catalogue on serial painting, locates its beginning with Claude Monet (and notes that serial aspects of Monet's work parallel the most advanced serial mathematics theories of the artist's time) and tracks modernist seriality through the work of Marcel Duchamp, the poet Gertrude Stein, Piet Mondrian, Warhol, Frank Stella and Josef Albers, among others.¹⁸⁹ Sandra Kaji-O'Grady locates the beginning of seriality in art and architecture with the 'total serialism' of the composer Pierre Boulez. She notes that the 'highly artificial procedures' of serialism were subsequently adopted in the visual arts in the late 1960s in the work of artists such as LeWitt, Bochner, Judd, and Hanne Darboven.¹⁹⁰ In locating the theoretical architecture practices of John Hedjuk and Peter Eisenman, Kaji-O'Grady notes that 'seriality and repetition' was shared during this period by artists, composers, choreographers and philosophers.¹⁹¹ Kaji-O'Grady notes exhibitions of serial art included *Art in Series* (1967), *Serial Imagery* (1968), and *Systemic Painting* (1966), which featured work by LeWitt, Robert Morris, Judd and Bochner, among others, and notes the critical

¹⁸⁶ Mel Bochner, 'The Serial Attitude', *Artforum* 6, no. 4 (December 1967): 28.

¹⁸⁷ *Ibid.*, 28.

¹⁸⁸ John Klein, 'The Dispersal of the Modernist Series', *Oxford Art Journal* 21, no. 1 (1998): 123.

¹⁸⁹ Coplan, *One of a Kind: Contemporary Serial Imagery* (Los Angeles: Los Angeles Municipal Art Gallery, 1988), 11.

¹⁹⁰ Sandra Kaji-O'Grady, 'Chapter 8: Formalism and Forms of Practice', in *The SAGE Handbook of Architectural Theory*, eds. Greig Crysler et al. (SAGE Publications, 2012), 152.

¹⁹¹ Sandra Kaji-O'Grady, 'Architectural Serialism', *Architectural Theory Review* 3, no. 2 (1998), 17–31.

contributions to serial art in essays in the art journal *Artforum* by Coplans (1968), Bochner (1967) and Krauss (1971).¹⁹² In Ian Pepper's exploration of the differences between serialism and seriality, while acknowledging that the literature on usage of term 'serial' in contemporary art could be 'extended almost indefinitely' and that the definition of the term is not 'characterized by consistency', offers these distinctions for the production of painting, sculpture and drawings:

1. uninflected repetition of a unit
2. repetition of a unit involving progression determined by a proportional or other developmental schema
3. painting in series—
 - a. variations on a theme
 - b. the structural interdependence of an ensemble of works
4. seriality as the mechanical production of identical objects
5. seriality as a method for permuting a set of items.¹⁹³

Pepper's attempts to define notions of seriality provide a useful clarification of the artistic modes of production and locate more specifically many of the artists loosely cited by Bochner, Klein, Coplan and Kaji-O'Grady. Using Pepper's schema, Monet, Mondrian and Stella might be categorised as serial painters who completed variations on a theme while Warhol's seriality might straddle the first and fifth definitions with his desire for machine-like production but through the imperfect medium of the silkscreen. Pepper's distinctions will be drawn on in the conclusion of this section to help define the working definitions of 'series', 'serial', 'seriality' and the 'sequential' as they are used in the thesis. Further, as illustrated by the breadth of artists cited, the critical evaluation of seriality was not limited to contemporary artists but also looked back to historical figures such as Impressionists painters like Monet and Modernists such as Albers. The inclusion of nineteenth-century photographer Muybridge in these assessments of serial practices points to similar appraisal, categorisation and, in the case of historical

¹⁹² Kaji-O'Grady, 'Formalism and Forms of Practice', 158.

¹⁹³ Ian Pepper, 'On the Difference between Serialism and Seriality' (PhD, Graduate School of Arts and Sciences, Columbia University, 2010), 114.

image-makers, re-evaluation that occurred more broadly in photography at the same time in the late 1960s. This is not surprising given that an argument can be made that photography, partly due to aspects of the medium's technological and scientific development, is the most serial of all modes of expression. This seriality is to be found in the nature of medium's technology (both analogue and digital), its archival and commercial practices and the mechanical production (and reproduction) of images. However, from at least photography's 'modernity', there has existed a tension between the medium's serial and singular aspects. As illustrative of this tension, curator Joel Smith argues against what he considers the 'undue importance' of 'the moment' in photography and the emphasis on the individual photograph as a 'discreet autonomous unit'.¹⁹⁴ In contrast, curator Sophie Howarth rails against this type of 'serial image' and posits that from the 1960s, the medium's interest in its own seriality, as illustrated through the photographic images of Warhol, Ed Ruscha, Bernd and Hiller Becher or Gerhard Richter, resulted in the autonomy of the single image being lost¹⁹⁵ (Figure 2.7).

In discussing the serial in photography, curator Joel Smith, in a special issue of the *Record of the Art Museum, Princeton University* offers a loose definition of photographic seriality where it takes the form of a collection of 'images composed, exposed, printed, and assembled so as to agree with regard to viewpoint, subject matter, formal character, scale, and type of print'.¹⁹⁶ Smith suggests that these broad definitions are only useful to a point; in the examples he cites (the Bechers, Muybridge, Alfred Stieglitz), the 'image-to-image continuity serves a different function in each series, urging the viewer toward a distinct reading of the

¹⁹⁴ Joel Smith, 'More than One: Sources of Serialism', in *More than One: Photographs in Sequence*, ed. Joel Smith (New Haven and London: Yale University Press, 2008), 9–10. Smith is presumably railing against the term 'the decisive moment' coined by the photographer and co-founder of the Magnum photo-reportage agency Henri Cartier Bresson who described 'the decisive moment' as 'The simultaneous recognition, in a fraction of a second, of the significance of an event as well as the precise organization of forms which gives that event its proper expression'. Henri Cartier-Bresson, *The Decisive Moment* (New York and Paris: Simon and Schuster & Editions Verve, 1952), not paginated.

¹⁹⁵ Sophie Howarth, 'Introduction', in *Singular Images: Essays on Remarkable Photographs*, ed. Sophie Howarth (New York: Aperture, 2004), 8.

¹⁹⁶ Smith, 'More than One', 12.



Figure 2.7: Photograph's interest in seriality as illustrated through the photographic images of Bernd and Hilla Becher

'Winding Towers', Bernd & Hilla Becher, 1966–97, (Object number: 343.2010.a-i) The Museum of Modern Art, New York

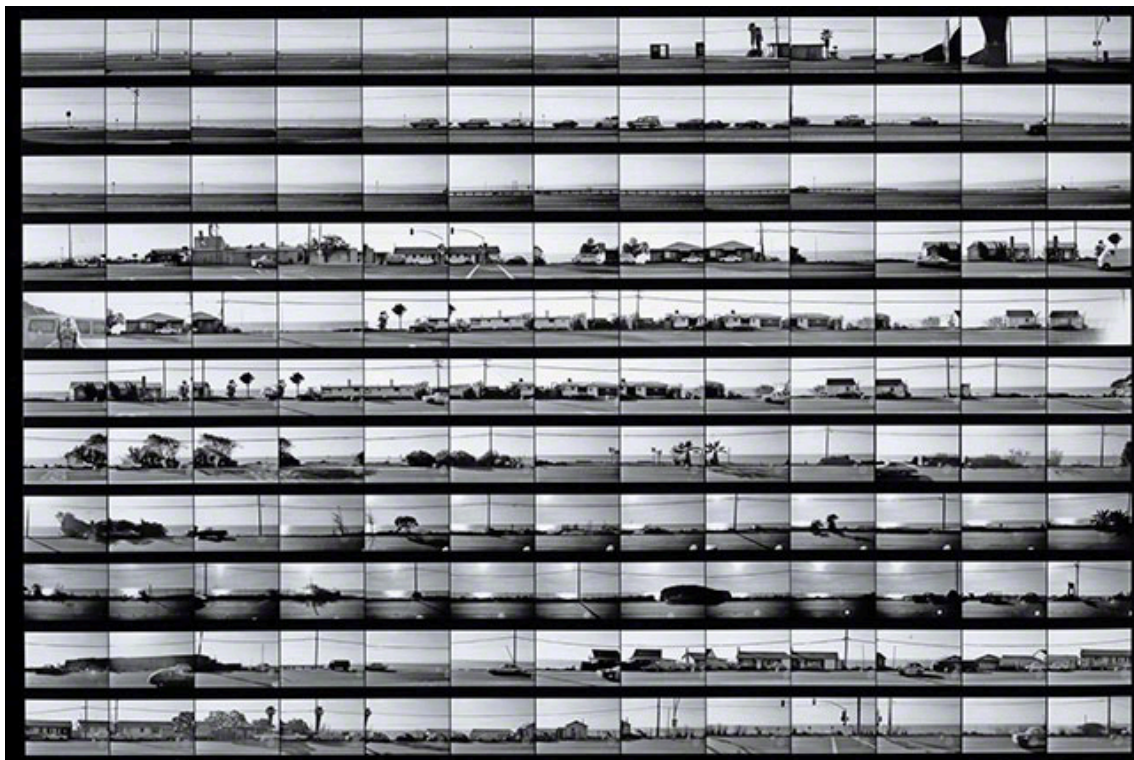


Figure 2.8 The display of the accumulated image data as an 'overall matrix.'

Contact sheet for Pacific Coast Highway, negatives 1974, printed later, Ed Ruscha, (Object Number: 2012.M.1.1) Promised gift of Ed and Danna Ruscha to The Getty Research Institute, 2012

whole'.¹⁹⁷ This leads to Smith offering four different starting points for the consideration of several 'serialities' of photographic production:

1. inheritance and adaptation
2. sequences of intention
3. cumulative versus sequence
4. extended proofs.

Firstly, in Smith's mode of 'inheritance and adaptation' photography 'inherited' a number of pictorial traditions and modes of commercial production from other media (such as popular lithographic portfolios) whose place in the market photography complemented and, in some instances, sort to replace. In this mode, Smith argues for a seriality generated by the broad consistency of photographic production where there exists a 'generic resemblance of each view to all the others' made by the photographer or studio because production conformed to a house 'style' across a range of images.¹⁹⁸ Smith illustrates this with the images of commercial British photographer Francis Firth and his eponymous 'Firth's Series' of photographic albums where a view of Paris or Jaipur would appeal to the same taste of a customer perusing a mail order catalogue. The successful nineteenth-century commercial practices of Édouard Baldus and Hippolyte Collard might also be located in this category where assistants often replicated the photographic approach style of the studio founder.

Emerging out of this 'generic' mode, Smith's second category of serial production argues for the seriality of the photographer who set out with an 'explicit intention to compile an extended, integral body of imagery'.¹⁹⁹ Smith illustrates this notion of seriality with Eugene Atget's lifelong documentation of Paris as well as Bernice Abbott's four-year project documenting New York and the more contemporary work of Lee Friedlander. This 'generic seriality' could equally apply to Firth and Atget's contemporaries such as Charles Marville who, according to Peter Barberie, 'arrived at a method of applying more or less uniform compositional formulas to extended topographical documentary projects comprising dozens or hundreds of

¹⁹⁷ Ibid., 11–12.

¹⁹⁸ Ibid., 14.

¹⁹⁹ Ibid., 16.

photographs each'.²⁰⁰ Marville appeared to be keenly aware of the seriality of his own photographic production as his photographs appear to have been made in a 'manner highly conscious of the archives to which he was contributing, the final format that the images might collectively take and how they might be exhibited'.²⁰¹ Despite the ambiguous authorship of the final albums in which Marville's images were collected, it would appear that Marville was 'self-conscious of the vision of a city' in service of the Ville de Paris that he was creating even in the making of individual images.²⁰² This type of serial practice might also be extended to the contemporary 'photographic projects' of artists like Bernd and Hilla Becher whose documentation of industrial structures, according to Hal Foster, Krauss, Yves-Alain Bois and Benjamin Buchloch, embraced the principle of the 'sequential or the serial image'.²⁰³ The authors cite conceptual artist Carl Andre's interest in the work of the Bechers because, much like this own work, there existed 'compulsive attention to serial repetition'.²⁰⁴ This repetition can be seen in both the production and the reception of the Bechers' work. For instance, Sarah James describes the couple's disciplined form of expression resulting from a 'strict adoption of a constant, straight, composition [that was] unchanged over nearly half a century'.²⁰⁵ James notes that this approach standardised the location of the photographers in relation to the subject, the nature of the lens, the format of the camera, the frontal presentation and framing of the structures, the time of year as well as the weather conditions under which the images were made—what Suanne Lange notes as a 'continuity of conditions'.²⁰⁶ With regard to the exhibition and publication of the work, Foster et al. note that the Bechers' 'emphasis on repetition, seriality, minute inspection, and structural differentiation was achieved' by the way they arranged

²⁰⁰ Peter Barberie, 'Charles Marville's Seriality' (Record of the Princeton University Art Museum, 2008), 31.

²⁰¹ Philip Goldswain, 'Picturing a City: Charles Marville's Albums of Paris', in *Urban Portraits in Photographic Books*, eds. Susana M. Martins and Anne Reverseau (Belgium: Leuven University Press, 2016), 219.

²⁰² *Ibid.*, 219.

²⁰³ Hal Foster et al, *Art since 1900: Modernism, Antimodernism, Postmodernism* (Thames and Hudson, 2005), 521.

²⁰⁴ *Ibid.*, 522.

²⁰⁵ Sarah E. James, 'Subject, Object, Mimesis: The Aesthetic World Of The Bechers', *Photography, Art History* 32, no. 5 (December 2009), 875; Susanne Lange, 'Chapter 6: Bernd and Hilla Bechers' Photographic Techniques and Methods', in *Bernd and Hilla Becher: Life and Work*, ed. Susanne Lange, trans. Jeremy Gaines (Cambridge, MA: MIT Press, 2006).

²⁰⁶ *Ibid.*, 875–76.

their images as ‘pristine, grid like taxonomies by which to present the minute structural differences between each of their examples’.²⁰⁷ The Bechers’ work invites the viewer to look between the images, and because of the photograph’s rigorous compositional similarity, organisation into the grid allows easy visual comparison between industrial structures they record. The viewer can understand comparable details in images, and the selection of the images placed in the grid means that there is enough change between each of the structures to register the difference. In further differentiating the reception of the Bechers’ images, Chris Balaschak points to the differences between the format of the exhibited and published work.²⁰⁸ When produced in a book, with a single image to a page, Balaschak notes that the work is read ‘sequentially’ (Figure 2.9). In contrast, in an exhibition, the grid of photographs on the wall can be read ‘serially’.²⁰⁹ Bernd Becher these difference between these modes of display as the difference between ‘storytelling’ and the ‘systematic’ reading²¹⁰ (Figure 2.10). The distinction between the modes of reading photographs via their methods of presentations suggests that there are different ways to read the same image within different contexts. The Bechers’ work is often located in the context of earlier German ‘serial’ photography such as the work of Auguste Sander, the *Neue Sachlichkeit* (New Objectivity) movement, Karl Blossfeldt’s documentation of plants and Albert Renger-Patzsch industrial imagery. Flora Valadié, in drawing connections between the Sander’s documentation of the German people for his project *Face of Our Time* and other modes of early seriality suggests that, as well as the series being a ‘harbinger of modernism’, the series:

Tells a story of its own: far from being only an endless repetition of details, it bears a narrative dimension as it necessarily unfolds in time, it is also made of variations, and has a specific mode of composition.²¹¹

²⁰⁷ Foster et al, *Art since 1900*, 523.

²⁰⁸ Chris Balaschak, ‘Between Sequence and Seriality: Landscape Photography and its Historiography in *Anonyme Skulpturen*’, *Photographies* 3, no. 1 (2010): 24–47.

²⁰⁹ Balaschak, ‘Between Sequence and Seriality’, 36.

²¹⁰ *Ibid.*, 36.

²¹¹ Flora Valadié, ‘Serial Production, Serial Photography, and the Writing of History in Three Farmers on Their Way to a Dance’, *Transatlantica* 2 (2009): 1–19. Valadié analyses Richard Powers novel’s *Three Farmers on Their Way to a Dance*, which draws on the image of the same name by

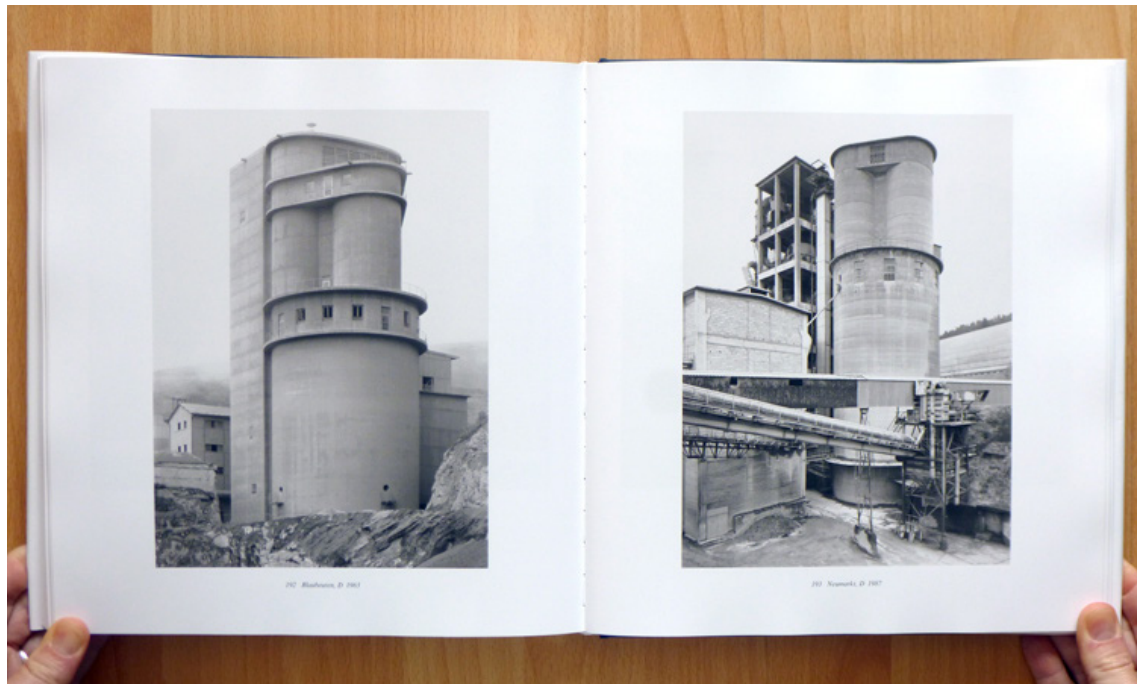


Figure 2.9: The narrative of the book or what Becher calls 'storytelling.'

Double-page spread from Bernd & Hilla Becher, *Water Towers*, (Cambridge, Mass.: MIT Press; c1988)



Figure 2.10: Photographs on the wall are read 'serially', what Bernd Becher describes as 'systematic'

Installation view of the exhibition, 'Bernd and Hilla Becher: Landscape/Typology' The Museum of Modern Art, New York May 21 –August 25, 2008. Photograph by John Wronn

Valadié cites Olivier Lugon, who suggests that the serial form allows the photographer to show that there is a 'pre-existing order in the photographed objects' that diminishes the role of the photographer as author, but whose presence is 'reasserted in the editing of the collection of photographs' into publications like Sander's book project.²¹²

Concerning the way the images are organised into books and exhibitions, Balaschak and Foster et al.'s description of the Bechers' publications and shows are echoed by Smith's third mode of serial production. Here, Smith looks to the methods of combining and presenting multiple images into published material.²¹³ The emphasis is on the format and display of the accumulated image data as an 'overall matrix' rather than the 'visual data in any one image'.²¹⁴ Citing Ruscha's books and Robbert Flick's 'sequential views', grid-like structures that the artist described as 'a framework, a pattern of movement and map', Smith draws comparisons between these methods of images presentation and the survey photography of O'Sullivan's expedition in the mid-1800s (Figure 2.8).²¹⁵ Unlike the Bechers' use of the grid as a comparative tool where the associations between images might be made horizontally or vertically, Flick's are read sequentially, left to right, top to bottom, constructing a photographic narrative across a traverse section of landscape. Ruscha's *Every Building on the Sunset Strip* (1966), in its deadpan documentation of both sidelines of the eponymous Los Angeles street, offers a comparable narrative as the viewer 'reads' the book, either page by page or unfolding its singular accordion panoramic spread, as a continuous description.

The last of Smith's definitions of seriality, 'Extended Proof', is illustrated with the work of contemporary artists Duane Michals and John Baldassari who investigate the potential of the printed page as a space where 'combining images in configurations that question or reinvent the operations of visual

photographer August Sander while discussing the work of Walter Benjamin and the serial car manufacturing of Henry Ford. Flora Valadié, 'Serial Production', 2.

²¹² Flora Valadié, 'Serial Production', 5.

²¹³ Smith contrasted with a single 'layered' image, such as those created by Etienne-Jules Marey, where multiple timed exposures are combined into a single image.

²¹⁴ Smith, 'More than One', 23.

²¹⁵ Ibid., 23.

communication'.²¹⁶ Here, Smith locates the seriality's focus on the artistic application of selected archival material and its reorganisation into new meaningful sequences in the artificial unity of the book to create 'narrative sequences'.²¹⁷ Smith notes that in this artistic practice, within the 'verbal-visual universe of the page, the recombinant photograph' offers a range readings from the 'immediacy of the image and the notional inexhaustibility of the series'.²¹⁸ Similarly, photographic historians like Sandweiss and Trachtenberg note 'serial' relationships in earlier image-based publications. Sandweiss notes that when 'public images' are arranged into what she calls 'serial images', where groups of images are organised and published together on a page, the images take on 'added meaning' and become able to 'narrat[e] more complex stories through their relationship with other images'.²¹⁹ Trachtenberg also suggests that the organisation of the work of commercial photographers into 'constructions, groups or images shaped or edited as albums, books or photo-stories' can be used as 'another resource ... for making sense of ... life in front of the lens'.²²⁰

A summary of the discussion of the usage of the terms 'series', 'serial', 'seriality' and 'sequential' will draw together the strands of broad discussion and define how they will be used in the thesis to frame Chapter 4 and the case studies presented in Chapters 5 to 7. Four definitions of these terms are proposed that define the production of images, the publication of photo-textual material and the reception of photo-textual material. A final fourth definition and usage of the terms extend the notions of serial organisation to inform the research methodology. Firstly, in drawing on Pepper's definition of 'painting in series', where an artist might complete 'variations on a theme'²²¹ and Smith's suggestion of 'generic resemblance'²²² and 'intentional' approaches of serial practice,²²³ it is proposed that the 'serial production' is used to describe a mode of the creation of photographic images. Utilising James and Barberie's assessment of types of 'serial

²¹⁶ Ibid., 25.

²¹⁷ Ibid., 28.

²¹⁸ Ibid., 28.

²¹⁹ Sandweiss, *Print the Legend*, 8.

²²⁰ Trachtenberg, *Reading American Photographs*, xv.

²²¹ Ian Pepper, 'On the Difference', 114.

²²² Smith, 'More than One', 14.

²²³ Ibid., 16.

production' in a reconsideration of the work of goldfields' photographers allows the research process to scrutinise their work anew. It offers the opportunity to consider where photographers located their cameras, which locations they return to repeatedly, how they framed the same subject on different occasions, what was excluded from the frame, how individual images might have sat in the broader archive of their commercial practice and how the creation of images was made in anticipation of their future publication.

Secondly, working from concepts utilised in the study of Victorian print culture as well as approaches of display used in contemporary art, it is proposed that the term 'serialisation' be used to describe the organisation of photo-textual material on a printed page, within and across a publication or across several issues of a publication to construct a narrative. The research is interested in the manner in which the 'serial' organisation of images on and across the 'verbal-visual universe' of the page creates a narrative about a place.²²⁴ It is only when these images, drawn from an 'archive', are organised onto the page that some degree of fixity of meaning is attached to them. This process of organisation means that images, either drawn from an existing archive or commissioned for a specific publication, are 'serialised' as they are arranged together and 'worked into arguments'.²²⁵ This serialisation of images can be further differentiated when considering the specifics of how images are composed on the page. Repeated, singular images on a page, one following another, are defined being in a 'sequence' or being 'sequential' and, drawing on Balaschak's definition, they build a narrative or privilege 'storytelling'.²²⁶ Again, drawing on notions used in nineteenth-century print culture, this type of organisation produces a 'layering effect' over time, putting down 'first one layer of story then another as part succeeded part'.²²⁷ This is distinguished from the more complex grouping of multiple images on a page, across a double-page spread, or together in a publication. Drawing on Hughes and Lund's suggestion that the components of publications were 'not always a self-contained ... entity' but imbedded in 'material framework that shaped responses',

²²⁴ Ibid., 28.

²²⁵ Hopwood, Schaffer and Secord, *Seriality*, 252.

²²⁶ Balaschak, 'Between Sequence and Seriality', 36.

²²⁷ Hughes and Lund, *The Victorian Serial*, 6.

this manner of organising multiple images across multiple pages is described as 'extended serialisation'. This coincides with the Bechers' description of their grid assemblies as a 'systematic' mode of visual comparison.²²⁸ As Hughes and Lund suggest, multiple images on a page generated 'complex, multifarious response[s]'.²²⁹

As can be seen from the defining of 'sequencing' and 'extended serialisation' of images and text across the print page, the publication of these images is intrinsically linked to their reception. This leads to the third distinction and definition: the 'serial reading' of photo-textual material by its audience. Drawing on Law and Patten, this definition looks to the reception of the serialised or sequenced material and the 'psychology of serial reading' of the early to mid-nineteenth century.²³⁰ This definition of 'serial reading' builds on Hughes, Lund and Tresch, who note that the serial was 'a literary form attuned to the fundamental tendencies in the age at large'²³¹ as well as a component of a greater 'serial imagination of society'.²³² In trying to discern meaning from the material under examination, an understanding of the audience's 'reading process' is significant.

Fourth and finally, in addition to the definitions drawn from historical and the contemporary notions of serials and seriality, the investigation of these terms has informed the methodology of the research in two ways: firstly, in analysing the organisation of images on a page, across pages or across an issue of a newspaper (or multiple issues) to discern narrative or understand change, which is defined as the 'serial interpretation' of multiple images. Secondly, drawing on Hopwood et al., the term 'serial reorganisation' will be used to describe how the restructuring of historical visual data assists in its analysis and to make arguments in the research for the nature of the change in Kalgoorlie, Boulder and the Goldfields. This will be done while noting that visual 'arguments' lead to 'claim making', that the orderly

²²⁸ Balaschak, 'Between Sequence and Seriality', 37.

²²⁹ Hughes and Lund, *The Victorian Serial*, 10.

²³⁰ Law and Patten, 'The Serial', 147.

²³¹ Hughes and Lund, *The Victorian Serial*, 6.

²³² John Tresch, 'The Order of the Prophets: Series in Early French Social Science and Socialism', *History of Science* 48, no. 3-4 (2010): 317.

organisation of images was as important to illustrate 'gaps and discontinuity as much as continuity',²³³ and the use of organisation formats such as grids in diverse sources from nineteenth-century scientific journals to the Bechers' industrial typologies.

Maps and Mapping

This section will discuss and analyse cartography as the second representational medium that the thesis and its case studies investigate to help in understanding boom urbanism. This survey of 'critical cartography' explores the relationship between cartography and its 'truth value', how maps produce knowledge and how they were circulated and used. This section looks to the frame maps, the evaluation of cartography that began in the late 1980s and the more recent consideration of the 'process of mapping' to inform how the cartographic representations of Kalgoorlie, Boulder and the Western Australian goldfields might be understood and help decipher boom urbanism.

Drawing on geographer Brian Harley's classical essay 'Deconstructing the Map', which looked to theories of Michel Foucault, Jacques Derrida and others, identifies the 'cartographic process' and its external and internalised power structures.²³⁴ Harley locates cartography in WJT Mitchell's broader system of 'value-laden images' and equates the discursive language of maps with the 'territorial imperatives of a particular political system'.²³⁵ Several historians of cartography have drawn attention to the power of 'cartographic representation' and its manner of 'building order'.²³⁶ Externally, these structures can be found in the way in which power is brought to bear on cartography and how maps are commissioned. Harley

²³³ Hopwood, Schaffer and Secord, *Seriality*, 253.

²³⁴ As Rueben Rose-Redwood notes, Harley's 'Deconstructing the Map' (1989), initially published in *Cartographica*, was subsequently reprinted in various anthologies, including *Writing Worlds: Discourse, Text, and Metaphor in the Representation of Landscape* (Barnes and Duncan, 1992), *Human Geography: An Essential Anthology* (Agnew, Livingstone, and Rogers, 1996), *Postmodernism: Critical Concepts* (Taylor and Winkler, 1998), *The New Nature of Maps: Essays in the History of Cartography* (Harley, 2001), and *The Spaces of Postmodernity: Readings in Human Geography* (Dear and Flusty, 2002).

²³⁵ J. B. Harley, 'Maps Knowledge and Power', in *The Iconography of Landscape*, eds. D. Cosgrove and S. Daniels (Cambridge: Cambridge University Press, 1988), 280.

²³⁶ J. B. Harley, 'Deconstructing the Map', in *The Map Reader: Theories of Mapping Practice and Cartographic Representation*, eds. Martin Dodge, Rob Kitchin and Chris Perkins, 290. doi.org/10.1002/9780470979587.ch8.

suggests that 'the greater the administrative complexity of the state- and the more pervasive its territorial and social ambitions—then the greater its appetite for maps'.²³⁷ Kitchin and Doge suggest that maps are the 'product of privileged, and formalized knowledges and they also produce knowledge about the world'.²³⁸ Similarly, Cosgrove notes that maps are the 'spatial embodiment of knowledge and stimulus to further cognitive engagements'.²³⁹

Geographer Denis Cosgrove suggest that the construction of 'Western spatiality' has been through the 'acts of visualizing, conceptualising, recording, representing and creating spaces graphically', which, Cosgrove suggests, constitute 'acts of *mapping*'.²⁴⁰ Again, the language that Cosgrove deploys to describing mapping (with the exclusion of the term 'graphically') could equally be applied to the outcomes borne by the acts of photographing. Cosgrove argues for these acts of mapping as being acts of 'imagination and projection, efficacy and disruption' with his interest focusing on the 'process of mapping rather than with maps as finished objects'.²⁴¹ While Cosgrove is less concerned with the object of the map, Corner observes that the map's 'surfaces are massive collection, sorting and transfer sites, great fields upon which real material conditions are isolated, indexed, and placed within an assortment of relational structures'.²⁴²

Pertinent to the manner in which maps are considered methodologically in the thesis, the landscape architect and theorist James Corner proposes two descriptions of maps. The first is a conventional view (and that which could equally be applied to photography) where maps are 'taken to be "true" and "objective" measures of the world, and are accorded a kind of benign neutrality'.²⁴³ Secondly, Corner recognises that 'the other side of this analogous characteristic' is the 'inevitable abstractness of maps, the result of selection, omission, isolation,

²³⁷ Ibid., 287.

²³⁸ Rob Kitchin and Martin Doge, 'Rethinking Maps', *Progress in Human Geography* 31, no. 3 (2007): 331.

²³⁹ Denis Cosgrove ed., *Mappings* (London: Reaktion Books, 1999), 2.

²⁴⁰ Denis Cosgrove ed., *Mappings* (London: Reaktion Books, 1999), 1. Italics are author's original emphasis.

²⁴¹ Ibid., 1.

²⁴² Corner, 'The Agency of Mapping', 199.

²⁴³ Ibid., 199.

distance, and codification'.²⁴⁴ Corner continues 'that maps are highly artificial and fallible constructions, virtual abstractions that possess great force in terms of how people see and act'²⁴⁵ and that 'maps are essentially subjective, interpretative, and fictional constructs of facts'.²⁴⁶

Cosgrove suggests that 'mapping begets further mappings', as formal maps are based on 'prior records' such as sketches but also in the sense that maps 'escape into new circuits of culture' after their completion.²⁴⁷ Kitchin and Dodge draw on (but challenge) the terminology of Bruno Latour's immutable mobile when they argue that although the map has:

The appearance of an immutable mobile—its knowledge and message fixed and portable because it can be read by anyone understanding how maps work—it remains mutable, remade every time it is employed.²⁴⁸

Corner acknowledges 'mappings discover new worlds within past and present ones; they inaugurate new grounds upon the hidden traces of a living context'.²⁴⁹ The usefulness of the ideas of Corner and the 'politics' of mapping to the thesis are that they suggest methodologies, embedded in the language of mapping, through which maps themselves might be understood. The serialisation of maps in Chapter 7, a processes of the 'mapping of maps' to reveal systems of transformation, territorialisation, urbanisation and industrialisation are useful tools in trying to understand the processes of the development of the boom town.

To this end, precedents were sought for the manner in which maps might be investigated to make more apparent the relationship between the urban and mining orders. Corner's insight into the manner in which 'mapping' as a 'critical tool' might be applied to sites to provide new understanding is a useful approach to considering the towns cartographic depiction.²⁵⁰

²⁴⁴ Ibid., 199.

²⁴⁵ Ibid., 200.

²⁴⁶ Ibid., 234.

²⁴⁷ Cosgrove, 'Introduction: Mapping Meaning', in *Mappings*, ed. Cosgrove Denis (London: Reaktion Books, 1999), 12.

²⁴⁸ Kitchin and Dodge, 'Rethinking', 338.

²⁴⁹ Corner, 'The Agency of Mapping', 198.

²⁵⁰ Ibid., 197–240.

Corner advocates critical mapping as a precursor to architectural and landscape design proposals. This involves a number of loosely defined, broad methodologies (perhaps more accurately described as a series of ‘action verbs’) that indicate starting points for the investigation of cartographic material itself. Corner defines the surface of the map as ‘massive collection, sorting and transfer sites, great fields upon which real material conditions are isolated, indexed, and placed within an assortment of relational structures’.²⁵¹ This echoes Alpers’ description, mentioned earlier in this chapter, of aspects of Dutch seventeenth-century cartographically inflected landscape painting upon whose ‘worked surfaces ... is laid out an assemblage of the world’.²⁵² Corner’s language draws on the vocabulary of other disciplines (such as archaeology and the biological sciences) when he argues that mapping is ‘neither secondary nor representational but doubly operative: digging, finding, and exposing on the one hand, and relating, connecting, and structuring on the other’.²⁵³ The exploration of a map through ‘digging, finding, and exposing’ brings to attention ‘various hidden forces’ that underlie the structure of a given place.²⁵⁴ These ‘hidden forces’ that drive the formation of a place, Corner suggests, might take the form of ‘historical events and local stories; economic and legislative conditions; even political interests, regulatory mechanisms’.²⁵⁵ New mappings allow for an ‘understanding of terrain as only the surface expression of a complex and dynamic imbroglio of social and natural processes’ of which re-mapping offers the potential of ‘visualizing these interrelationships and interactions’.²⁵⁶

Corner has three conditions and ‘operations’ for the re-mapping process:

- Field—The flat surface of the map ‘schematically analogous to the actual ground’ as well as the graphic system that it will organise later.
- Extracts—are elements that are observed and then transcribed onto the graphic Field. Corner describes these extracts as ‘selected, isolated, and

²⁵¹ Ibid., 199.

²⁵² Svetlana Alpers, *The Art of Describing: Dutch Art in the Seventeenth Century* (Chicago: University of Chicago Press, 1983), 122.

²⁵³ Corner, ‘The Agency of Mapping’, 209.

²⁵⁴ Ibid., 209.

²⁵⁵ Ibid., 198.

²⁵⁶ Ibid., 198.

pulled out from their original seamlessness with other things; they are effectively deterritorialized'.²⁵⁷

- Plotting—'entails the "drawing out" of new and latent relationships that can be seen among the various extracts within the field'.²⁵⁸

Summary

This chapter has brought together different sets of disciplinary knowledge to establish a number of critical ideas about the historical and theoretical context within which this research about Kalgoorlie, Boulder and the Goldfields takes place. When organised in this manner, the seemingly distinct ideas about development (urbanisation and mining) and representation (photography, mapping and seriality) indicate several overlapping areas and affinities. These include the disruption caused by the mineral-fuelled processes of urbanisation, the photographic recording of this urban growth in its contingent and improvised state, and the serial organisation of images into a 'series' of public images that make arguments and constructive narratives about a rapidly changing place.

²⁵⁷ Ibid., 213.

²⁵⁸ Ibid., 214.

CHAPTER 3: Approach and Parameters

The previous chapter examined several framing concerns for the thesis: the nature of urbanisation in Australia, the role that mineral discovery played in urbanisation more broadly, the constructed nature of photography and cartography as well as notions of the serial, seriality, serialisation and the sequential. The key ideas that emerge from this analysis locate Kalgoorlie, Boulder and the Goldfields in a broader culture of seriality at the end of the nineteenth century, and test how photography might play a role in actively shaping images of a place, as well as the different modes of urbanisation that might occur in a boom town. Chapter 2 also highlighted a number of gaps in existing knowledge and methodologies for the understanding of a place undergoing rapid change, as depicted in photographs, maps and drawings. This chapter defines the parameters and approach utilised by the research to investigate the boom urbanism of Kalgoorlie, Boulder and the Goldfields. By setting out these parameters and approaches, this chapter sets the timeframe for the research, outlines the case study methodology, identifies case study objects and articulates how these objects will be analysed.

A number of parameters define the study. The first parameter establishes the time frame for the research period of 1893–1903 by characterising the development of

the town by many what will be called 'spatialising events'. These spatialising events serve as temporal and spatial landmarks in the development of Kalgoorlie, Boulder and the Goldfields. Secondly, the chapter outlines the use of an additional parameter, the section of photo-textual objects and maps that utilise the 'serialisation' of images to represent these spatialising events, to define the scope of the research. Thirdly, the combination of the spatialising events and their serial representation—as a selection criterion—will allow for the negotiation of the substantial archive of visual material generated during the research period of 1893–1903. A number of photo-textual objects and maps from this reduced scope were investigated for their suitability as case studies from which the final three case study objects were chosen.

The spatial history in Chapter 4 and the case study investigation in Chapters 5-7 are differentiated from one another by the use of the visual analysis techniques that are applied to the case studies. The case study objects that were chosen for this study emerged from the selection process that took place during the spatial history

Spatialising Events

The first parameter was to delimit the time frame for the research period. Here, the time frame was determined by a number of 'spatialising events' that marked the development of the towns. This term has been defined by extending the ideas that were outlined in the previous chapter, which examined how photography and cartography—by recording, defining and imagining—transformed territory into space. While Forster argues that photography and the railway were 'perhaps the nineteenth century's most insidious agent of social spatialisation', the research extends this argument to include other processes of visualisation and infrastructural development to consider in the manner in which these processes and events might similarly have a role to play in the transformation of territory into productive space.¹ By extending this argument, the research extends what

¹ Jeremy Foster, 'Capturing and Losing the "Lie of the Land": Railway Photography and Colonial Nationalism in Early Twentieth-Century South Africa', in *Picturing Place: Photography and the Geographical Imagination*, eds. Joan M. Schwartz and James R. Ryan (London and New York: IB Taurus, 2003, reprinted 2006), 141.

might be considered the agents of spatialisation. These intertwined practices of the provision of infrastructure and the practices of visualisation, serve as a useful measure for defining the spaces and events that can be included in a spatial history of the towns. Given these measures of the transformation of territory into space—both the process of visualisation and the provision of infrastructure—the following list of spatialising events was created:

Timeline of Spatialising Events (1893–1917)

- 1893 (Discovery of Gold)
- 1894 Kalgoorlie surveyed
Telegraph arrives
Declaration of the Eastern Coolgardie Goldfield
- 1895 Municipality of Kalgoorlie was gazetted
The Goldfield and Mines Regulation Act passes
First crushing from the underground mining at the Great Boulder Mine)
- 1896 Perth–Kalgoorlie railway arrives
Boulder townsite gazetted
First photograph published in Kalgoorlie Western Argus (Peak grade of gold)
- 1897 Municipality of Boulder was gazetted
Loopline ore railway opened
- 1898 State Forest Protection Area declared
- 1900 Federation referendum
Separation from Federation Manifesto published
Map of ‘Aurelia’ with Kalgoorlie as capital published
- 1901 Australian Federation, First National Census
- 1902 Passenger trams open
- 1903 Goldfields Water Scheme completed
(Peak gold in tonnage)
- 1908 Kalgoorlie and Boulder Town Halls built
- 1917 Transcontinental Railway opened
Dwyer sells studio

The Timeline of Spatialising Events lists a series of events beginning with the discovery of gold in 1893 and concluding with the completion of the Transcontinental Railway in 1917. In this period, Kalgoorlie, Boulder and the Goldfields experienced the arrival of the railway from Perth and the rail connection to South Australia, the provision of suburban trams as well as an industrial railway, the connection of the telegraph and completion of the water pipeline to Perth. The provision of this infrastructure (as well as the methods of improvisation before the establishment of these services) changed the spaces of the town and the field (Figure 3.1a-c).

The Timeline of Spatialising Events mostly describes 'events' at the scale of the 'urban' and the 'infrastructural'. However, there is also an opportunity to add a finer grain and smaller-scaled spatial history that includes the provision of public buildings and spaces such as the Town Hall, Warden's Court and Post Office as well as the stock exchange, schools, hospitals, gardens, the cemetery, abattoirs and rifle ranges. In addition to the functional and spatial program of these buildings, edifices like the combined Post and Telegraph Office and Warden's Court (referred to as the Post Office) building also played a significant role in the visualising of the town. Further to these government-built institutional buildings, also built during this period was also what might be considered a second-order of civic buildings in Kalgoorlie, Boulder and on the Goldfields: the Mechanics Institute, buildings of religious groups such as the Anglican, Catholic and Methodist churches, a synagogue and branches of fellowship organisations such as the Masons, Oddfellows, the Miner's Association and the Trades Hall (Figure 3.2a-e). The commercial architecture of banks, markets and department stores was also built (and rebuilt) as can be seen through the photographic record of buildings such as McKenzies, the Exchange and the Australia Hotels (Figures 3.3a-b). Many of the 'events' recorded in this spatial history might be considered typical of the infrastructural and urban transformations experienced by many nineteenth-century cities and towns, while the visualisation of Kalgoorlie, Boulder and the Goldfields is achieved by recognisable photographic and cartographic tropes.

As well as the physical infrastructure and buildings of the towns and the field, legislation provided a legal framework for the spatialisation of these places. The



Figure 3.1a: The infrastructure of the goldfields

'Water condenser on the Eastern Goldfields', Unknown photographer, c.1905, (Call number: 006181PD), Series: Passey collection of photographs; 5323B/486, The State Library of Western Australia, Perth



Figure 3.1b: The infrastructure of the goldfields

'Water condenser on the Eastern Goldfields', William Roy Millar, (Call number: 000829PD), Series: Collection of early Goldfields images; BA1525/26, The State Library of Western Australia, Perth



Figure 3.1c: The infrastructure of the goldfields

'Water condenser, Coolgardie', Hemus & Hall, 1895, Collection of early Goldfields images, The State Library of Western Australia, Perth



Figure 3.2a: Second order public buildings

'Kalgoorlie Synagogue', John Joseph Dwyer, 1900–1909, (Call number: 010207PD), Series: JJ Dwyer collection 5816B & Collection of goldfields photographs taken by JJ Dwyer and T.F. Mackay 3920B, The State Library of Western Australia, Perth



Figure 3.2b: Second order public buildings

'Workers hall', John Joseph Dwyer, 1900–1909, (Call number: 010192PD) Series: J. J. Dwyer collection 5816B & Collection of goldfields photographs taken by JJ Dwyer and T.F. Mackay 3920B, The State Library of Western Australia, Perth



Figure 3.2c Second order public buildings

'A.N.A. Hall', John Joseph Dwyer, ca. 1902., (Call number: 010191PD) Series: J. J. Dwyer collection 5816B, The State Library of Western Australia, Perth



Figure 3.2d Second order public buildings

'The Kalgoorlie Club', John Joseph Dwyer, c1900, (Call number: 010195PD) Series: J. J. Dwyer collection 5816B, The State Library of Western Australia, Perth



Figure 3.2e Public buildings in Kalgoorlie, c1900

'The Roman Catholic Church, Kalgoorlie', John Joseph Dwyer, c1900, (Call number: 010200PD) Series: J. J. Dwyer collection 5816B, The State Library of Western Australia, Perth

introduction of new laws, such as the Mining Regulation Act (1895), should be considered acts of 'spatialisation' and visualisation, as they proscribed mapping and drawings as part of their requirements, and described both space and geological landscapes in the wording of their legislation. As described in Chapter 2, the recording of the spatialisation of the goldfields, the political, legal, technological, infrastructural, architectural, photographic and cartographic events together begin to constitute an urban imaginary. They are 'choreographed' in the boom town where the occasion of these spatial events are celebrated with many documented by photograph and its recognisable visual tropes.

Once the *Timeline of Spatialising Events* for the research was established, several factors indicated that the 25-year time frame was too long. While the arrival of the Transcontinental Railway in 1917 came the last 'network' connection that joined the Eastern Coolgardie Goldfields to the rest of Australia by rail infrastructure, this event was deemed too (temporally, technological and socially) distant from Hannan's discovery of gold in 1893. While the connection to the transcontinental railway system is significant, the event had none of the transformative effect delivered by the arrival of the water, the railway from Perth or the connection of the telegraph. Instead, the endpoint of the research period was determined to be at the opening of the Goldfields Water Scheme in 1903. The extraordinary accomplishment of piping freshwater from the foothills of Perth to the goldfields was chosen to be the last great transformational infrastructure and 'spatialising' project considered by this research. The project transformed Kalgoorlie, Boulder and the Goldfields as well as the space of the agricultural wheatbelt between the state capital and the goldfields. The project was the last of the rapidly constructed triumvirate of infrastructure (telegraph, railway and pipeline) that stretched between Perth and the Eastern Goldfields. The convenient decade timeframe of 1893–1903 also allowed the research to include the events and publications surrounding the 10th anniversary of Hannan's discovery of alluvial gold and how that founding event was celebrated.

The second parameter for selecting and analysing the visual archive of Kalgoorlie, Boulder and the Goldfields was the consideration of the serial production, publication and reception of images. If the thesis is to understand what kind of

change Kalgoorlie, Boulder and the Goldfields underwent, then it requires a method by which the transformation or boom of the urban and industrial environment can be measured. Both maps and photographs offer the opportunity to measure space and record time. To be understood, the boom town needs at least two points or 'states' in time so that the difference between these states can be determined—this is the nature of the 'boom'. To measure the boom then requires at least two maps or photographs that record the space of those two states. That at least two states are required to measure the boom suggests that an investigation of serial images from the visual archive of Kalgoorlie, Boulder and the Goldfields would be the most productive in determining the extent and nature of a boom. As outlined in Chapter 2, a selection of images offers the opportunity to consider a number of different types of serialities: notions of serial composition, the serial organisation of images in presenting evidence and making arguments, and the complexity of serial reading by the audience for these images.

Archival Materials

This section describes the conditions in which the photographic 'archive' of Kalgoorlie, Boulder and the Goldfields was created and the issues associated with negotiating the larger visual archive that recorded the development of town and field. Given the established parameters of spatialising events and seriality, the research examines the archives of visual and textual material that documented the first decade of Kalgoorlie, Boulder and the Goldfields' development. The next section examines the archive of visual material (photographs, maps and ephemera) that illustrated these spatialising events to identify the serial images that described the boom. For the purposes of this research, this archive was accessed through public, private and online collections in Kalgoorlie, Boulder, Perth, Canberra and Melbourne between 2008 and 2016. The archives and collections accessed included the Western Australian Museum (Kalgoorlie–Boulder), the Goldfields Historical Society (Kalgoorlie–Boulder), Kalgoorlie Consolidated Gold Mines (Kalgoorlie–Boulder), The Western Australia Museum (Perth), the Battye Library of West Australian History (Perth), the State Records Office of Western Australia (SRO), The University of Western Australia Special Collections, the Kerry Stokes Collection (Perth), the National Library of Australia,

the State Library of Victoria, and the online the National Archives of Australia, the State Library of New South Wales and newspaper repository website, Trove. Within these archives and collections, such as the Battye and the SRO, special collections such as photographs, maps, manuscript, books, ephemera, newspapers and correspondence were accessed and documented.

The archive of Kalgoorlie, Boulder and the Eastern Goldfields is not consolidated, homogenous or complete but one that is continuously being added to as visual material is made accessible by collections, digitised by institutions and found in personal and corporate collections.² The visual archive created in Kalgoorlie, Boulder and the Goldfields between 1893 and 1903 was the result of a number of factors: the proliferation and accessibility of imaging technologies, the urban and industrial booster's desire to document growth, the requirements of government regulation and as a commodity to sell to consumers on the goldfields or further afield.³ Alan Sekula, also addressing the archive of a commercial photographer from a mining town, contends that these kinds of collections produce a 'radical antagonism between different kinds of images' as they reduce different types of photographs, their reception and use to an 'abstract visual equivalence'.⁴ At least 40 photographers and studios worked in Kalgoorlie and Boulder in the decade between 1893 and 1903. This number does not consider travelling photographers from Perth or surrounding towns such as Coolgardie and Menzies or visiting international photographers who documented the city, such as the panorama photographer Marvin Vaniman who recorded Kalgoorlie (as part of an Australasian tour between February and August 1904) for the Pacific Steam Boat Company⁵ (Figure 3.4). The collective archive generated by these photographic

² For example, the Battye Library's new Mining and Energy archive's open call for submissions (<https://slwa.wa.gov.au/explore-discover/collecting-wa/mining-energy-archive>, accessed 3 May 2018).

³ For example, panoramic photographer Norman Adair applied for copyright for seven of his panoramic images taken around Kalgoorlie, Boulder and the Golden Mile. See National Archive Series A1721, Barcode 507445, 507481, 507486, 507489, 507492, 507496 and 507495. As illustrated by the stamp on the rear of one of the Adair photographs, which appears to be a pull-out panorama, the flexible canvas backed photography was for sale in the place that it depicted.

⁴ Alan Sekula, 'Reading an Archive: Photography between Labour and Capital', in *Blasted Allegories: An Anthology of Writings by Contemporary Artists*, ed. Brian Wallis (New York: New Museum of Contemporary Art; Cambridge, MA: MIT Press, 1987), 195. The archive is the commercial collection of the Nova Scotia coal mining company in Nova Scotia.

⁵ Alan Tierney, *Melvin Vaniman (1866–1912): A Biographical Note* (Goulburn, NSW: Alan Tierney, 2000).



Figure 3.4a: The tourist view point

'The Golden Mile, Boulder', Melvin Vaniman, 1904, (Call number: 1492B), The State Library of Western Australia, Perth



Figure 3.4b : The tourist view point

'Panorama of Kalgoorlie', Melvin Vaniman, 1904, (Call number: 1494B), The State Library of Western Australia, Perth

studios is significant but remains elusive and incomplete. As an example, the remains of John Joseph Dwyer's commercial photographic studio (active Kalgoorlie, 1896–1917) is an excellent illustration of the issues surrounding an archive that is now held jointly by the two institutions across three physical locations: the State Library of Western Australia and the Western Australian Museum in Perth as well as the branch in Kalgoorlie–Boulder. Between these locations there are only about 5,000 glass plate images (or their copies) from almost 20 years of commercial production, the majority of which are studio portraiture. Despite the predominance of portraiture in Dwyer's archive, the photographer's political and business connections meant that he documented the significant buildings and spaces of the goldfield's urban and industrial landscape.

Prior to the establishment of his Hannan Street studio, Dwyer was in partnership with E.C. Joshua and worked as photographer for the Coolgardie-based newspaper the *Goldfield Courier*.⁶ As noted by Sassoon and others, Dwyer's commercial archive has established itself as the preeminent visual record of the development of the city from when it was established in 1896 to its sale in 1917.⁷ The authorship of images at the beginning and the end of Dwyer's career remain problematic. In establishing his own photographic studio, Dwyer may have bought out existing businesses and their catalogue of images. There is evidence that he rephotographed existing works such as those by EW Henderson who documented Kalgoorlie before Dwyer's arrival (Figure 3.7a–b). A number of other Dwyer uncropped images clearly shown pins or tape holding existing image as the photographer copied them. Dwyer sold his studio to T.F. Mackay in 1917 and many of the images made around this period also pose questions of origin. After selling his studio to MacKay, the new owner copied at least one of Dwyer's most famous images, presumably to sell under his own proprietorship.

That the Dwyer archive held by the Western Australia Museum and the State Library is substantially incomplete is best evidenced by the number of Dwyer images that can only be found in newspapers and books or recorded in Dwyer's

⁶ Joanna Sassoon, 'Mining the Archive: The Goldfields Photographs of John Joseph Dwyer', in *An Everyday Transience: The Urban Imaginary of Goldfields Photographer John Joseph Dwyer*, eds. Philip Goldswain and William M. Taylor (Crawley, WA: UWA Publishing, 2009), 173.

⁷ *Ibid.*, 173–84.



Figure 3.7a: Dwyer rephotographing a EW Henderson photograph

'Hannan Str looking West from Maritana Str, Sept 95', John Joseph Dwyer, Undated, copy of 'North Hannan Street, Kalgoorlie', EW Henderson, 1895, Kalgoorlie Town Hall. Photograph by the author



Figure 3.7b Detail of Dwyer's signature

Detail of Dwyer signature on 'Hannan Str looking West from Maritana Str, Sept 95', John Joseph Dwyer, Undated, copy of 'North Hannan Street, Kalgoorlie', EW Henderson, 1895, Kalgoorlie Town Hall. Photograph by the author

photographs of his own studio. The incompleteness of the institutional collections is best illustrated through the image of the ground floor entrance hall to Dwyer's Hannan Street studio (Figure 3.6). While a viewer conversant with the existing Dwyer archive might recognise the images of Paddy Hannan, the Kalgoorlie race course and one or two interiors, there are a large number of photographs that remain unfamiliar such as the panoramic industrial and farming transport images that hang salon-style in the hallway. The photographic view of Dwyer's hallway, with the predominance of portrait images, also points to the (understandable) 'biases' of the Battye digitalisation process where the majority of images that have been made available online are mining and cityscapes rather than largely anonymous studio portraiture.⁸ The incompleteness of the Dwyer archive, the complicated access to the museum's images as well as its selective digitalisation, point to the difficulty of selecting individual images from the archive as the basis of a case study investigation. The extent of the image archive created in Kalgoorlie, Boulder and the Goldfields poses the question of how to make sense of the individual images contained within it, and what they might tell a contemporary viewer about the unique urban and industrial conditions at the time of its creation.

Photo-Textual Objects

As outlined in Chapter 2, important to the thesis research is Sandweiss' idea of the 'public photograph'.⁹ Similarly significant is Trachtenberg's notion of 'groups of images shaped or edited as albums, books or photo-stories', which, by the manner of their organisation together, start to make sense of life in front of the camera.¹⁰ The objects of the public photograph, the album, books or photo-stories in which the 'raw' visual information is selected, edited and organised into a form suitable

⁸ The Battye Library's Dwyer collection has currently 266 digitised images, of which 25 are portraits. This is also complicated by the manner of the division of the Dwyer collection into two archives. My archive research supports the notion that much of WAM's collection is studio portraiture.

⁹ Martha A. Sandweiss, *Print the Legend, Photography and the American West* (New Haven, Connecticut: Yale University Press, 2002), 8.

¹⁰ Alan Trachtenberg, *Reading American Photographs: Images as History, Mathew Brady to Walker Evans* (New York: Hill and Wang, 1985), xv.



Figure 3.6: The entry corridor to Dwyer's studio.

'Untitled', John Joseph Dwyer, Undated, (catalogue number: GM02150), The Western Australian Museum, Perth & Kalgoorlie

for publication and consumption, are best described as ‘photo-textual objects’.¹¹ The photo-textual objects considered in this research include newspapers, journals, souvenirs, books and ephemera whose editors, compilers and authors made selections of photographs and organised them together in a format for sale. As outlined in Chapter 2, the serial organisation of the images in these photo-textual objects offers the opportunity to consider how they might be read by the public who consumed them. These objects vary greatly in the scale, size and ephemerality as well as in the relationship between photography and text (and in some cases cartography). They range from material that is almost a ‘direct’ reproduction of a photographic image with only minor additions of text such as postcards to embedded photographs in text-rich publications such as the double volume Battye Cyclopaedia. The table below provides examples of the photo-textual objects considered part of the thesis research.

Type	Example	
Newspapers & Periodicals	Kalgoorlie Western Argus	Figure 3.10
	Kalgoorlie Miner	
	The Western Mail	Figure 3.11
	The W.A. Goldfields Courier	Figure 3.12
	Evening Star	
	The Australasian	
	Daily News	
	Sunday Times	
	The Pictorial Australian	
Postcards	Austral stores Postcard (Series B, F, G)	Figure 3.3b/Figure 4.27
	AE Sharland & Co Kalgoorlie Postcards	

¹¹ Caroline Blinder argues that the ‘photo-text has variously been defined as any interaction in which textual material, whether captions, prose, poetry, quotes, or reportage, is augmented by photographic illustrations. Nonetheless, as a genre distinct from other photo-textual modes of interaction the photo-text took on certain specific qualities from its very inception in the mid-19th century, particularly when it emerged as a book form with a clear agenda and narrative trajectory’. Caroline Blinder, ‘The Photo-Text in the 19th and 20th Centuries’, in *Oxford Research Encyclopedia of Literature: Interdisciplinary Approaches to Literary Studies*, DOI: 10.1093/acrefore/9780190201098.013.65.

	Hocking and Co postcard	
	Osboldstone & Co, Melbourne	
	Western Mail Postcards	
	HG Jacoby Postcard	
Stereoscopes	Solin and Co	Figure 3.14
Panoramic photographs	Norman Adair	Figure 3.5a/b
	Melvin Vaniman	Figure 3.4a/b
	Vere Scott	
Albums	Personal album of Campbell Deland	Figure 3.17
Souvenir	Hemus and Hall Land of Gold	Figure 3.18
	Souvenir of Goldfields Water Scheme	Figure 3.19
Guides	Frearsons' Guide to Western Australian Goldfields	
	Morning Herald Guide to North Eastern Goldfields	Figure 3.20
Books	The Battye Cyclopaedia	
	Gold mining and milling in Western Australia, A. G. Charleton	

Given the research parameters of spatialisation and serial production and reception of images, a number of photo-textual objects were tested for the suitability for the inclusion for a more general exploration in Chapter 4 or an in-depth examination in the case study chapters. The parameters of spatialising events, serial organisation of images or the ability for the material to be serially organised as part of a case study methodology were utilised to make decisions about the selection. One such example is a postcard series by Austral Store (Figure 3.22 and Figure 4.27a–h), which consisted of a collection of half a dozen different photographic postcards depicting buildings and landscapes of Kalgoorlie, Boulder and Goldfields for sale as a pack. However, the photographs only represented one moment in time. While each of the postcard series presented a compelling portrait of the ‘space’ of the towns and mines (and that raised interesting questions about the connection between the images in each series), collectively they didn’t

or a disinclination to make a break from a generous—too generous—habit that keeps so many young men I know from carrying into practice their confidentially communicated idea that it is time to protest against the unduly continued charge of a shilling per drink made by bar-keepers here for whisky, brandy, and other spirits? It is recognised as fit and proper that the price of food and clothing should have been brought down very considerably since the old days, when everything had to be brought to the fields by horse or camel teams. Ready facilities for carriage by railway and even, settled conditions such as exist in a thoroughly established town have of course lowered rates. But there seems to be a sort of an extravagant, sentimental reluctance to insist that the price of retail spirits should be reduced too in fair proportion. And the public takes advantage of this tendency, which means liberty to continue extortion. When one calculates how many shilling pipes a publican sells out of a 60. bottle of whisky one doesn't wonder how one face can not and again take a trip to Europe, or give now and again a tin-pot medal to some athletic association so that he may rank as a "sport" and a "great good sort." Really, I'm seriously thinking of organising a league to break down the shilling drink imposition. Perhaps the publican will trot out the logic that miners' and others' wages will be cut down if he is made to cease his extortion—that we know what that's worth in this case.

There are current many little tales of witty calls from the gallery gods in theatres to performers on the stage, and many folks remember with relish how John L. Sullivan, the great pug-



HANNAH-STREET, KALGOORLIE.

(J. J. Dwyer, Photo, Kal.)

that are made by the trains that pass so close to the institution. Nowhere else in Australia have I heard such shrieking of whistles and grunting and puffing of engines as one goes at the Kalgoorlie railway station and the approaches thereto. It is not possible to run trains into the Kalgoorlie station past the hospital reserve without such frightful shrieking as is now indulged in. And when old-fashioned engines of the "Puffing Billy" type come along making the dreadful racket that is necessary, we are assured, to keep the Colliie coal burning properly it must be a hard trial indeed for one stricken sufferer in the hospital. If it is necessary to have all the horrible noises—and the W. A. Railway Department sticks closest to what is most objectionable—the course that commends itself is to keep on urging the Government to shift the hospital. The present site is not at all suitable to all the needs of the district, and the hospital will have to be rebuilt, so why not sell the land on which the hospital now stands, and with the ample proceeds build a proper up-to-date hospital somewhere between Kalgoorlie and the Boulder. Both towns would then be equally suited, and the Boulder people would then not have their present reasons for complaint about the great distance to the one Government hospital in the district. This suggestion of change of site is not a new one—by no means, but is one of those things that our lackadaisical public men have dropped, because an unprogressive Forresterian conservative once said he didn't see why the change was needed, or something of the sort. Besides, sick people in hospitals can't vote at election, or make rows at public meetings, so what pertains to their welfare is left by ambitious off-keepers to the unfortunates' benevolent ladies who give flowers and newspapers for the sick.



EGAN-STREET, KALGOORLIE.—LOOKING EAST.

(J. J. Dwyer, Photo, Kal.)

was once provoked during his Australian tour as an "actor" with a company that played "Honest Hearts and Willing Hands," to yell up to the offensive gods, "I'll put a tail on some of yer." The Kalgoorlie gods are generally very noisy—but they have their wit, too. Not long ago at Her Majesty's, a local amateur company was playing a knock-kneed, wisky-washy melodrama to about 30 people who had somehow been tempted to see the show. The play dragged along in a ghastly stillness, broken only by an occasional moan or yawn from the audience and the patter of rain on the roof. Then the "juvenile lead" came on, and he was worse than all else. So a god seated in solitary majesty piped out desperately, "Choose your death!" The laugh that followed was the one bright patch in the whole dreary business.

On the great day of judgment some of the officials of the West Australian Government railways will surely have to answer to a big list of human beings slaughtered through neglect and carelessness, especially on the short stretch of line between Kalgoorlie and Lakeside. It is calculated that every chain of the fence put up along that line represents a human being killed on the line before the Government could be forced to erect that fence. Altogether the list of killed on the line—old and young—through various defects is a dreadful one. I have often wondered, too, whether the lives of some of the unhappy inmates of the Kalgoorlie Government Hospital have not been unduly worn out by the frightful noises



EGAN-STREET, KALGOORLIE.—LOOKING WEST.

(J. J. Dwyer, Photo, Kal.)

Figure 3.10: A single page spread from the Kalgoorlie Western Argus

Kalgoorlie.

Kalgoorlie was gazetted as a municipality in the 25th of May, 1895, as that the present town is a mere infant in the matter of age among the cities of Australia. Its growth, however, has been marvellously precocious, and already it can shake its cap and plume its feathers with the pride of possessing things which do not belong to many like cities. For this it has a miniature carboniferous capital at its base, out of which issue gold, so abundantly and so richly, that the mine is the life of the district and the education of all the children mining authorities of the globe. Are not its gold-mining the theme of many a prophetic, and do they not form the groundwork of the latest articles by statistical seribes, who take gold for the text, the exploitation, and the penetration? Agriculture may be, as is frequently asserted, the subject of all alchemy, turning earth, and even manure, into gold, and conferring upon its cultivator the additional reward of health, but it is the search for and the lust after gold which converts the desert into a populous region, fills the remote and sterile corners of the earth with the machinery of civilization, builds cities as if by magic, and stirs into a whirl of feverish activity every remnant of human industry.

Probably no more potent illustration of the seducing power of gold can be found anywhere in the world than is afforded by Kalgoorlie and the Boulder cities, where, in the short space of five years, a population of 25,000 persons has settled down, every one entirely dependent for existence upon the gold-producing capabilities of a narrow strip of ground smaller in area than many a South Australian farm. Five

some portion of his time to the public good. Organisation, however, is a ruling principle in the scheme of British colonization, and where two or three divisions

opened from six to nine. The annual rateable value of property had then increased to £202,000. The total revenue being £10,200. A year later, when the books were closed, the rateable value of property had increased to £202,000, with an estimated revenue of £10,200. Mr. R. D. McKinnon was elected mayor, and a more energetic, capable, or

scrupulous citizen of the Municipal Council. It was fairly said that the year 1895 had been a capital one, measured as the gold output of the belt had increased by more than five times that of the previous year. Reference was made to the formation of the Municipal Association, to the opening of the railways to Renmark and Kaneroon, to the proposed water-tube

supply, and the fact that the health of the district had been a source of anxiety to the Health Officer. The only death had been attributed to the health officer, and the only death had been attributed to the health officer. During the year ended 31st March 1896, there were reported 12 deaths of those who were due to typhoid fever. In the preceding year the total number of deaths was 211, typhoid fever being responsible for 85. From a report of the mortality during the year ending September 30th for the year of the district, including Boulder, it appeared that most of the deaths occurred between the ages of 25 and 35. The infant mortality was very high, being equal to 25 per cent. of the total death rate. Taking the population at 25,000 the average was 12.5 per thousand. The largest number of deaths occurred in May.

The municipal council chambers, situated in Buckman-street, are comfortable and comfortable and centrally placed. The building is of brick and stone, of modern design, two stories in height, and furnished throughout in a tasteful manner. Within the municipality are two and a half miles of streets, nearly all of which are two chains in width. In many of the principal thoroughfares the pavements are 30ft. in width, divided in two portions of 15ft. each, respectively set aside for bicycles and pedestrians. The city is lit with electricity throughout, the service being under the control of the municipal authorities, while a spacious enclosed recreation reserve, provided with every accommodation, is also vested in the Council. Besides this, there are parks and minor reserves, and it may surprise many to hear that there are 700



Photo by Elliott Studio.

HANNAN'S STREET, KALGOORLIE.

Kalgoorlie.

are gathered together there shall a Progress Committee be formed. So it was in the early days of the Kalgoorlie gold hunt. A Progress Committee was formed, and necessary public work was carried out for twelve months. Streets were roughly shaped, roads opened up, sanitary condi-

tion of municipal affairs he was assisted by the following councillors—H. N. Taylor, A. H. Bartlett, S. E. Hocking, W. J. Carter, O. W. Gao, F. A. Chaplin, N. H. Hawkins, Straiford-Smith, and H. Unwin, and to these gentlemen a high word of praise for their management of public matters of exceptionally difficult character was particularly fortunate in the selection of town clerk, Mr. A. M. Bartlett,

of a line from Coolgardie to Renmark, which was opposed, and the hope was expressed that next session a Bill would be introduced authorizing the construction of a line to Renmark direct from the State. The financial condition of the Council had been approached asking that an over-bridge be con-

Photo by W. Ray Miller.

years, and a half ago Hannan told his horse in a drive back in the search for them he found gold, and the "demon back" was immediately tramped out of being by untamed men, two few cities were placed on the soil, hundreds of homes were founded, and the close cooperation of energy and capital brought into existence a new form—a centre of industrial operations unsurpassed in the mining world, and a mighty and proud contributor to the wealth of the Australian Continent. Not even Bonaparte, in his wildest flight of Titanian imaginings, could have conceived that a sandy stretch of desolate and uncultivated country in the interior of this colony would, in a remarkably brief period of time, be invaded and conquered by a small band of twenty fortune-seekers; that roads, railways, electric appliances, and elegant buildings for every imaginable purpose of use and ornament, would be studied over the land, and an enormous and startling physical change have occurred. Were it possible to reconstitute a dead aboriginal—who had thrived his spear, food-hunting, on the Boulder Hill only six years ago—with what utter amazement would he gaze on the territory over which he had wandered stretched and unshaken, and look to would put down the whole process to the blackest of black witchcraft!

Although there may be a flavor of romance, there has been precise little poetry about the growth of Kalgoorlie. Nature does not surrender her golden treasures too easily, and Kalgoorlie did not find an abiding place without a desperate struggle and a persistent fight against terrible odds. When in 1864 there were a few better than in Bonanza-street, and came out of the ground in several of the houses, there was little to indicate that a big city was in its inception, and the conditions of life which then prevailed were not pleasant enough to induce any man to talk in the race for gold and to devote

tions observed as far as practicable; and a little community soon had a footing on what had been regarded for half a century as a worthless and uninhabitable sand and gravel tract of country.

As the gold discoveries began to assume a more permanent form, so the population increased, and on the 1st of May, a very auspicious day—1895, Kalgoorlie became a municipality, being controlled by a mayor

control of municipal affairs he was assisted by the following councillors—H. N. Taylor, A. H. Bartlett, S. E. Hocking, W. J. Carter, O. W. Gao, F. A. Chaplin, N. H. Hawkins, Straiford-Smith, and H. Unwin, and to these gentlemen a high word of praise for their management of public matters of exceptionally difficult character was particularly fortunate in the selection of town clerk, Mr. A. M. Bartlett,

streets to connect the business portion of the town with the residential area, and the mayor believed that this work would speedily be undertaken. Gratification was expressed at the erection of new public buildings, and the interest taken by all visitors to Kalgoorlie in the mining industry. The financial condition of the Council was regarded as satisfactory, and various local works undertaken were

traces already planted in the principal streets, so that in a short time the blinding summer heat will be tempered with a grateful and natural shade. The Council study the convenience of the railways, in so far that the main streets are altered nearly every day, thus to new small degree mitigating the irritating effects of the appalling dust which, during the hot months sweeps in clouds over the city and district. Early in 1895 it was shown there was a need for extended government beyond that of a progress committee or of a municipal council, which in the end had led only limited jurisdiction. Funds of gold were being daily reported from the outlying districts, and means of communication had to be provided. At this time there was no road to the Boulder, and no ready method of collecting revenue to enable one to be formed. Accordingly a Roads Board was called into existence, and simultaneously with the progress in the town there was a movement in the district. But all this took time, and through an attempt was made in 1895 by several gentlemen closely connected with the Boulder mines to form a roads board, which project the Government encouraged by a grant of £200 for preliminary expenses, money was not advanced until towards the end of 1896. Mr. M. J. Richardson (the present secretary) having been appointed returning officer to carry out the first elections, the date fixed was for seven nominations, the number of members required, who were duly elected. Their names were H. O. Parsons (chairman), J. F. Dwyer, J. H. Dwyer, G. O. Hawkins, H. W. Taylor, T. F. Whitford, and T. F. Brinsford. The initial meeting was held on September 30th in the Council chamber, then a small room at the rear of the old Exchange buildings in Hannan-street. Much of the night was spent in reporting financial conditions from the Government, but not been particularly noticeable with Kalgoorlie institutions, and it was perhaps quite fitting that one of its first resolutions



Photo by Elliott Studio.

MARITANA STREET, KALGOORLIE.

Kalgoorlie.

(Mr. John Wilson) and six councillors. Turning over their centre, the value of the town property was found to be £22,200, with a total revenue of £2,500—and a had a lot. So the growth proceeded, and at the second municipal election, held on 19th November, 1896, the Hon. H. O. Parsons, M.L.C., was elected mayor, and the number of members in-

now a municipality, was the first holder of the post. In September, 1897, the appointment was offered to one supplied by Mr. J. C. Henderson, who now holds the office, and his work in every department has been of an exceptional and meritorious character.

The report for the year 1897-98, by Mayor R. D. McKinnon, was submitted at the

concerned. When the municipal boundaries were first set, a half of which had been contracted and planted with trees. The appearance of the town had greatly improved. Many new large buildings had been erected. During the year 77 applications had been received for permission to build. The health of the district had been

Figure 3.11 The Western Mail



THE COOLGARDIE JAPANESE.



MR. C. J. MORAN, M.L.A. FOR THE GOLDFIELDS.



VIEW ON THE GREAT BOULDER.

Figure 3.12: The WA Goldfields Courier

The Western Australia Goldfields Courier, 11 April 1896, (Call number: 994.16/EAS) The State Library of Western Australia, Perth and National Library of Australia, <https://trove.nla.gov.au/newspaper/page/28092324>

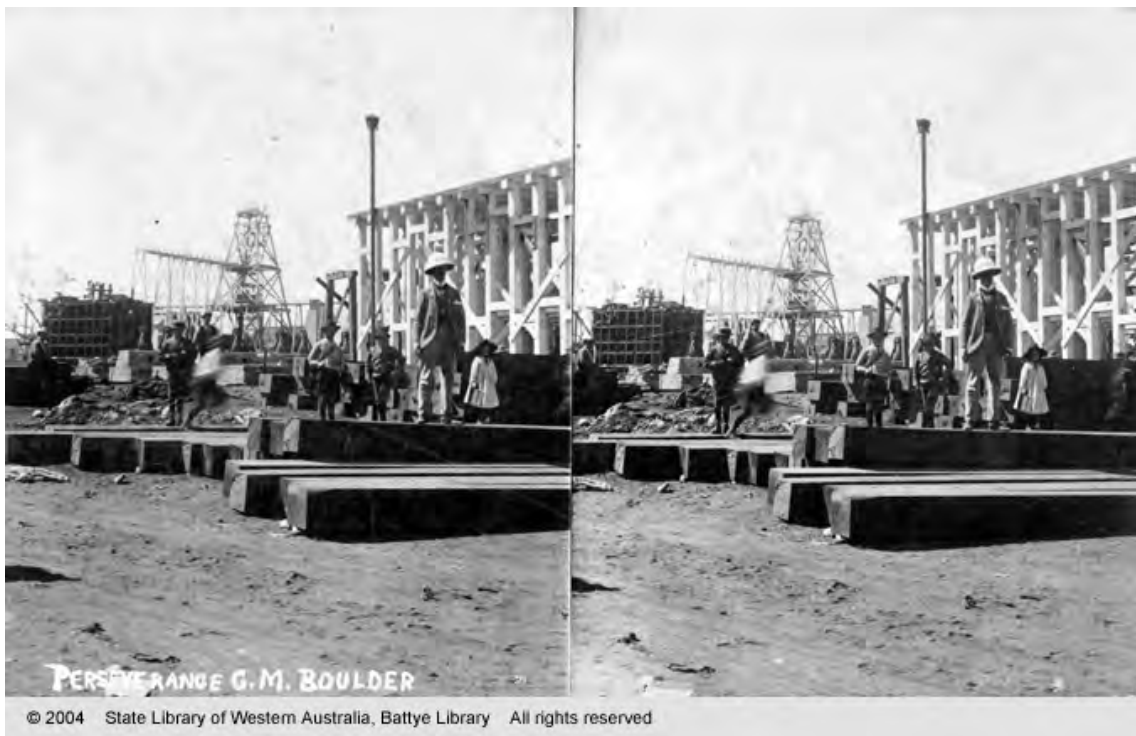


Figure 3.14: Solin and Co Stereoscope of the Perseverance gold mine

'Perseverance G. M. Boulder', Craig & Solin, ca. 1898–1900, (Call number: 013178D) Series: Weekend News Flashback series 3542B, The State Library of Western Australia, Perth



Figure 3.3b: Austral stores Postcard (Series B, F, G)

'Hannans (sic) Street looking east, Kalgoorlie', Unknown Photographer, Austral Stores, Series G. Postcard, (Call number: 007502d), The State Library of Western Australia, Perth



Figure 3.5a: Adair returned to the same vantage point to capture the transformed 'Panorama of Boulder Block', Norman Adair/Adair Photo, 1899, (Call number: 2277B) The State Library of Western Australia, Perth



Figure 3.5b
 'The Golden Mile', Norman Adair/Adair Photo, 1900/1901, (Call number: 74B) The State Library of Western Australia, Perth



Figure 3a: Hannah Street

'Hannan Street Kalgoorlie W.A., 20 September 1895', EW Henderson, 1895, Series: Edward Campbell Deland collection of photographs of Hannans (Kalgoorlie) 1884B, The State Library of Western Australia, Perth



Figure 3.17: An image from one of the Deland's albums

'Hannans Hospital', EW Henderson, 1895, (Call number: 1884B), Series: Edward Campbell Deland collection of photographs of Hannans (Kalgoorlie), The State Library of Western Australia, Perth



Figure 3.18a: Goldfields ephemera

'The Land of Gold: Coolgardie, Kalgoorlie and Boulder, WA', Hemus & Hall, 1899 (Call number: 919.416 COO) The State Library of Western Australia, Perth

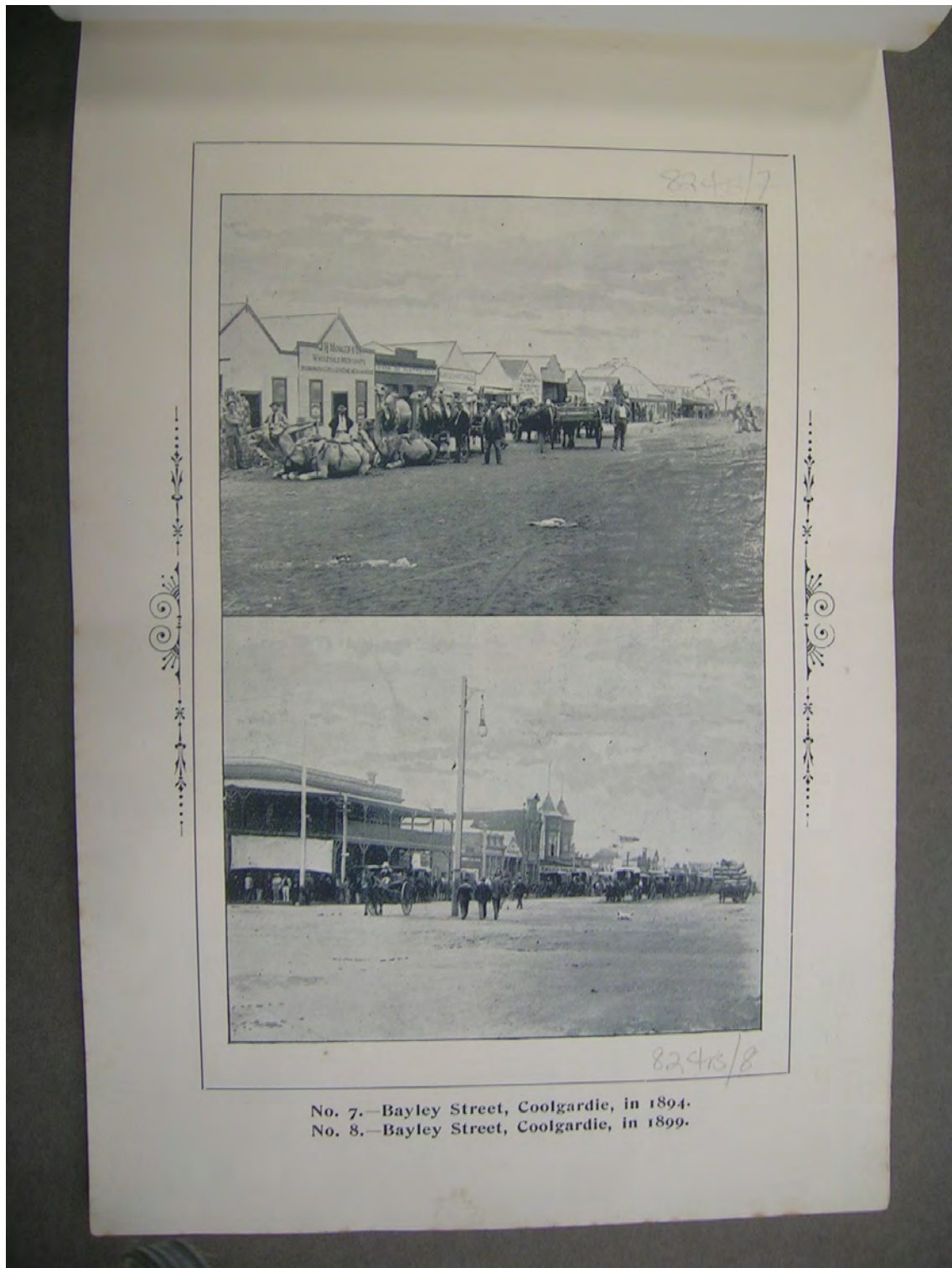


Figure 3.18b

No 7.- Bayley Street Coolgardie in 1894 & No 8.- Bayley Street Coolgardie , Hemus and Hall Land of Gold

'The Land of Gold: Coolgardie, Kalgoorlie and Boulder, WA', Hemus & Hall, 1899 (Call number: 919.416 COO) The State Library of Western Australia, Perth



Figure 3.18d
No. 22.-Yachting on Lake Lefroy

'The Land of Gold: Coolgardie, Kalgoorlie and Boulder, WA', Hemus & Hall, 1899 (Call number: 919.416 COO) The State Library of Western Australia, Perth



Figure 3.18c
No.12.- Early Inhabitants,

'The Land of Gold: Coolgardie, Kalgoorlie and Boulder, WA', Hemus & Hall, 1899 (Call number: 919.416 COO) The State Library of Western Australia, Perth

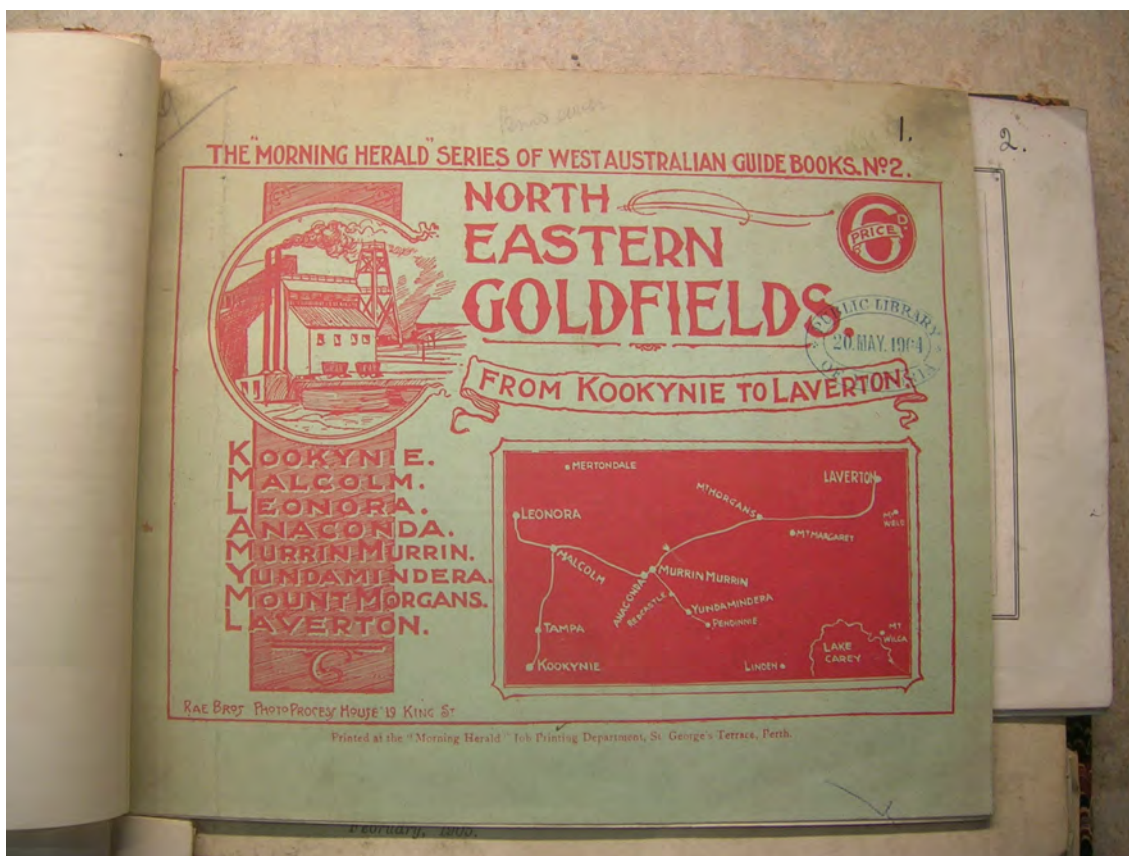


Figure 3.20 Goldfields ephemera

'Morning Herald' Guide handbook to the Goldfields of West Australia: geological and general, with a quantity of useful information, obtained from official documents and private sources, together with a map, in five colours, showing railways, roads, boundaries of land division and goldfields, stock routes, telegraph lines, agricultural areas, steamer mail, and goldfield routes, rainfall, lighthouses, &c., &c., &c., Frearson's Printing House, 1895 (Call number: RARES 622.04 M66 v.14) The State Library of Victoria, Melbourne

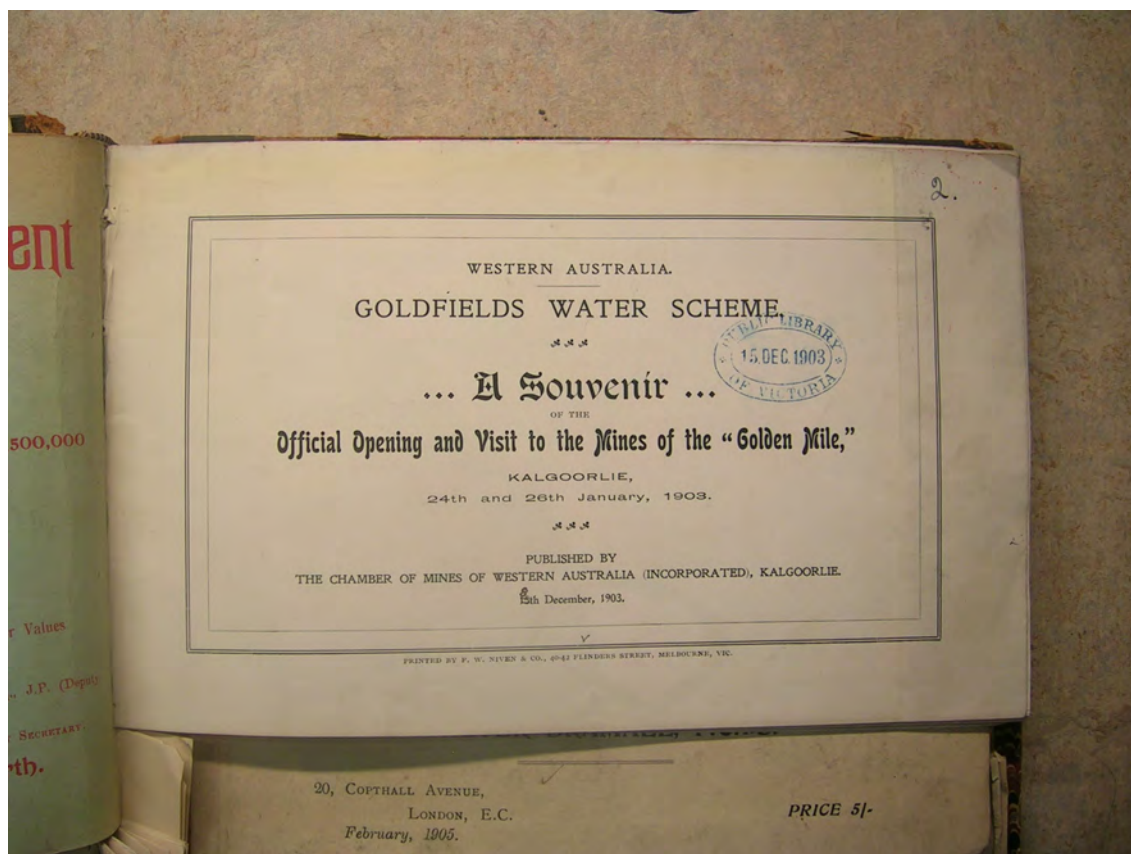


Figure 3.19 Goldfields ephemera

'Goldfields Water Scheme: A souvenir of the official opening and visit to the mines of the "Golden mile", Kalgoorlie, 24 and 26 January 1903', Chamber of Mines of Western Australia, 1903, (Call number: 628.1 CHA), The State Library of Western Australia, Perth

represent a second point in time from which the scale or nature of the boom could be measured. The postcards instead will be utilised in Chapter 4 because of what they reveal about the depiction of the mature stage of Kalgoorlie's development. Similarly, the panoramic photographs created by two stylistically very different photographers, Norman Adair and Melvin Vaniman, were considered for their depiction of the towns and field. Adair returned to the same vantage point on the Golden Mile three times across a number of years in the late 1890s to photograph the same industrial and suburban landscape surrounding the Boulder Block and its adjacent mines. Although Adair's set of panoramic recordings of Boulder Block reveal the patterns of growth of this piece of vestigial urbanity, the adjacent mines and camp sites in the photographs, this narrow focus (despite the panoramic format) on this ultimately idiosyncratic aspect of goldfield urbanism and industrialisation meant that this investigation was not pursued further as a case study. Similarly, Vaniman's panoramas (1904) for the San Francisco-based Oceanic Steamship Company are interesting for the curious depiction of the space of Kalgoorlie, Boulder and the Golden Mile that they captured (Figure 3.4a–b). While Vaniman's commission was to make 'pictures of New Zealand and Australia for their offices in America, Australasia, and Europe, as incentives to tourists to take ship and see the scenes depicted', it is the relative banality of the American's images of the suburban space stretching between Kalgoorlie, Boulder and of the industrial structures of the Golden Mile that make these images unusual as a sequence.¹² These photographs are intriguing images that need further investigation and discussion of their content and how they work together in series. Vaniman's panoramas imagine both the urban and the industrial images of the developed Kalgoorlie, Boulder and the Goldfields as the subject of potential mass tourism. However, the absence of a temporal aspect of the panorama's depiction of place meant that they were not investigated further as case studies. Two examples of photo-textual objects that were able to satisfy both the temporal and spatial of seriality were:

- the photographic supplement to *The Kalgoorlie Western Argus* newspaper

¹² 'A Feat in Photography. And the Man Who Accomplished It. With Some Views on Our Agricultural Possibilities', *Sydney Mail and New South Wales Advertiser*, 27 April 1904, 1050.

- the Souvenir of the Goldfields Water Scheme.

Selecting Photo-Textual Object 1: Newspapers

Newspapers, as a combination of text and images, offered the opportunity to see, in the manner of Sandweiss' or Trachtenberg's suggestion, how photographs might be organised together to depict life in front of the camera. As James Mussell and others point out, the newspapers played a pivotal role in the nineteenth-century 'information economy'.¹³ A close reading of the newspaper photographs and how they were edited and combined with other images and text on the page, through an issue and across a sequence of issues, offered the opportunity to understand how newspapers might have shaped an understanding of the nature and spaces of the boom town.

Initially, newspapers from Kalgoorlie, Boulder and Coolgardie held by the Battye Library were used in the thesis research to provide textual support to the process, spaces and events of the boom town as illustrated in individual photographs or maps held in public and private collections. Preliminary research was carried out using the microfilm version of the newspapers held by the Battye Library. This was relatively straightforward in the early days of the Kalgoorlie newspapers publication when the newspapers only contained one or two pages of photographs that would appear in the same location in each edition. However, the advent of the National Library of Australia's Trove database aggregator and particularly its searchable text newspaper archive in 2009 allowed for searching that was much faster, more thorough and included a diverse range of newspapers. Searching with terms as such 'Dwyer Photo' for photographs by the renowned Kalgoorlie photographer yielded images, advertisements and articles that featured Dwyer's images. Locating individual photographer's images led to the discovery of the photographic supplements and the anniversary commemorative editions.

It became clear in the process of the surveying newspapers from the research period these publications were a valuable source for locating many additional photographic images that sat outside museum and library pictorial collections or

¹³ James Mussell, 'Elemental Forms', *Media History* 20, no. 1 (2014): 4.

found in other publications such as mining manuals. For example, the preeminent Kalgoorlie photographer Dwyer was one of many photographers who were employed on either a full-time basis or on commission for newspapers such as *The Goldfield's Courier*, *The Miner* and *The Argus* and whose images appeared in such diverse sources Perth newspaper's such as *The Western Mail*, *The West Australia* and *The Daily News*. The ability to use Trove's searchable text function and search refinement meant that entering specific terms like 'Dwyer' and 'Hemus' and even a generic truncated term like 'photo' allowed for the discovery of many images that sat outside of museum and gallery collections. The incompleteness of Dwyer's archive in public collections is highlighted by the number of his images that are only found published in newspapers.

The inclusion of photographic 'supplements' within Kalgoorlie newspapers was a common approach to celebrate anniversaries or significant events. Perth publications such as *The Western Mail* also published Christmas editions from the late 1890s, which included photographic content that focused on Kalgoorlie and Boulder. *The Argus* was the first newspaper to publish an 'anniversary edition' that celebrated the sixth anniversary of the 1893 discovery of gold at Kalgoorlie. *The Argus* published an anniversary edition every year for the time of the research's study period and continued after the study period. Another example in 1908, a souvenir edition to celebrate the opening of the new Town Hall, included images printed in previous supplements. Not only are these photographic specials a feature of the early twentieth century, but they also point to the longevity and persistence of certain images. In 1927, an issue of *The Western Mail* printed a 'Special Number: Back to the Goldfields' issue that featured Adair's panorama of the Boulder Block from 1899, first published in the same newspaper contemporaneous to the photograph's taking (Figure 3.22 and 3.23).

Another such supplement was included with *The Kalgoorlie Western Argus* (Volume VII, No 392) as a 'Special Anniversary Number', which promised to illustrate the 'past and the present' of Kalgoorlie and was described as 'Kalgoorlie Illustrated'. This was published as an addition to the standard issue of *The Kalgoorlie Western Argus* on Tuesday 17 June 1902. The Supplement was a 24-page additional 'Special Anniversary Number', mainly illustrated by photographs,

that celebrated the ninth anniversary of the day that the prospectors Hannan, Shea and Flanagan discovered alluvial gold at what became known as Kalgoorlie. The inclusion of photographic supplements with Kalgoorlie newspapers was a common approach to celebrate anniversaries or significant events. As well as the goldfield newspapers, Perth publications such as *The Western Mail* also published Christmas editions from the late 1890s, which had a photographic component that focused on Kalgoorlie and Boulder.

The 1902 ninth anniversary supplement was selected for further case study investigation because of the balance it strikes between the number of photographic representation and their organisation in the newspaper. This balance is in contrast with the previous anniversary issue that contained fewer photographs (and therefore a less comprehensive visual record of the towns) while the subsequent 10th-anniversary issue places greater emphasis on the graphic layout of the newspaper pages and the building typologies.

Accessing digitised copies of historical newspapers via the Trove archive allows downloadable copies in various digital formats. While accessing a hardcopy of the newspaper would have been preferable, viewing a downloaded PDF version of the newspaper (through reader programs such as Adobe Acrobat) still allowed the layout of the pages, spreads and the location of supplements and extra pages to be discernible. While this removes all of the material qualities of the newspaper, this was deemed less important than gaining access to the most richly illustrated newspaper printed on the goldfields during the study period.¹⁴ The entire issue of the newspaper was downloaded as both a single PDF document and a set of jpeg images. The PDF was edited to arrange the pages in the correct orientation and edit some double-spread pages to allow it to be 'read' in Adobe Acrobat as a double-spread newspaper. The newspapers were also imported into Adobe Illustrator and arrange in page order from which pages could be drawn down for analysis. Much like the layout of 'mapped maps' used later in the third case study, tracing the outline and then colour coding of the graphic layout of the serialised serial newspaper allows patterns of images to be observed across the edition. Tom

¹⁴ Ibid., 4–20.

Gretton, in his study of the interplay between text and image in illustrated nineteenth-century magazines, utilises a similar technique but with a figure/group diagram that created pictograms that codify these relationships.¹⁵ As well as this subject matter-based classification, the images were also classified according to their temporal qualities.

Selecting Photo-Textual Object 2: Ephemera

The second group of photo-textual objects that satisfied the requirements of the research criteria are a number of items of ephemera that celebrated events in Kalgoorlie, Boulder and the Goldfields. Again, these objects satisfy Sandweiss, Trachtenberg and McCauley's definition of 'serial' and 'public' photographs. They are small-format publications, featuring image and text, often for sale in the place they depicted and where they were produced.

One example, Hemus and Hall's *The Land of Gold: Coolgardie and Kalgoorlie*, the fifth in a series of self-described 'booklets' that collected 'views' produced by the Coolgardie-based studio (Figure 3.18a–c), illustrated the 'marvellous growth of the sister Towns' of Coolgardie and Kalgoorlie.¹⁶ While documenting Coolgardie, Kalgoorlie, Boulder and several mines, the focus on 'growth' meant that serial images (Bayley Street Coolgardie in 1894/1899 the length of Coolgardie's Bayley Street in two images, The Great Boulder Mine presented in a triptych) is important as much as the serial comparison between the three sister towns in the 22-page souvenir.¹⁷ As well as the seriality of these images, the booklet satisfies Mussell's definition of both the 'seriality and miscellaneity' that characterised nineteenth-century publication with the inclusion of novelties such as land sailing on the nearby salt lake (see Figure 3.18b as well the documentation [both studio and in situ] of 'Early Inhabitants' of the Goldfields).¹⁸ They also record mock conflict between the prospectors and 'treacher[ous] aboriginals, whose deadly spears

¹⁵ Tom Gretton, 'The Pragmatics of Page Design in Nineteenth-Century General-Interest Weekly Illustrated News Magazines in London and Paris', *Art History* 33, no. 4 (2010): 680–70.

¹⁶ *The Land of Gold. Coolgardie Kalgoorlie and Boulder* (Perth, WA: Hemus and Hall, 1899). This work is unpaginated. The introductory page to the booklet describes this as the fifth in a series, but the previous four are not held by any archive.

¹⁷ Ibid., unpaginated.

¹⁸ Mussell, 'Elemental Forms', 5.

claimed many victims from the ranks of early prospectors;¹⁹ however, the background of this staged scene suggests that it is not located in the semi-arid woodland of the Western Australian goldfields. Other examples of the small-format souvenirs include the Morning Herald's *North Eastern Goldfields: From Kookynie to Laverton* (1903)²⁰ (Figure 3.20) and *Frearson's Handbook to the Goldfields of West Australia* (1895). The Hemus and Hall, Frearson's and *Morning Herald* guides and booklets illustrate certain aspects of the development of Kalgoorlie, Boulder and the Goldfields and the serial depiction of the time, space and the spatialising events of the town and field. However, they were not deemed as significant or comprehensive as the photo-textual object that was selected for detailed case study investigation.

One photo-textual object of ephemera that did provide the combination of the serial recording of time and space was one produced to celebrate the opening of the Goldfields Water Scheme. Published by the Chamber of Mines of Western Australia, the 42-page souvenir was officially titled 'Western Australia Goldfields Water Scheme: A Souvenir of the Official Opening and Visit to the Mines of the Golden Mile, 24th-26th January 1903' (hereafter referred to as the Souvenir)²¹ (Figure 3.19). The Souvenir documented the ceremonial arrival of water at the Mount Charlotte Dam outside of Kalgoorlie. The Souvenir recorded through text and photolithographic images, the twin towns of Kalgoorlie and Boulder, 11 of the surrounding mines and the people who visited these mines after the opening of the Scheme. The Souvenir included a brief overview of the opening day's events, a transcript of Sir John Forrest's opening speech given at Mount Charlotte, and group portraits of the interstate and local visitors who toured the mines two days after the official opening.²²

¹⁹ *Land of Gold*, unpaginated.

²⁰ *North Eastern Goldfields: From Kookynie to Laverton, Series of West Australian Guide Books No. 2.*

²¹ 'Western Australia Goldfields Water Scheme: A Souvenir of the Official Opening and Visit to the Mines of the Golden Mile, 24th-26th January 1903' (Kalgoorlie: Chamber of Mines of Western Australia 1903), unpaginated. The Souvenir was printed By F. W Niven & Co., 40-42 Flinders Street, Melbourne, Victoria. The State Library of Victoria's copy of the Souvenir was date-stamped '15 December 1903', just a week after its publication.

²² The Souvenir is held in a number of public library and private collections in Australia including the Kerry Stokes Collection, the State Library of Victoria, Battye Library of Western Australian History, The State Library of New South Wales and the Royal Geographical Society of South

Analysing Images and Seriality

The thesis uses a case study methodology to analyse a number of photo-textual objects and maps, each of which offers a different insight into thematic aspects of the investigation. The research will utilise two different application of the case study methodology in the exploration, description and analysis of these objects. Firstly, Chapter 4 will undertake a more open-ended and sequential exploration of a carefully selected number of photo-textual objects drawn from the visual archive of the goldfields. This chapter will explore the objects' production, reception, distribution and their significance to draw a picture of the spatial and temporal context of Kalgoorlie–Boulder and the Goldfields between 1893 and 1903. Secondly, Chapters 5 to 7 undertake a series of in-depth case studies that build on the explorations in Chapter 4, but that apply a closer visual reading utilising graphic analysis techniques and the reorganisation of material as a process of investigation of the case study objects. The selection of these case studies objects was for their sequential or serial organisation of images, their ability to be appraised as part of a case study research methodology and their ability to cover the terrain of the townsite and mines comprehensively. The Souvenir focused on the development of the industrial landscapes of the Golden Mile, the Supplement provided comprehensive images of urban Kalgoorlie and Boulder, which allows for an extensive understanding of those places, while the final case study, draws on a series of maps that documents the interaction between these the urban and industrial field in a single source. Given the difference between the source material of each of the case studies, the methodology that is applied to the content under examination will be differentiated at the beginning of each chapter.

Visual Analysis of Case Studies

Common to the analysis of the case study objects in Chapter 5 to 7, is the analysis of individual images contained within the photo-textual object's groups of serial images. As Klein argues, if the 'internal logic' of the individual image sets the logic of the 'series' that it contributes to, then the 'initial logic' of the image needs to be

Australia. I accessed a hardcopy of the Souvenir at the Kerry Stokes Collection in Perth and utilised a digital version downloaded from the State Library of Victoria.

determined through visual analysis.²³ Gillian Rose advocates a technique of analysing visual images that she calls 'compositional interpretation', which draws on techniques that have a long history in the discipline of art history but are less common in the field of architectural history.²⁴ Rose argues for this visual analysis as part of a 'compositional modality' that looks to 'what images are'.²⁵ Rose acknowledges the difficulty of separating social and visual analysis, quoting Norman Bryson, who suggests that image-making 'unfold[s] from a social formation'.²⁶ Rose argues for 'compositional interpretation' as an initial stage of visual analysis before the further 'social' construction of an image, whereby study of its 'reception, meaning and content' can be undertaken.²⁷ Rose posits that despite these 'absences', compositional interpretation remains a useful method because it does offer a way of looking very carefully at the content and form of images.²⁸ Rose suggests that compositional interpretation is made up of the following components

- content
- colour
- spatial organisation
- focus
- light
- expressive intent.

The thesis will apply and extend Rose's technique of 'compositional analysis' to the images contained within the case study's photo-textual objects. While Rose describes her techniques as 'textual' analysis, this thesis extends this method by the graphically applying the method to the images to construct a series of images for that make transparent the compositional analysis of the contents of the photo-textual objects.

²³ John Klein, 'The Dispersal of the Modernist Series', *Oxford Art Journal* 21, no. 1 (1998): 121.

²⁴ Gillian Rose, *Visual Methodologies. An Introduction to the Interpretation of Visual Materials* (2nd ed., London: SAGE, 2007), 34.

²⁵ *Ibid.*, 37–38.

²⁶ *Ibid.*, 37.

²⁷ *Ibid.*, 37.

²⁸ *Ibid.*, 37.

Example of Extended Serial Reading

Once the logic of individual images has been established, it is necessary that a method for analysing serialised images is established. Extending Balaschak's differentiation of the presentation of the Bechers' work into two different modes (the 'narrative' of images in a book and the 'systematic' comparative grid of images on an exhibition wall) is a useful way to analyse how images are collected together and organised into photo-textual objects.²⁹ Instead of the ideas of the 'narrative' and the 'systematic' being oppositional to one another (as Balaschak suggests they are when discussing the Bechers' particular type of photographic presentation), the combination of these two modes allows us to construct complex meanings by looking at the organisation of images together on a page, across a publication and with text. Sekula, in a similar vein, argues that photographs by themselves are 'fragmentary and incomplete utterances ... where meaning is always directed by layout, captions, text and site and mode of presentation'.³⁰ By utilising what Trachtenberg calls 'ensembles'³¹ of photographs, with their own 'internal dialogue of images and texts',³² we can remove one layer of impenetrability from the 'opaque mass of facts' that Kracauer suggests both the historian and the photographer face when attempting to write history.³³ The method allows us to recognise Mussell's characterisation of nineteenth-century newspapers as both concerned with 'miscellaneity and seriality' while extending this observation to other photo-textual objects such as ephemera.³⁴ The relationship between these two states, which correspond to Balaschak's definition of the 'narrative' and the 'systematic',³⁵ can be seen in the first photographic double-spread pages published by *The Goldfields Courier* on 11 April 1896, just weeks after the photographs were first printed in Kalgoorlie newspapers (Figure 3.12). The six images are titled:

- The Coolgardie Japanese

²⁹ Balaschak, 'Between Sequence and Seriality', 36.

³⁰ Sekula, 'Reading an Archive', 197.

³¹ Trachtenberg, *Reading American Photographs*, xv.

³² *Ibid.*, xv.

³³ Siegfried Kracauer, *The Mass Ornament*, ed. and trans. Thomas Y Levin (Cambridge, MA: Harvard University Press, 1995).

³⁴ Mussell, 'Elemental Forms', 5.

³⁵ Balaschak, 'Between Sequence and Seriality', 36.

- Mr CJ Moran, MLA for the Goldfields
- View on the Great Boulder
- Before the Railway: Team carting machinery from Southern Cross
- Leviathan Public Battery, Hannan's Lake
- Typical Prospectors Camp.

What this collection of images establishes is both the narrative thread through the images of industrial progress (the progress from the prospector's camp to the miner's battery), the exotic (the Japanese and the camel being ridden by the member of parliament), the nostalgic (the image of the prospector's camp with dry blower) and soon to be nostalgic (the railway only arrives seven months after the publication of the image of the camel team) as well as the radical juxtaposition between the miscellany of the images.

Maps

The previous section of the chapter investigated the selection of serial photo-textual objects that documented the spatialising events of Kalgoorlie, Boulder and the Goldfields between 1893 and 1903. This section of the chapter outlines the methods for selecting, organising and analysing the maps produced during this period.

Maps provide some of the most unequivocal visual evidence of the spatial transformation of the town and field. This section describes the conditions under which the cartographic 'archive' of Kalgoorlie, Boulder and the Goldfields was created. Instead, the fourth definition of serialisation given in Chapter 2 of this thesis will be used here to select the maps to be investigated.

Serialisation of Maps

In the first decade of the development of Kalgoorlie, Boulder and the Goldfields, an archive of maps was generated by the proliferation and accessibility of imaging technologies, the desire and need to document urban and industrial growth and the requirements of government regulation. Maps held in the collections of the

National Library of Australia,³⁶ the archive of the mining company Kalgoorlie Consolidated Mining Company,³⁷ the Battye Library of Western Australian History,³⁸ and the State Library of Victoria³⁹ were investigated as part of the process for determining a series that illustrated Kalgoorlie, Boulder and the Goldfields' development over the study period. Many of these maps share consistent information and cartographic conventions and even utilised the same base material. Like the photographic archive of the towns and field described earlier in this chapter, the cartographic archive is not consolidated, homogenous nor complete but rather one that is continuously being added to as material is made accessible. Digitisation by institutions and discoveries in personal and corporate collections consistently contribute additional content. The cartographic archive for Kalgoorlie, Boulder and the Goldfields can be divided into two groups:

- 'private' maps produced by mining companies and publishing houses
- 'public' maps produced by government agencies (some of which are for sale to the public).

The division of maps into these two categories is easily determined by the nature of their publisher (private versus government). Still, there are instances in which privately published maps are produced under the sanction of government agencies. The production of private maps and drawings by Kalgoorlie's mining industry and the commercial interests around the mining industry was prolific.

³⁶ The National Library of Australia's maps of Kalgoorlie were accessed in May 2000 as part of an earlier research project. Digital version of the physical maps accessed in 2000 were purchased in 2010.

³⁷ The KCGM drawing archive, located at Fimiston near Kalgoorlie, holds many of the maps of the mines that previously worked the area that has now be subsumed by the Fimiston Super Pit. These maps were accessed in September 2010.

³⁸ Battye Library maps were accessed and photographed in May 2008. Maps consulted included: Department of Lands and Surveys, Western Australia, 'Mines & batteries from Kalgoorlie to Sir Samuel & Lake Way' (Perth, WA: Department of Lands and Surveys, 189-); Department of Lands and Surveys, Western Australia, 'Townsite of Kalgoorlie' (Perth, WA: Department of Lands and Surveys, 1894); E.S. Wigg & Son, 'Mining leases at Coolgardie; Mining leases at Colgoola Hannan's Find' (Melbourne, Victoria: McCarron, Bird & Co, 1894), C. W. Cropper, 'Map showing the goldmining leases in the Direct Hannan's Belt Kalgoorlie, East Coolgardie Goldfield, Western Australia' (Kalgoorlie: Gledden & Manning, ca. 1896); Kalgoorlie Electric Tramways Limited, 'Kalgoorlie Electric Tramways Limd. pole map showing location of centre poles bracket construction' (Kalgoorlie, WA: Kalgoorlie Electric Tramways Ltd., 1902); C. G. Gibson, 'Geological sketch map of Kalgoorlie, Coolgardie G.F.' (Perth, WA: Geological Survey of W.A., 1910).

³⁹ Maps and map-focused ephemera were accessed at the State Library of Victoria in July 2011.

These maps take several forms. Firstly, many of these maps are internal documents intended for use within a mining company and include investigative drawings such as assaying drawings, mining sections and surface development drawings. A number of these types of mining drawings are reproduced in publications associated with the industry: manuals, textbooks, guides and company documents such as prospectus and annual reports.

Secondly, the production of this commercial cartographic archive was in part to satisfy government regulation. Passed in 1895, Section 31 of the Mines Regulation Act demanded that the drawings of the workings of the mine be held by the mine manager for 'up to three months past'.⁴⁰ If the information list on maps such as the W.H. Barker and Company's *Mining Leases at Kalgoorlie (Hannan's Find) East Coolgardie Goldfield Western Australia* (1897) (Figure 3.24a–b) are accurate, and a company complied with their administrative obligations, it would have meant that on one year more than 300 maps (or map revisions) were generated by those companies listed. In addition to the small number of private maps held by state and national libraries, the majority of these maps that were utilised for internal records are now held by the Kalgoorlie Consolidated Mining Company. They operate the Fimiston 'Super Pit' open-cut mine, which absorbed many of the underground mines that worked this area during the research period.

Thirdly, there is a category of private maps produced by companies aligned to the mining industry: stock and share brokers, agents, surveyors and hotels. Extending the idea of the photo-textual objects, a number of these maps could be more accurately described as 'carto-textual' objects for their combination of maps, statistical material and descriptive text that extend beyond the information solely associated with the maps cartographic function. The W.H. Barker and Company map is an excellent example of this kind of document. Now held by the Battye

⁴⁰ *The Mining Act (1895)* (WA) Section 31: 'The owner, agent, or manager of every mine, where six or more men are ordinarily employed underground, shall keep at the Plans to be furnished office at the mine an accurate plan, on a scale of two chains to one inch, of the workings of such mine, made by a duly qualified mining engineer or manager, or by a mining surveyor authorised as such by the Minister, showing the workings up to within three months past, and shall produce such plan at the mine to any inspector or to any other person duly authorised by the Minister, and shall, if requested by any such inspector or other person, mark on such plan the progress of the workings of the mine up to the time of such production, and shall allow the inspector to examine and take a copy or tracing thereof.'

Library, as well as the detailed map of Kalgoorlie mining leases (their names, area and lease number and any consolidated or associated mining companies the individual leases might belong to), the map includes detail of the layout of the Kalgoorlie townsite, infrastructure such as dams, camping reserves, the surveyed area for the future railway, roads and telegraphs lines in and out of the town. The cartographic depiction of these elements is combined with a company register of mining companies registered in Great Britain and Australia. The map, in red ink, has a description of gold-bearing geology in other locations such as Colorado and Hungary and the differences between ore from those locations and the type found in Kalgoorlie. The document lists the company and its agent's addresses in Australia, New Zealand and South Africa as well as its bankers in Paris, London and Berlin. A smaller inset map illustrates the other significant mining field in Australia. There are several other maps such *Cropper's Map showing the gold mining leases in the Direct Hannan's Belt Kalgoorlie, East Coolgardie Goldfield, Western Australia* and *Plan of the Golden Mile showing various leases and prices on the home market* (1899), which combined different scales of maps or types of information.

The parameters used for determining the suitability of photo-textual objects as case studies, as described earlier in this chapter, were also applied to the selection of maps. This included the ability of the map to be serialised as a representation of space and time. Attempts were made to organise these private and public maps into timelines to test their potential as a series. These maps have been organised into a timeline that is divided into three groups according to their scale and period (as well as the mode of settlement and degree of urbanisation and industrialisation). These three groupings and timelines are:

- Early regional exploration
- Settlement and alluvial exploration
- Urban and industrial

However, these maps (as well as their organisation in timelines) proved unsuitable for a variety of reasons. They were not issued at a scale that suited the task of determining the interaction of spatialising events such as the friction between the

urban and mining leases and the arrival of infrastructure. There was inconsistency in the issuing of maps and information was not mapped comprehensively or consistently across the maps found. As discussed in Chapter 2, to be serialised the documents required a specific kind of internal logic.⁴¹ This was not the case here.

In addition to these investigations of the private and public maps, the research investigated cartographic material held by the State Records Office of Western Australia (SRO), which holds maps produced by Western Australian Government agencies.⁴² These maps series included:

- Series 236: Districts, consignment 3869), dates c. 1850+
 - These plans consist of one or more locations within the same Land District
- Series 979: Cancelled public plans, dates 1878–1907
 - This series represents the first attempt to cover the colony within one integrated cadastral mapping system
- Series 235: Townsites, dates 1835–1913
 - Plans compiled from original surveys of proposed and or declared townsites
- Series 2168: Townsites, dates 1856–1994
 - This series comprises cadastral plans of proclaimed townsites or parts thereof, including suburban lots.

Series 236 and 979 maps were discounted for the large scale (80 chains, 160 chains to an inch, respectively), which did not allow for them to register the detailed interaction between urban blocks and the mining leases. Many of these maps do not record mining information at all. The SRO's Townsite Series 235 were at an appropriate scale (scale 2 chains to an inch), and the maps included mining information such as the lease outline and the notations indicating lease numbers,

⁴¹ This extended Coplan's idea of the internal logic of the serialised painting to a cartographic discipline. John Copland, *One of a Kind: Contemporary Serial Imagery* (Los Angeles: Los Angeles Museum of Modern Art Gallery, 1988).

⁴² The State Records Office of Western Australia archive was assessed in May–June 2014. This included Department of Lands and Survey maps as well as archive notes (<http://www.sro.wa.gov.au/archive-collection/collection/maps-online>, accessed 17 October 2017).

ground conditions such as surface rights and the locations of survey pegs (and even mine shafts) as well as road reclamations. From this series, ten maps of Boulder and 29 maps of Kalgoorlie were investigated for the intersection between mining and urban leases. This involves digitally 'marking up' the maps when these incidents occurred and logging these incidents in a database. While the marked-up Series 235 maps revealed intersections between the adjacent town and goldfield, the scale of the maps was too large. The timeframe between the issuing of maps was also too great—some maps issued in 1897 were still being utilised in the late 1970s, as indicated by the notation of the maps—for the map series to usefully describe the rapid expansion of the town and industrial field in the late 1890 and early 1900s. After investigating and discounting the suitability of the SRO's map series 235, 236 979, the researcher decided that the case study investigation would utilise these Series 2168, a collection of maps that describe the development of towns across Western Australia between 1856 and 1994.

This chapter outlined the approach and parameters of the study and defined the nature of a range of spatialising events and how archival material such as photo-textual and cartographic objects recorded the spaces, events and processes of the urbanisation and industrialisation of Kalgoorlie, Boulder and the Goldfields. The chapter outlined the fashion in which the material selected for examination would be subjected to textual and graphic analysis in the case studies for this thesis presented in Chapters 5, 6 and 7.

CHAPTER 4: A Spatial History of Kalgoorlie, Boulder and the Goldfields

Before beginning the close reading and visual analysis of the case studies objects, this chapter explores, describes, analyses and contextually locates a limited number of objects that establish the spatio-temporal conditions of Kalgoorlie, Boulder and the Goldfields. This chapter is important for several reasons. Firstly, while the thesis research looks to understand the very particular urbanisation process of boom urbanism, it is necessary to provide the reader with an understanding of the spatial and temporal conditions under which this boom took place. Secondly, Chapter 2 pointed to the lack of urban and architectural histories that drew on visual sources as the basis for the construction of their narratives. This research project would be remiss if it were to commit the same errors. To this end, the following chapter identifies, describes and analyses ten objects that help to define the conditions of the urban and industrial landscape of Kalgoorlie, Boulder and the Goldfields under which the process of boom urbanism took place. The ten objects include photographs, maps, legislation, newspaper editions, photographic albums and government gazettes that all invoke the spatialisation



Figure 4.1: Patrick Hannan's Miner's Right

'Patrick Hannan Miner's Rights', Western Australia Government Photographer, Photograph, 1967 (Call number: 816B/TB/7065), The State Library of Western Australia, Perth



Figure 4.2: Lantern slide of a drawing of a Kalgoorlie streetscape,

'Drawing of the main street, probably Hannan Street, Kalgoorlie', Walker Hodgson, 29 November 1894, Lantern Slide Photograph (Call number: 090038PD), The State Library of Western Australia, Perth



Figure 4.3: Photographic copy of watercolor

'Very old Ivanhoe mine by Mr N. Hawkins', John Joseph Dwyer, 1894, (Call number: b2542653) Series: J. J. Dwyer collection 5816B, The State Library of Western Australia, Perth

and visualisation of the towns and the industrial field. The chapter investigates the objects, the circumstances of their creation, use and reception while analysing their contribution to the spatialisation of their locations.

Object 1: Photograph of Patrick Hannan's Miner's Right

The first object, a photograph of Patrick Hannan's Miner's Right (Figure 4.1), illuminates several aspects of a spatial history of Kalgoorlie, Boulder and the Goldfields. Firstly, as a photographic object, the miner's right issued on 10 August 1893, acknowledges the events that occurred two months earlier, when on 14 June, Patrick (Paddy) Hannan, Tom Flanagan and Dan Shea discovered gold at the foot of Mount Charlotte.¹ The party were following a rush out of the nearby mining town of Coolgardie, 40 kilometres to the southeast when they found alluvial gold at what would become Kalgoorlie.² A Perth newspaper reported:

Patrick Hannan arrived last night [in Coolgardie], bringing with him about seventy ounces of alluvial gold, which he had picked up from the surface. A perfect stampede has taken place at Coolgardie for the new find, and Coolgardie by tomorrow morning will be deserted.³

No other remaining maps or photographs record the events of the discovery of gold that lead ultimately to the urbanisation and industrialisation of the Western Australian interior. Paddy Hannan's Miner's Right, first copied photographically in 1899, again in 1967 and now digitised, illustrates the document that entitled the holder to work on a goldfield for no more than ten years from the date of its issue.

The photographed miner's right is significant for several reasons. As a photographic recording of Hannan's Right, it is emblematic of the process by which

¹ The Webbs spend 15 pages of *Golden Destiny* debating the exact date and discoverers of the first alluvial gold at Kalgoorlie. Martyn Webb and Audrey Webb, *Golden Destiny: The Centenary History of Kalgoorlie-Boulder and the Eastern Goldfields of Western Australia* (Kalgoorlie-Boulder: City of Kalgoorlie-Boulder, 1993), 91–106.

² As acknowledged by many historians of the goldfields, while Hannan found the first alluvial gold, it was Sam Pearce and Willie Brookman's pegging out of lode gold two weeks later in the area closer to Boulder that secured the ongoing prosperity of the field. See Webb and Webb, *Golden Destiny*, 1. Brookman's Miner's Right is reproduced in photographic form in an anniversary issue of *The Western Argus*, Tuesday 8 June 1901.

³ *Daily News*, Thursday 29 June 1893, 3.



Figure 4.4: The Fimister Souvenir,

'Kalgoorlie's Pioneer', Unknown Photographer, 1899, (Call number: 008940D) Series: Louis Jacob Meatchem collection of mining photographs BA1245, Views of the Eastern Goldfields 4406B and Golden Pipeline Project, The State Library of Western Australia, Perth



Figure 4.5: Hannan Street

'Street scene, Hannan's 1894', William Roy Millar, 1894, (Call number: 006142D), The State Library of Western Australia, Perth

early representations of the town now exists. This highlights that even when other modes of visual representations did exist, such as the small number of watercolours or handful of drawings that documented the early urban condition or industrial field, they were soon transformed into photographic objects and now exist only as a photographic record rather in their primary medium (Figure 4.2–4.3). As an example of the first most rudimentary structures, these depictions of the early tent ‘buildings’ in Hannan Street, the town’s main thoroughfare and the basic engineering constructions of the Golden Mile were copied by Kalgoorlie photographers and absorbed into their commercial archives (and now reside in the online collections of archives and libraries). In addition, the pervasive process of the photographic documentation of the town and its people was aided by the camera and its economic accessibility at this point in its technological and economic development. As the discussion of Objects 6 and 7 later in this chapter illustrates, this photographic prevalence extended to the photograph’s production, and circulation within the goldfields, across colonial Australia and even internationally. This transferability between visual media can also be seen in the miner’s right’s photographic reproduction, which allowed it to be incorporated into other graphic media and circulate contemporaneously. For example, in 1899, at its first reproduction, the photograph of the miner’s right was embedded among several line drawings that described Paddy Hannan’s life on the goldfield (Figure 4.4). This new object, a souvenir made of a hybrid graphic–photographic object, was given to the then Kalgoorlie Mayor J.W. Fimister as an appreciation of his service to the town.

The legal status of the miner’s right, as covered by the Goldfields Act of 1866 and its successive legislation of 1895, and in conjunction with the ability of its holder to claim a mining lease, begins to determine and define the spatio-temporal conditions of the field. The miner’s right established what actions a miner could undertake, while the lease demarcated the space in which in these actions could take place. In addition to the obvious entitlement ‘to take possession of, mine and

occupy Crown lands for mining purpose', the right allowed a series of other spatial transformations of a goldmining lease.⁴ According to Clause 9, the miner could:

- 'cut, construct, and use races, dams, and reservoirs, roads, and tramways
- take or divert water from any spring, lake, pool, or stream
- put up and at any time to remove any building or other erection upon such land so taken up and occupied
- cut timber on and to remove the same, to strip and remove the bark from any such timber, and to remove any stone, clay, or gravel from any Crown lands, for the purpose of building for himself or themselves any place of residence, or for mining purposes'.⁵

The interaction between the rights of the miner, the processes allowed and the nature of the ground (or 'Earth', as it is defined by the Goldfields Act 1886 and 1895) recall Morse's description of goldmining as a 'process of disassembly'⁶ of the land into what Jackson described as a 'vernacular' or 'synthetic landscape' whose form is produced by this 'spatial reorganization'.⁷ As noted previously, while Jackson is referring to the agricultural lands of the Po Valley and the dam infrastructure of the Netherland's polder, the landscape of mining can be located on this continuum of territorial transformation. The miner's right further spatialised the goldfield with each lease, providing the opportunity to create an infrastructural landscape of mining, inhabitation and commerce.

Thirdly, the miner's right was evidence of one way in which the Western Australian Government attempted to exercise control in mining areas such as the Eastern Coolgardie Goldfields.⁸ To illustrate the extent to which the miner's right is concerned with governmental control, it is worth examining the first substantial

⁴ *The Goldfield Act 1886* (WA) Section 9.

⁵ *Ibid.*, Section 9.

⁶ Morse, *The Nature of Gold*, 92.

⁷ John Brinckerhoff Jackson, *Discovering the Vernacular Landscape* (Yale University Press, 1984), 8.

⁸ It is acknowledged that the Western Australian Government avoided the mistakes of Victoria's handling of the miner's license (which is acknowledged as one of the reasons for the Eureka Stockade). Geoffrey Serle writes that 'nearly all participants and observers as well as historians of (the) Eureka (Stockade) agree that the general attitude of the administration to the diggers, the existence of the licence-fee, the behaviour of Commissioners and police, and particularly the methods used to collect licence-fees, are among the major long-term and immediate causes of Eureka'. Geoffrey Serle, 'The Causes of Eureka', *Australian Historical Studies* 6, no. 1 (1953): 15–24.

clause of the legislation that granted the right and determined who could claim it and who was excluded. After Clause 1 and 2, which name the legislation and set out the definitions of its major terms, Clause 3 states:

NO miner's right, or any lease, license, or permit on any goldfield shall be issued or granted under this Act or the Regulations to any Asiatic or African alien before the expiration of five years from the date of the first proclamation of such goldfield.⁹

While this clause preventing non-European labour on the field is not concerned with spatialisation, it points to the extent and manner in which the 'prerogative right and powers of Her Majesty' or that of the Governor of Western Australia might be exercised on the field.¹⁰

Objects 2 and 3: EW Henderson's View of Hannan Street, 1894/5 and Townsite of Kalgoorlie (Hannan's Find), Map Sheet 1, 189-

The second and third objects, a photograph and a map, together describe the early urban condition of Kalgoorlie. The first photograph of what would become Kalgoorlie was probably taken by the photographer Roy M Millar as he travelled from neighbouring Coolgardie in 1894 to visit the site of the latest gold rush (Figure 4.5). However, it is the Kalgoorlie-based photographer EW Henderson's images of the initial settlement of Hannan's Camp/Kalgoorlie that are perhaps significant, as they begin to show the emergence of the settlement and demonstrate the importance of the role of the photographer in imagining the town.¹¹ One picture by Henderson, looking southwest towards Coolgardie, shows an early image of a nascent Hannan Street, Kalgoorlie's main mercantile thoroughfare, with a scattering of seven timber and canvas structures along its western edge (Figure 4.6). As a measure of its urban immaturity, salmon and gimlet gums are still dotted within the wide expanse of what is very loosely a

⁹ *Goldfield Act 1886 (WA)*, Clause 3.

¹⁰ *Goldfield Act 1886 (WA)*, Clauses 4 and 5, respectively.

¹¹ Henderson advertises his services in the first issue of *The Kalgoorlie Miner* newspaper, 14 September 1895. A number of Henderson's photographs, as well as other anonymous photographers that have clearly been rephotographed, can be found in Dwyer's archive, suggesting that the practice was common.



Figure 4.6: North Hannan Street 1894/5

"North Hannan Street, Kalgoorlie", EW Henderson, 1895 (Call number: 1884B/34), The State Library of Western Australia, Perth

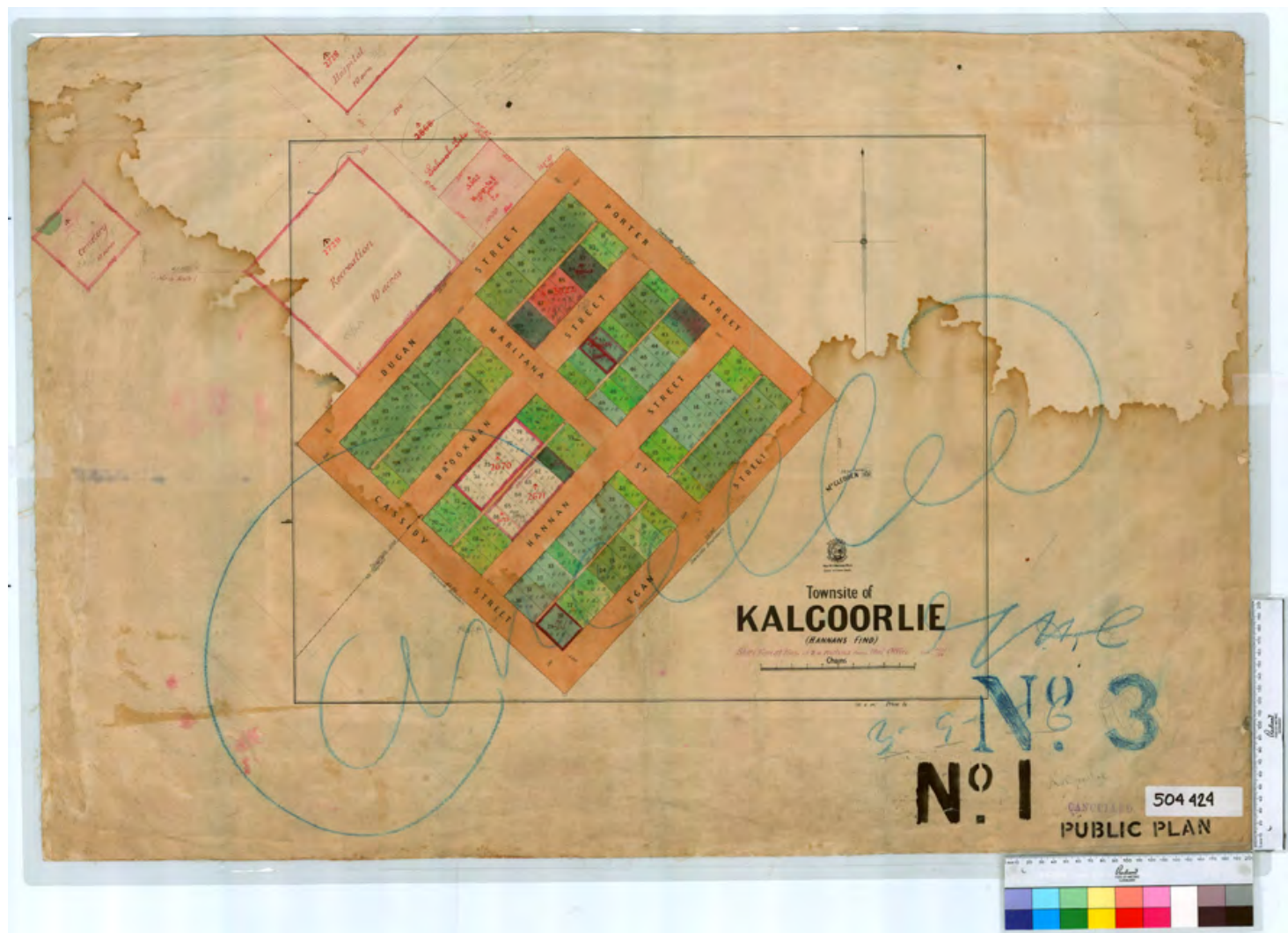


Figure 4.7: Kalgoorlie Sheet 1 August 1894

'Sheet 1, Kalgoorlie', August 1894, Department of Lands and Surveys, (Tally No 504424) The State Records Office of Western Australia

‘street’. On one of the tents, closest to the camera taking the picture, the sign ‘E W Henderson Photographer’ is just legible on the end gable of the canvas structure. The Battye Library gives the image a date range of 1894/5 and whatever the date of the image, it illustrates that the arrival of photography in Kalgoorlie was contemporaneous with its settlement and photographers were among the first non-mining professions to appear on the goldfields. The presence of a photographer at this early stage of the development of the town could be read in several ways. Firstly, photography is considered one of the essential services that were ‘quickly bought’ to the goldfields along with the more expected amenities of transportation, mining services and supplies.¹² Secondly, the establishment of the mining camp (and soon afterwards, a gazetted town) offered commercial opportunities of which the photographer could take advantage. While there is no record of Henderson in Coolgardie, he may have arrived in Kalgoorlie from further afield (the adjacent Southern Cross or the Yilgarn goldfields) to provide his services. In addition to indicating the photographer’s presence on the field, this image and others taken by Henderson established the visual record of the early stages of the gold rush camp, its transient architecture and the rudimentary nature of the early settlement as well as the nature of the businesses that worked in this environment.

Henderson’s recording of Hannan Street stands in contrast to the cartographic construction of the town as demonstrated by a map issued contemporaneously by the Department of Lands and Survey in August 1894 (Figure 4.7). Utilising cartographic and surveying conventions, the map establishes an image of urban regularity, fixity and permanence where line, colour and text are used to describe and delimit the regular plan of Kalgoorlie. Kalgoorlie’s typical block consists of 20 100-foot by 250-foot lots. Each block has a 20-foot wide service laneway running lengthways, and 200-foot streets separated the blocks. While the application of the surveyor’s grid appears to regularise the new townsite of Kalgoorlie, a closer reading of the plan points to several anomalies. The map indicates an existing set of structures (glorified tents rather buildings) (Figure 4.8, detail of Sheet 1) that

¹² Paul suggested that there are a series of essential services which arrived in the wake of the miner and the prospector to service their ‘wants’. Paul W. Rodman, *Mining Frontiers of the Far West, 1848–1880* (New York: Rinehart and Winston, 1963), 2.



Figure 4.8: Detail of Kalgoorlie Sheet 1 August 1894 showing, outlined in red, the Government Reserve and location of first Post Office and Warden's Court

'Sheet 1, Kalgoorlie', August 1894, Department of Lands and Surveys, (Tally No 504424) The State Records Office of Western Australia



Figure 4.9: Detail of Kalgoorlie Sheet 1 August 1894 showing the hand-drawn urban extensions to the northeast

'Sheet 1, Kalgoorlie', August 1894, Department of Lands and Surveys, (Tally No 504424) The State Records Office of Western Australia

house the Warden's Office and that straddle the new surveyed lots.¹³ The grid of a newly gazetted townsite, such as that proposed for Kalgoorlie, might suggest a tabula rasa without an existing hierarchy or predetermined order. However, the presence (and location) of the Warden's Office loads the supposedly neutral grid with the most rudimentary civic presence and creates an ad hoc urban organisation based on what was there rather than what is determined by the state or the topography of a site. This ad hoc beginning to Kalgoorlie's urban form is further emphasised (and the order suggested by the fixity of the map is further destabilised) by the hand-drawn urban extensions to the northeast (Figure 4.9), which do not continue the arrangement, form or logic of the grid as it extends to include a recreation area, a hospital and a school site. Rather than the rigidity and stability of the urban grid, these two instances in the development of Kalgoorlie instead point to the flexibility of the urban grid. Further inspection of the plan highlights several other irregularities: the townsite boundary is almost square (2,600 feet x 2,360 feet), and half the blocks consist of 2 x 9 lots while the others are 2 x 11 lots.

While Kalgoorlie, as depicted on Sheet 1, appears cartographically independent from the mines located adjacent to it, this Department of Lands and Survey map does not adequately describe the situation on, or of, the ground. Combining material from mining maps and Sheet 1 illustrates that many leases were in force contemporaneously with the issuing of Sheet 1 in 1894. Early maps such as Webb & Son's *Map of Mining Leases at Colgoola/Hannan's Find* (1894) (Figure 4.11) shows a handful of goldmining leases around Mount Gledden. A map from *The Pictorial Australian* in 1895 (Figure 4.11) not only illustrates the growth in the number leases between Kalgoorlie and Boulder but also how they cluster around the perimeter of the townsite boundary. As the Hamilton's surveyor's traverse notebook sets out (Figure 4.12), the corner of the Hannan's/Kalgoorlie townsite boundary was referenced from both a topographical and geological measure: Mt Gledden and the mining leases of the White Feather and Hannan's. These other spatial measures are absent from the first maps of urban Kalgoorlie despite their

¹³ These rudimentary structures of the Warden's Office and Post Office are also representatives of legal order of the government as it is via the functionaries of these services that mining leases are applied for, secured and issued.

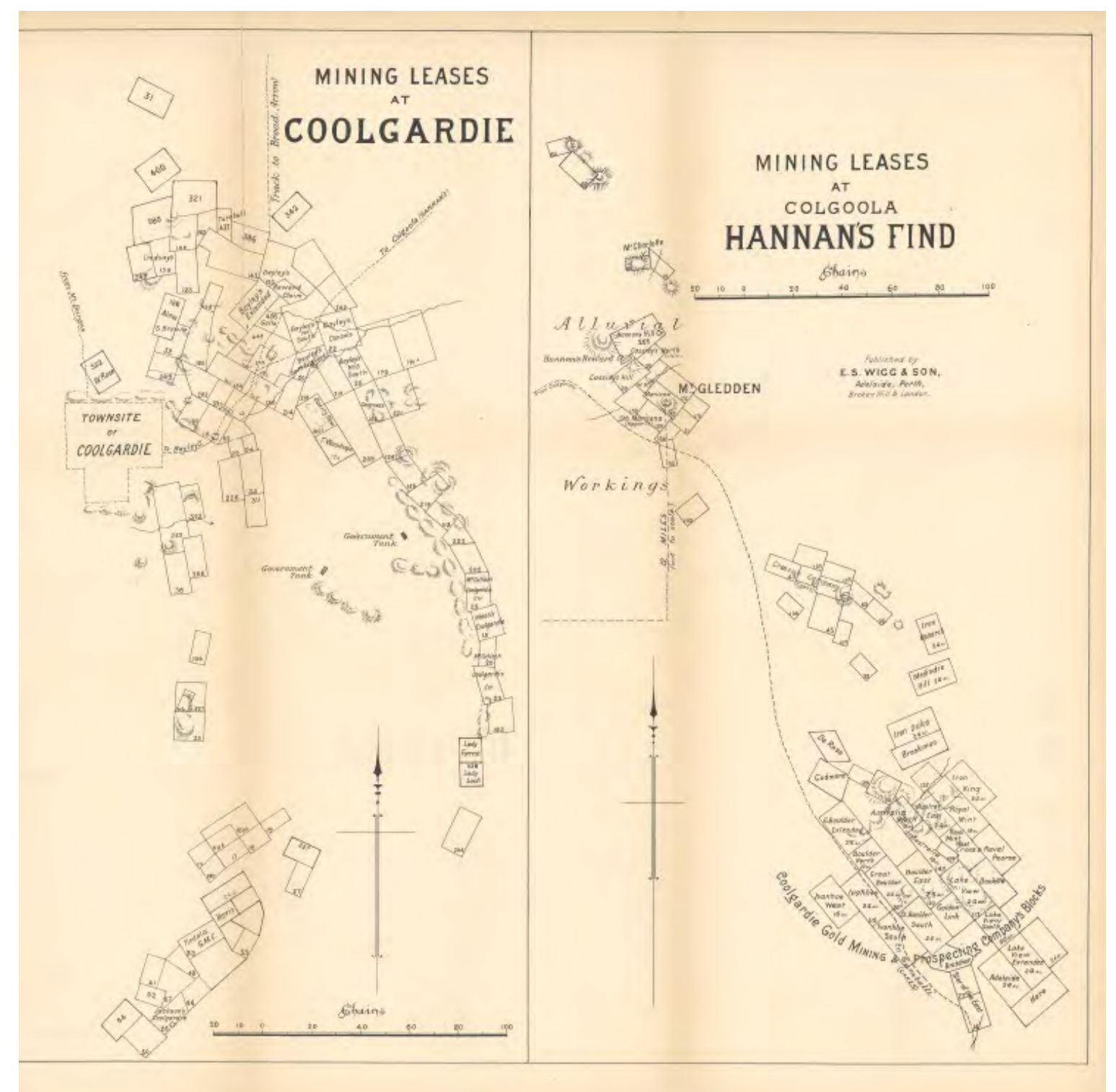
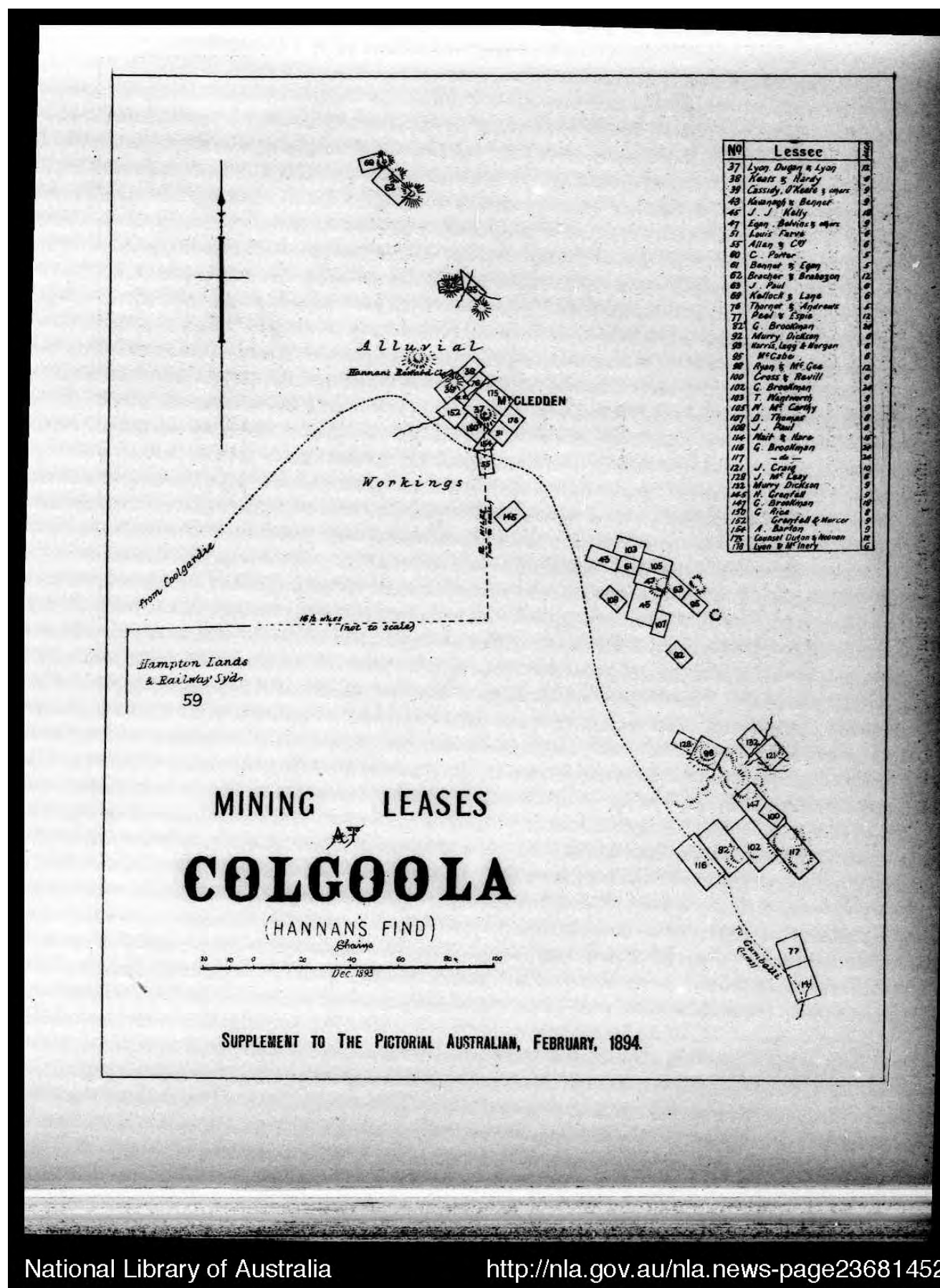


Figure 4.11: Map of Mining Leases at Colgooola/Hannan's Find, Webb & Son's, 1894

'Map of Mining Leases at Colgooola/Hannan's Find', Webb & Son's, 1894, Supplement to the Pictorial Australian, February 1894, National Library of Australia, <https://trove.nla.gov.au/newspaper/page23681452>

Figure 4.10: 'Mining Leases at Coolgardie' and 'Mining Leases at Colgooola Hannan's Find'

'Map of Mining Leases at Colgooola/Hannan's Find', Webb & Son's, 1894, Supplement to the Pictorial Australian, February 1894, National Library of Australia, <https://trove.nla.gov.au/newspaper/page23681452>

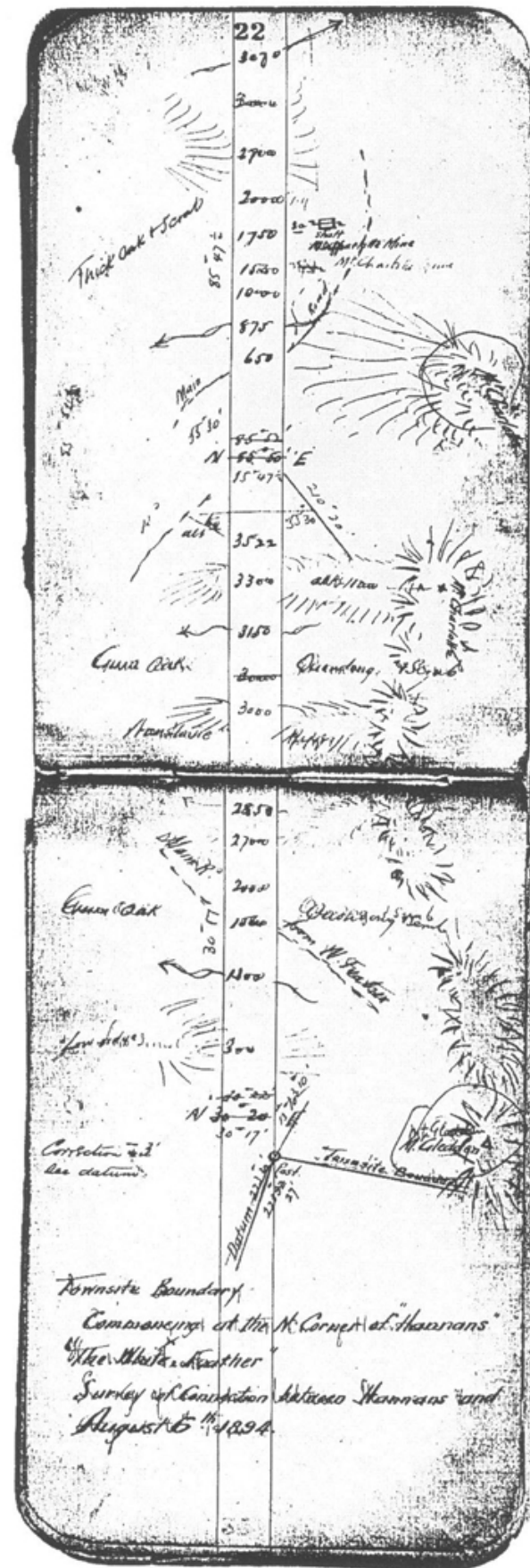


Figure 4.12: Hamilton Surveyor's Traverse Notebook,

Source: Webb, Martyn and Audrey Webb. Golden Destiny: The Centenary History of Kalgoorlie-Boulder and the Eastern Goldfields of Western Australia. Kalgoorlie-Boulder: City of Kalgoorlie-Boulder, 1993

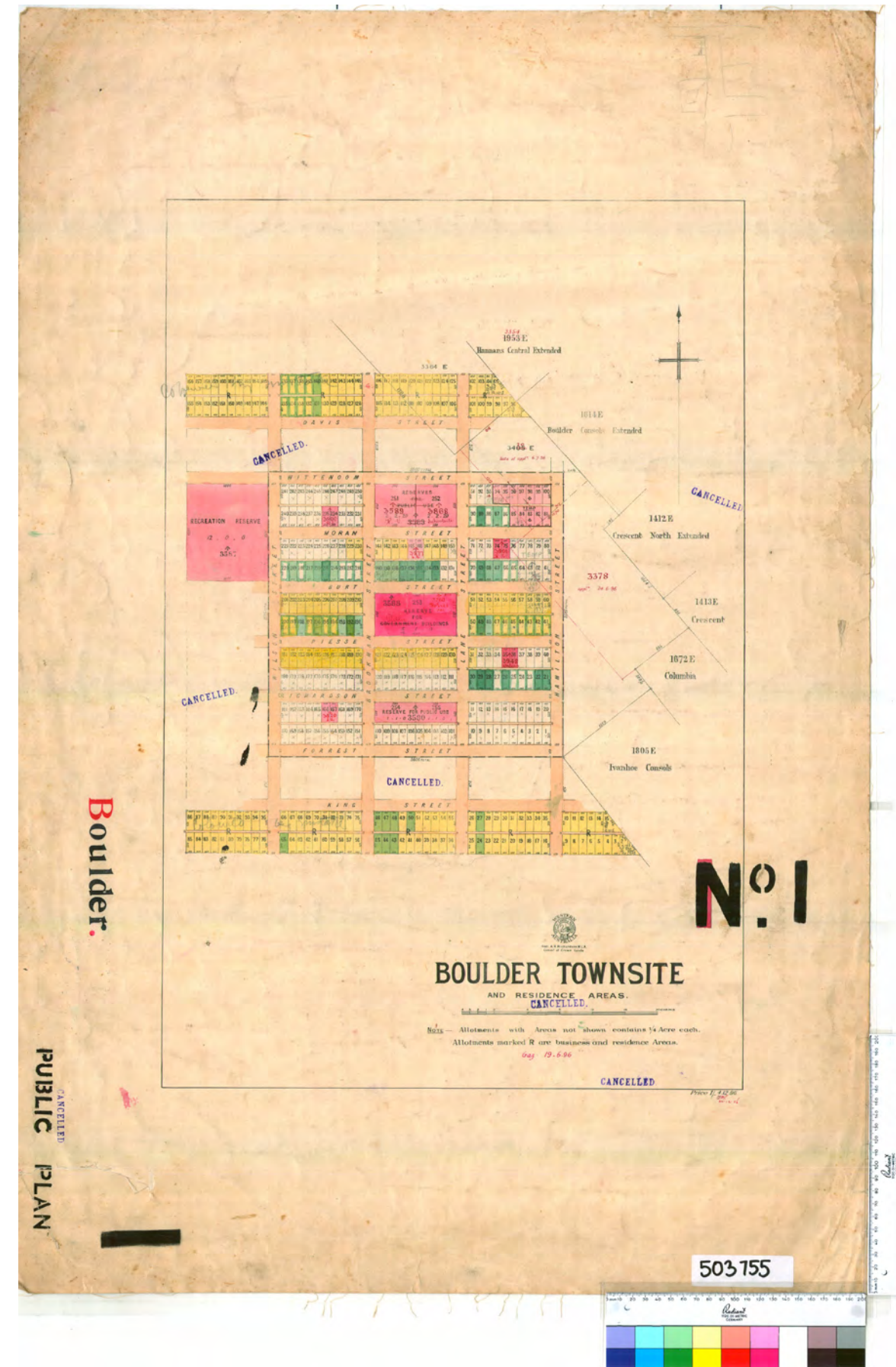


Figure 4.13: Boulder Townsite and Residence Areas, 1896

'Sheet 1, Boulder Townsite and Residence Areas', 1896, Department of Lands and Surveys, (Tally no 503755), The State Records Office of Western Australia⁶

proximity and importance. The contrast between the image and the map (and its cartographical absences) points to the specificity and limits of each medium and their potential for establishing a visual regime of order.

Object 4: The Proclamation of the Mines Regulation Act and the Goldfields Act of 1895

The first four objects described and analysed in this chapter illustrate how photography, maps and legislation attempted to provide a level of fixity, order and control by spatialising the territory of the town and the field in the early years after Hannan's find. Despite the instrumentality of the mechanisms of photography and cartography (and what might be described as governmentality)¹⁴ in attempting to establish a sense of order, a new suite of legislation including the Mines Regulation Act and the Goldfields Act, both of 1895, created a new 'contested' ground between city-making and mining in Kalgoorlie, Boulder and the Goldfields. These Acts introduce what land could be mined, the manner of undertaking this process (as well as the range of lands excluded from these processes) and the nature of the inhabitation of leases and facilitate the spatialisation of the legal framework of mining and land occupation.

This is best illustrated by an incident recorded in *The Kalgoorlie Miner*, which on Monday 23 December 1895 reported that Mr James Dunsmore had pegged out and attempted to claim four 15-acre goldmining leases—the entire townsite of

¹⁴ The disciplines of urban design, photography and cartography could be considered complicit with Foucault's notion of governmentality. Abramson, Dutta, Hyde and Massey argue that 'Michel Foucault's concept of "governmentality", describe the combination of protocols, rules, structures, and institutions through which our desire to be governed is cultivated and channeled'. Further, an 'array of mechanisms that mediate power to regulate our conduct, encompassing everyday practices and mind-sets along with administrative protocols and organizational procedures'. Dutt Abramson et al are relevant for this thesis as they located the built environment as in alignment with Foucault's notion's. They argue that 'architecture is coextensive with the assemblage that is governmentality; we recognize it not only in the edifices that house and facilitate modern institutions but also in the organizational logics, processes, and systems that call them forth'. Daniel M. Abramson, Arindam Dutta, Timothy Hyde and Jonathan Massey, 'Introduction', in *Governing by Design: Architecture, Economy, and Politics in the Twentieth Century*, ed. Timothy Hyde (Pittsburgh: University of Pittsburgh Press, 2012), vii–viii. With regard to maps, according to Daniel Clayton, the geographer Brian Harley began to show that maps were instruments par excellence of what Foucault termed "governmentality", sifting and sorting populations and territories into grids of power and normalisation. Daniel Clayton, 'Snapshots of a Moving Target: Harley/Foucault/Colonialism', *Cartographica: The International Journal for Geographic Information and Geovisualization* 50, no. 1 (2015): 20.

Kalgoorlie. This was just 10 months after the mining town had been gazetted as a municipality, and at that point, it consisted of six urban blocks with around 120 building lots. The newspaper noted that the Mining Warden, Mr P. Fielding, under whose jurisdiction all gold leases in the area fell, expressed the opinion that 'the applicant has, not got a possible chance of securing the leases, owing to the land applied for, being within the surveyed and gazetted town boundary'.¹⁵ However, the newspaper did not regard the matter in such definitive terms and suggested that the issue involved a 'legal point on which there is some difference of opinion' and was said to rest upon the interpretation of clauses in new legislation that had come into law on 12 October 1895.¹⁶ Further, the newspaper noted that:

It is without doubt a matter for deep congratulation that not only the surrounding hills are rich in auriferous deposits, but that the townsite itself ... should be deemed worthy of exploiting. Many cities of much greater pretensions than Kalgoorlie would be more than delighted at such a prospect.¹⁷

The *Inquirer* and *Commercial News*, reporting on the same incident, claimed that it was 'generally known that rich alluvial gold exists throughout the town' and 'good prospects are often obtained by men sinking post-holes for verandahs'.¹⁸ The same article claimed that a sample obtained from a building site in Kalgoorlie's main business thoroughfare, Hannan Street, had been sent to London for assaying to determine the presence of gold. Building, mining and city-making were intertwined. The newspapers' reportage of the incident highlights the tension between the perceived value of the same contiguous ground in two different economic and physical considerations:

But at the same time those who have paid large sums of money to the Government for the purchase' of Town blocks, view with some concern the pegging out of the land within the Municipal boundaries, fearing that the putting down of shafts in roads or lanes or back yards would interfere

¹⁵ 'Untitled', *The Kalgoorlie Miner*, 23 December 1895, 2.

¹⁶ *Ibid.*, 2.

¹⁷ *Ibid.*, 2.

¹⁸ *The Inquirer and Commercial News*, 20 December 1895, 3.

with business if it did not very materially detract from the value of their properties.¹⁹

The Miner argues that municipal blocks would be physically and economically 'undermined' by the potential to be considered goldmining leases. This sentiment existed, despite the legislation having several very precisely detailed Clauses that accepted a wide range of other land uses that that would exclude mining including those that are:

Lawfully and *bona fide* used as a yard, garden, cultivated field or orchard or upon which any house shed or other building shall have been erected and shall be in actual use or occupation or any artificial dam or reservoir which shall have been made shall be and the same are hereby excepted from occupation for mining and for residence or business.²⁰

Both the Land Act and the Goldfields Act contain the potential for inhabitation, which added to the tension between the nature of the ground and its ability to be mined. For instance, Clause 16 of the Goldfields Act of 1895, which establishes the entitlement of the miner's right, allowed the lessee to:

To take possession of and occupy for the purpose of residence and not for business purposes an area of Crown lands not exceeding one quarter of an acre as shall be provided for by the Regulations.²¹

In addition to the tension of the use and inhabitation of the ground, the Goldfields Act of 1895 introduces further spatialisation with its detailed definition of how the area of a goldmining lease would be determined:

No lease shall embrace an area exceeding twenty-four acres. Provided that where the workings will be chiefly confined to quartz veins or lodes the area applied for shall not exceed in length along the lode or vein twice the width across the line of lode or vein.²²

¹⁹ 'Untitled', *The Kalgoorlie Miner*, 23 December 1895, 2.

²⁰ *Goldfields Act 1895* (WA) Section 21.

²¹ *Ibid.*, Section 16.

²² *Goldfields Act 1895* (WA) Section 35.

While the form for mining leases is determined and constrained by geology and the law, it establishes a spatial framework for many other activities to take place.

Object 5: The Setting out of the Boulder Townsite, 1896

In contrast to the relationship established between mining and city-making as illustrated in Object 3, the set out of neighbouring Boulder demonstrates the impact of mining on city-making (Figure 4.13). While the Department of Lands and Survey's first map of Kalgoorlie illustrates an instance of the 'blindness' of urban mapping with the cartographical absence of the mines that clustered around the edge of the Kalgoorlie's town grid, this section of the thesis examines several objects that record the importance of goldmining leases when setting out Boulder's townsite, and the spatial relationship these artefacts establish between the mines to its immediate east and the new townsite.

The State Records Office of Western Australia holds several documents that relate to the establishment of the townsite of Boulder. These documents include letters, transcriptions of telegrams, preliminary maps and surveyors' tracings. The modesty of the settlement was also a result of its location—so close to Kalgoorlie—as noted by the Chairman of the Kalgoorlie Road Board, who opposed this proximity, writing:

As the locality suggested is only about 3 1/2 miles from Kalgoorlie, I would dep(undecipherable) to any large area being set aside for a townsite but it is undoubtedly necessary that some provision be made for residence site for the numerous miners working on this and on other parts of the Goldfields.²³

Further to the Board's objection noted above, they also expressed their concern about the town's development and used the language of the mining industry to describe these concerns. In March 1896, the town clerk of Kalgoorlie, Bartlett, wrote to the Minister for Lands and argued against the necessity of the provision

²³ State Records Office, Consignment: 1755, Item number: 1896/00137 volume 1, folio 5.

of the townsite of Boulder, suggesting that it would 'not reach the class it is intended but will be "rushed" by speculators'.²⁴

When setting out the town, the potential to expand the settlement was one of the four factors considered when planning the location and organisation of the urban grid. The Crown Commissioner of Lands AR Richardson in writing to the Under Secretary of Lands stated that his preferred plan for Boulder was for:

About 100 acres for business lots & Govt reserve (only a portion of which would be offered) then outside that on perhaps two sides we thought there might be a reserve left of Parkland, and then the resident areas, & as one (the third side would be bounded or confined by the Mining leases, the 4th side was to be left open for possible extension).²⁵

The order of priority described in that correspondence places for provisions for business and government as primary, followed by parkland, then mining and finally an open side to the townsite to allow for future expansion of the town. There may be other reasons for the placement of urban expansion last in the order of priorities for the development. The first reason might be that the current allotment of blocks in Boulder would satisfy the demand of miners and businesses likely to located in Boulder. In fact, demand for lots was underestimated, as suggested by later correspondence in the same folio, which demonstrates the oversubscription by workers for residential lots and the demand for the release of further lots.²⁶

Finally, both the town and the mine share a common spatial register as illustrated by the official proclamation townsite of Boulder in June 1896 in the *Government Gazette*, which declared that the townsite was to be measured from the 'western most angle of the goldmining Lease 1805 (Ivanhoe); the opposite boundaries being

²⁴ State Records Office, Consignment: 1755, Item number: 1896/00137 volume 1, folio 8.

²⁵ Letter AR Richardson, Crown Commissioner of Lands to Under Secretary of Lands, 20 April 1896, State Records Office of Western Australia, Reference Number Consignment: 1755, Item number: 1896/00137 volume 1, folio 14.

²⁶ Letter, AR Richardson, Crown Commissioner of Lands to Under Secretary of Lands, 20 April 1896, State Records Office of Western Australia, Consignment: 1755, Item number: 1896/00137 volume 1, folio 14.

parallel and equal'.²⁷ Despite the spatial reliance and proximity (they even shared the same survey peg) to the Ivanhoe lease, the proclamation declared that 'such town site [was excepted] from occupation for mining purposes or for residence or business under Miner's Right'.²⁸

Object 6: Deland Brothers' Photographic Albums and Letters, 1894–1895

The pervasiveness of photography in early Kalgoorlie's development is best illustrated by the photographic objects that record the stay of South Australian baker-accountant-merchant-miners Charles and Edward Deland in Hannan's (as Kalgoorlie was still known) between 1895 and 1896. The transient nature of the Deland brother's life in Kalgoorlie, as they moved between working in and around the miner's camp, repeatedly intersects with photography. This is best illustrated by two albums of 35 photographs collected and assembled by the brothers and now held by the State Library of Western Australia.²⁹ In addition to assembling the albums, the brothers took, collected, commissioned, were the subject of and distributed their own photographs. Significantly, a collection of letters that the brothers sent back to family in South Australia was published in 1986, and the letters offer further insight into the brothers' interactions with the photography.³⁰ The brothers brought photographs with them from South Australia as an aide-mémoire.³¹ Charles Deland was an occasional amateur photographer and recorded

²⁷ Letter AR Richardson, Crown Commissioner of Lands to Under Secretary of Lands, 20 April 1896, State Records Office of Western Australia, Reference Number Consignment: 1755, Item number: 1896/00137 volume 1, folio 14.

²⁸ State Records Office Consignment 1775, Item 1896/00137 Townsite Great Boulder, Folio XX.

²⁹ Although the albums have been dismantled, the pagination has been noted by the Battye Library. A number of the photographs have been digitised, Item 1884B, Battye Library at the State Library of Western Australia. The handwritten inscription, taken from one of the albums, reads, 'Photographs of Hannans. Taken between year 1895–1896 by Henderson, and collected by Edward Campbell Deland, who arrived at Hannans from Southern Cross in August 1895. Came up by track on foot when there was not (sic) train running from Southern Cross. Started in business on open piece of ground between Kapps Store site and Millar's Auction Mart block.' See Battye Library finder list for item 18884B.

³⁰ Michael R. Best ed., *A Lost Glitter: Letters between South Australia and the Western Australian Goldfields 1895–1897* (Netley, South Australia: Wakefield Press, 1986).

³¹ 'How nice it is to have the photos I have with me for with them it seems as if it was only as far from home as Adelaide is from you'. Deland, Letter 26, reproduced in Best, *A Lost Glitter*, 78.



Figure 4.14: The photographic interior

'The 'Home' Corner', Charles and Edward Deland, Undated, (Call number: 4728P) Series: Edward Campbell Deland collection of photographs of Hannans (Kalgoorlie) 1884B, The State Library of Western Australia, Perth

the arrival of the railway in Kalgoorlie.³² Images taken in Kalgoorlie were sent back to South Australia to be processed and distributed to his family.³³ The letters sent home were accompanied by photographs and described the process of being photographed by various travelling photographers. The brothers commented on their own representation in photography.³⁴ When they sold their Hannan Street bakery, a photographic studio replaced it.³⁵ However, the most telling image in the album is labelled 'The "Home" Corner' (Figure 4.14), which illustrates the well-appointed interior of the miner's tent (a miner's right is visible in the upper left of the image) with a desk, covered in brocade fabric with a cigar box on top and the edge of a lampshade visible on the far right. The interior is filled with photographic images with more than half a dozen portraits on the shelves and desk. Pinned to the inclined canvas ceiling are a photograph of three women wearing kimonos and an image of a yacht. A photograph of a large double-storey country house sits prominently in the background.

The Deland letters, photographs and albums (and the early arrival of photographers like EW Henderson in Kalgoorlie) illustrate, firstly, that there was an intra-colonial network for the circulation of photographic images (both prints and negatives) and, secondly, even to miners existing marginally on the goldfield, photography was commonplace and economically accessible. The album and accompanying letters highlight the availability of the photographic images and the importance of photographs in a contemporary currency of image exchange as well as in the day-to-day life of sojourners,³⁶ like the Deland brothers, on the goldfields.

³² 'I managed to secure some snap shots of the train, the platform and the Streets and principle buildings. I will send them to Baker and Rouse in Adelaide to be developed and they can send them to you'. Letter 54 in Best, *A Lost Glitter*, 115.

³³ 'I got your telegram on Sunday morning just as we were starting for a picnic & just after we had our photos taken'. Letter 33 reproduced in Best, *A Lost Glitter*, 86.

³⁴ 'We put on our Sunday best looks and played about until the Camera came to get our "phizogs". We all stood still quiet and have come out quite well in the proofs. Cam will bring the copies over with him so that you will soon know what we look like & how comfortable we are.' Letter 33, in Best, *A Lost Glitter*, 87. 'We had a photo taken the other day in Kalgoorlie as a travelling photographer was passing just when we were ready for the road. The proofs are out and I as usual come out with a scowl. I must be stout tempered for it is cruel to blame the camera. Cam(pbell) & the bikes come out splendidly, especially mine. I shall send you one immediately after we get copies for it will perhaps have small interest for you.' Letter 107 in Best, *A Lost Glitter*, 186.

³⁵ 'Our shop we sold by auction last Saturday week as there was very little trade doing ... Hocking has bought it and let it ... to a photographer.' Letter 47 in Best, *A Lost Glitter*, 107.

³⁶ J. Belich, *Replenishing the Earth: The Settler Revolution and the Rise of the Anglo-world, 1783–1939* (Oxford & New York: Oxford University Press, 2009) 29.

These albums illustrate that there was already a market for the consumption of images. This market existed before the arrival of newspaper printing technology that allowed the publication of photolithographic images, and before they were clients like daily newspapers that would commission or purchase photographic images.

Object 7: First Newspaper Photographs, Thursday 30 April 1896

The survival of photographic objects like EW Henderson's photographs and the Deland brothers' albums is fortuitous. The photographs and albums offer a particular (and perhaps idiosyncratic) insight from the limited view of one photographer and two collectors into how photography depicted life in Kalgoorlie, Boulder and the Goldfields. In contrast to any perceived narrowness of such a limited point of view, newspaper photographs are one of the most extensive collective archives of photographic images depicting a range of places, people and events in the towns and field. Newspaper photographs exist as one of the most visible examples of the visual self-imagining of the towns, their inhabitants and the industrial field on which they depended. This self-imagining was undertaken for domestic audiences as well as for broader state, national and international consumption.

Newspapers needed to appeal to a broad audience of potential purchasers. Therefore, the study of newspaper photographs (as part of a category of images that Sandweiss calls public images) must focus on their organisation in a publication and textual context are an important part of the thesis's investigation of the depiction of the space and events of Kalgoorlie, Boulder and the Goldfields.³⁷ As well as printing images of the spaces and events of the Goldfields, the newspapers also printed images from other places, locating Kalgoorlie and Boulder in a series of broader networks of photographic images of mining and Empire.

Between 1893 and 1903, there were nearly 20 newspapers published on the Eastern Coolgardie Goldfield (see Appendix, Table 3) while Margaret Hartnup records that neighbouring Coolgardie between 1892 and 1900 had seven

³⁷ Sandweiss, *Print the Legend*, 8.

newspapers with another 25 in the surrounding district.³⁸ Both major newspapers in Kalgoorlie during the study period, the daily newspaper *The Kalgoorlie Miner* (1895–present) and the weekly *The Kalgoorlie Western Argus* (1894–1938) (variously printed on a Tuesday and Thursday across its publication) were owned by Hocking and Company. The audience for the newspaper was extensive, and by the middle of 1902 *The Kalgoorlie Western Argus* (hereafter referred to as *The Argus*) boasted that it:

Circulates very extensively over the Eastern Goldfields and reaches hamlets and camps which never see any other paper. It has also a large circulation in the colonies, whilst hundreds of copies are posted weekly to Great Britain, the Continent, and the United States.³⁹

While only *The Argus* published photographs, *The Kalgoorlie Miner* (hereafter referred to as *The Miner*) would pre-empt the publication of the photographs with a description of the images that were to be published in a forthcoming edition of its sister publication. By the end of the study period in 1903, a standard edition of *The Argus* would typically print approximately 15 photographic images spread over seven pages across the centre of the newspaper. These images would consist of local industrial and urban scenes, photographs from the rest of the state and at least one image of international or national consequence. The newspaper described the process of securing these photographic images:

In addition to local mining and general views, arrangements have been made with a London firm for supplying large pictures of stirring scenes weekly which will be found particularly interesting. Various intercolonial views will also be reproduced, and as the printing will be completely up-to-date, the illustrations should meet with general approbation.⁴⁰

As well as printing and selling their own newspapers, Hocking and Company also sold an astonishing array of international, national and local magazines and weekly

³⁸ Margaret Hartnup, *Access to Early WA Regional Newspapers: Pre Federation to 1905* (Perth, WA: Battye Library, undated).

³⁹ *The Kalgoorlie Western Argus*, Tuesday 10 June 1902, 1. The British Library has holdings of both *The Kalgoorlie Western Argus* and the *Kalgoorlie Miner* dating from 1896 and 1897, respectively.

⁴⁰ *The Kalgoorlie Western Argus*, 3 March 1902, 1.

newspapers through their newsagency on Hannan Street (see Appendix, Table 2). For instance, in 1896, the year photographs first appeared in Kalgoorlie newspapers, an advertisement for Hocking and Co's newsagency listed almost 70 titles, which included well-known names such as the *Illustrated London News* and also French, American and English weeklies as well as newspapers from nearly all the Australian states and provincial capitals of New Zealand. Specialist magazines, such as *Weldon's Journal of Fashion* and *New York Police Gazette*, as well as satirical newspapers such as *London Punch* were among the speciality publications sold by Hocking and Co.

Given the illustrated newspapers and magazines available in Kalgoorlie, the addition of photographs to *The Argus* was seen by the publishers as necessary 'to keep pace with times' and to 'increase interest in its contents'.⁴¹ To achieve this in February 1896, *The Argus* announced that it had ordered a photoengraving machine that the newspaper 'hoped we shall be enabled to produce local pictures equal to anything yet attempted in Australia'.⁴² *The Argus* announced proudly on Thursday 30 April 1896 with an article entitled 'Our Illustrations' that 'This week for the first time the WESTERN ARGUS is issued as an illustrated paper'.⁴³ The first illustrated issue printed just two images, one above another (Figure 4.15) on the left-hand page of a double-spread in the newspaper. On the opposite page, the first half column of the descriptive text (of a five-column page) drew the reader's attention to the occasion of the first printing of photographs as well as the content of the images, the reasons for their selection and how to read the images. The text was as follows:

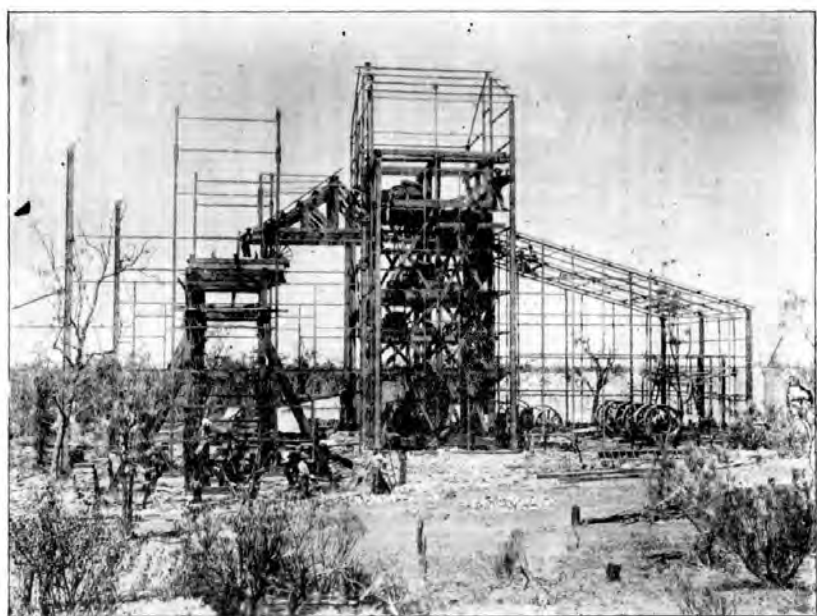
BROWN HILL MACHINERY.

This picture was taken before the mill house was closed in with iron, and gives a better idea of the size and importance of the plant than would be furnished by a view of the completed structure.

⁴¹ 'Editorial', *The Western Kalgoorlie Argus*, 13 February 1895, 8–9.

⁴² *Ibid.*, 8–9.

⁴³ *Ibid.*, 8–9.



National Library of Australia

<http://nla.gov.au/nla.news-page4110687>
Figure 4.15: First photographs in *The Argus*, February 1896

First Illustrated Issue of *The Argus*, Thursday 30 April 1896, National Library of Australia, <https://trove.nla.gov.au/newspaper/page4110687>

Humphrey Ostrham is not the owner of the A.T.C. Derby winner. The filly is under lease from the Messrs. Eales by Mark Thompson, who trains for the "leviathan" bookmaker.

An Adelaide message received this morning states that Richard Bryer, aged 50, who was employed at the Block 10 mine, Broken Hill, lost his life through 4 tons of earth falling upon him.

To the Queen of Greece belongs the honor of being the first lady admiral. She holds that rank by honorary appointment to the Russian navy. Her father was once the Czar's High Admiral, and she succeeded to the position, which, as she is a woman, is only a sinecure.

The Select Committee of the House of Commons appointed to control the arrangements for the kitchen and refreshment rooms report that the goods purchased from January 1 to July 30 amounted to £10,732, while the sales during that period reached £11,502. During the seven months 72,574 meals were served in the House, including 19,292 luncheons, 21,730 dinners, 31,705 teas, and 330 suppers. During the same period nearly £4,500 was spent on wines, £276 on cigars, and over £6,573 on provisions.

America is talking about a reported discovery of a consumption cure. Dr. G. W. Daywalt is perfectly frank in his declaration that the remedy is simply boric acid. He noticed that the action of boric acid in combination with peroxide of hydrogen was destructive to the bacilli of tuberculosis. In America hypodermic injections have resulted in what are said to be permanent cures. An American physician is now on his way to England to bring the discovery before the various medical colleges.

Her Majesty the Queen, though slightly under 5ft in height, is close upon 12st in weight. The heaviest Queen in Europe is Her ex-Majesty Isabella of Spain, who turns the scale at 14st. The late Empress of Austria, from her constant exercise and early rising, weighed 61st. The Empress of Germany turns the scale at 15st, and the Czarina of Russia can only put to her credit 9st and some odd pounds.

It was mentioned last week, writes "Herald" in the *Argus*, that Mr. Gillies is the father of the Victorian House. The fact is that he has seen eight years' longer service than any other member. He was first elected in February, 1861, to the second Legislative Assembly under the Constitution Act, and he has been a member of every Parliament since, except the sixteenth, when he was absent in England. This is the seventeenth Parliament, and he has seen over thirty-two years of service. Next to him in length of service comes his intimate friend, Mr. E. H. Cameron, who has been for twenty-four years continuously in the House, Mr. A. L. Tucker having the same record. Mr. Duffy has "done" twenty-three years, not continuous; Mr. Graves, twenty-two years, continuous; Mr. Mason, twenty-one years, not continuous; Mr. Wheeler, twenty-one; Sir John Milroy, twenty; and the juvenile Mr. Deakin has eighteen years to his credit, and is creeping back amongst the ancients.

It was an early proposal of the late Sir George Grey that all the South Sea Islands should be formed into a federation under the British flag, but the opportunity to do so was allowed to pass.

Both Cape Town and Auckland were rendered the richer through the generous acts of Sir George Grey, just dead. To each city he gave a magnificent library, in the case of Auckland the gift embracing a large collection of valuable manuscripts. The present to the New Zealand town was valued at £30,000.

The little town of Whiting, in Monona county, is (says the *St. Louis Globe Democrat*) quite excited over the discovery that Rev. C. T. Atwood, pastor of the Christian church of that place, was engaged to 17 young women at the same time. Everything went along smoothly until a few days ago, when came the public announcement of his engagement to Miss Bigelow. Sixteen other damsel nearly fainted when they heard the news. Finally, one by one, they confessed that he was also engaged to them; at least he had promised to marry each one. This came to the ears of the trustees of the church, and a public investigation was ordered, but the young man resigned. His only defence was that he loved them all because they were members of the Christian church, and he says when he talked of marrying them it was to someone else.

Mr. W. R. Wilson was to attend the A.T.C. Spring Meeting. He went through "the future federal city" and on to Auckland, N.Z. If his health improves he will leave Auckland for Sydney on Monday next, and will arrive in time for the opening day of the V.A.T.C. Meeting.

On Saturday Mr. White, superintendent of public batteries, formally took possession of the 20-head battery at Lake Yandarigooda on behalf of the Government. Some necessary alterations are to be commenced at once, and the superintendent expects to start crushing in about six weeks. A number of crushings have already been booked.

Mormonism is said to be spreading in the province of Western Ontario, where a good deal of alarm has been created by the anti-propaganda of the Latter Day Saints. They have recently been holding open-air baptismal services, and so great has been their success that there are now said to be 2,500 Mormons in the province, the only one in which any sustained Mormon missionary effort has been made, or in which any organised churches exist. There are altogether about 100 congregations in the province, the head of the church in Canada being Elder R. C. Evans, one of the 12 apostles constituting the governing body of the sect.

With reference to the "mill" between Mr. Pense and Mr. George, it is now stated that they fought for 10 minutes, and that George got the best of the encounter. There is evidently much doubt about the actual result of the battle. It would perhaps be as well if a Royal Commission were appointed to get at the real facts.

Among the backers of Comos for the A.T.C. Derby was Mr. George Gray, lately of this colony. Mr. Gray is reported to have had a very bad meeting. He is, however, hopeful that George Frederick will put down the flying St. Albans colt Boladri in the V.R.C. blue riband. The good judges won't have Mr. Gray's colt at any price. They aver that he is a non-stayer, and, moreover, cannot be got ready in time.

"Terlinga" has been visiting Balarat, and this is what he has to say of an old Western Australian favorite:—"Paul Pry I never saw in such form, and the lad that rode him had hard work to hold him back to Avon. This Paul Pry is one of the hardest bits of stuff that ever lashed through a bridle. In the last two years he has run in 62 races, and so he raced in four colonies during that time he must have done an immense amount of traveling. Still, he is as sound as a bell, and probably a better horse now than ever he was."

Rogers and party, prospectors, recently brought into Peak Hill some quartz specimens which they found on the surface near Lake Wye. These specimens, which weighed 294oz, were purchased for £100 by some local residents, who drilled and smelted them, and were rewarded by a profit, the gold obtained therefrom being 105oz.

Stories of the alleged marriage of the late Prince Imperial of France to Mary Watkins are being revived through the Empress Eugenie having been seen in Paris with young Louis Watkins, who bears a strong likeness to the ex-Empress of the French. Mary Watkins, who is said to have rejected all overtures from the Bonaparte family, lives in Melbourne, and makes a livelihood as a teacher in private families.

An innovation in church services is referred to by the *Wellington (N.Z.) Post*, which says:—"The new departure made at the Trinity Wesleyan Church, Newtown, in the introduction of line-light into the service, is meeting with popular favor. The Sunday night the church was crowded, seats having to be placed up the aisles, at the sacred lantern service. Mr. Coste worked the line-light, and Miss Jones was organist. The Rev. A. C. Lavery, gave the address, and the beautiful pictures and favorite hymns which were cast upon the screen were very impressive."



HANNAN STREET IN THE EARLY DAYS.

Mr. Howley is a most refreshing person, and bears his experience with a certain amount of pluck. Owing to the downfall in the cycle market, the course of the bankrupt may literally be described as a journey by wheel to woe—that is, if he was any happier with his millions than he is now with his liabilities. Whatever is true or false of all the charges and discharges, the public have had an eye- opener as to some people's ideas of how provisions should be worked. Appeals to the mobility and gentry even for the small change in their left-off clothing will probably be made in vain for some time to come unless the names of the directors are more likely to appeal to investors as being sound business men.

The story of Sir Arthur Currie's disappearance on the way to Klondyke (states the *Ontario reader*) like a romance. The party left Ashcroft, British Columbia, in April last, and from the start encountered the roughest weather. When but a few days out, 10 of the pack of animals broke away. Sir Arthur joined in the chase after them. Since his departure from camp nothing has been seen or heard of him, although the remaining members of the party spent nine days searching for traces. It is from one of those, who had returned to Vancouver, that news of the ill-fated expedition was learned. Sir Arthur, the son of a brave sailor, was only 41 years of age.

Ten tons of ore from the Christmas Gift lease, at Peak Hill, were treated for the splendid total of 288oz of smelted gold, or an average of nearly 27oz. The mine is situated about one and a half miles from the Peak, and is considered the most promising of the outlying mines.

We know by this time something of the Cuban insurgents, and it cannot be doubted that Cuban independence would mean a Spanish South American Republic, not of the Chilean, but of the Venezuelan or Nicaraguan type, anchored off the coast of Florida. In other words (says the *Spectator*), to give Cuba independence would be to hand the island over to civil war.

In connection with an application for bankruptcy in the Perth Local Court on Wednesday, Mr. Justice Hennessy made some caustic remarks on the waste of time they involved. He said that he was very much against technical objections, because he thought the object of courts of justice was to do away with technicalities.

It is believed that alluvial gold is to be found in the former bed of the Murray River, between Albury and Wodonga, and to test the matter it is proposed by the Governments of New South Wales and Victoria to put down a series of bores at their joint expense, as it is not known whether the gutter will be found on the north or south side of the river, or on both sides.

In order to determine the site of the bores, Mr. Stirling, the Government geologist, recently visited Albury, where he met Mr. Pittman, the Government geologist for New South Wales, and after carefully inspecting the country they came to the conclusion that the boring should be done across the Murray valley, between Hunn's Hill and Kelly's Range. It is estimated that at least six bores will have to be put down at a cost of about £200. Boreings have been put down to a depth of 100ft at the site of the bridge now being erected across the Murray near Albury, and they show a succession of gravel, sands, and conglomerate beds to that depth. It is therefore probable, Mr. Stirling says, the bores at Hunn's Hill will have to be put down to a depth of 300ft.

The following interesting letter from the Duke of Westminster appears in the *Liverpool Daily Post*, in which it was stated that his Grace's income is £400,000 a year:—"Sir,—A paragraph appeared in your issue of yesterday, in which it is said that my extreme plainness obtained for me when at school the nickname of 'Jack Sheppard', whereas that name was given to me on account of my hair being cropped short, a characteristic of that youth but for none other of his delightful qualities. But I should like to protest against the wild guesses at my income, which sometimes takes gigantic proportions, for which there can be no known data. In this case you have given me no more than double that which I receive. The South Belgravia leaves do not fall in for near 40 years, and mountain produce is a house as rent to me. — Yours, etc., WESTMINSTER, Finsbury, August 16.—P.S.—I have no pretensions to being an 'Ascotic'."



HANNAN STREET—PRESENT DAY.

Figure 4.16: Hannan Street Past and Present Day,

'Hannan Street in the early days' & 'Hannan Street—Present Day', *The Western Australian Goldfields Courier*, 1 October 1898, (Call number: 079.9416), The State Library of Western Australia, Perth

The plant is now running, and within a few days the first crushing will be announced. The importance of the trial run lies in the fact that the mill has been designed to treat the ores of the district with the consumption of as little water as possible and by the use of cyanide to extract as much of the gold contents of the ore as is practicable in one operation. In this the plant has been wonderfully successful; in the trial runs as much as 90 percent of the gold having been recovered. The process consists of dry crushing, barrel amalgamation and cyanidation, simultaneously and finally leaching with cyanide in ordinary vats.

OPENING OF THE WHITE FEATHER REWARD BATTERY.

This ceremony which took place at the (*undecipherable*) of last year) was attended by most of the residents of the district as well as many visitors. The scene depicted the group around the mill just after the plant had been set going-includes photos of many well-known residents. The battery has since been running almost continuously and had already turned out a large quantity of gold.⁴⁴

Without captions (and without reading the following descriptive text), they are an intriguing pair of images. The bottom image of the Brown Hill Mill House is a fascinating image to publish. The newspaper claims the decision to print the view of the unclad structure was to allow the viewer to understand the interior of the mill. Instead, the photograph appears as if the abstract grid that has territorialises the space and scrubby arid woodland of the Eastern Coolgardie Goldfields. The grid, rational but irregular given its structural variation, appears to be inscribed onto the flat photographic surface as if surveyor's Cartesian grid (or the composition grid of the large format camera's ground glass used to take the image) has taken pictorial form. Here is a very literal image of the mechanisation of space. The image above, of the battery, depicts a remarkably similar industrial structure, this time repurposed as the background for an event with a group of well-dressed, men, women and children posing in front of the machinery.

⁴⁴ Ibid., 8–9

The combination of the images together (and the accompanying text) draws attention to the relationship between these graphic and textual elements and what their relationship generates. The newspaper text suggests that the photograph is never just concerned with the depiction of the object captured in the image. The text describing Brown Hill machinery indicate a number of things. Firstly, it evokes an extended photographic vision, almost x-ray-like, which reveals the working of the mill's interior. Secondly, the text extends the pictorial (and spatial and temporal) qualities of photography backwards in time to the construction of mill, the nature of its cladding, its working present, as well as offering speculation on its productive future. In depicting the mill, the newspaper text acknowledges photography's role as a medium, dense with information, while the text offers supplementary evidence, in this case of the functions and processes that the photographed object might undertake. The second image of the White Feather Battery also signals the importance of recording events in the life of the boom town, such as the opening of the battery. As outlined in Chapter 2, the location of these images together places them into a serial relationship such that, as well as the reading of the individual images, the contemporary viewer might understand something new by looking at both images together. The two images establish a connection between the depiction of the construction of the battery and the celebration of its first use. Even in this first printing of photographic images in a Kalgoorlie newspaper, it can be discerned that there are several relationships established: the images' relationship to one another, the time elapsed between the making of the photographs and its printing in the newspaper, and the relationship between the accompanying descriptive text and image. As suggested in Chapter 2, the contemporary reader of the newspaper would have been accustomed to reading images together, and drawing conclusions from the singular images as well as their pairing together.

What is striking about even the earliest publication of photographs together in the goldfields' newspapers is their temporal complexity and their potential to be understood by the newspaper reader across time and space. Applying the definition established in Chapter 2 of serialisation as the organisation of multiple images together in printed material, this illustrates that the use of serialised

images occurred soon after photographs first appeared in Kalgoorlie newspapers and continued to be a manner in which images were presented within and across issues of the newspaper.

For instance, on 19 November 1896, just months after the first images are printed, *The Argus* published two images by one of the first photographers in Kalgoorlie, EW Henderson. The single-page spread contained two group portraits, printed one above another. The first is entitled 'Four o'clock Shift on Great Boulder Mine Going On' and the second 'Four o'clock shift on the Great Mine Coming Off' (Figure 3.21). Both images depicted a group of about 30 men, informally arranged, some seated, some standing, in front of a timber weatherboard and tinned roofed building with mining machinery and tailing dump to the right of the image. As discussed in Chapter 2 when considering the Bechers' presentation of photographs of industrial typologies in grids, the two photographs satisfy many of the requirements of serial images: compositional similarity, organisation on the page to allow easy visual comparison, comparable details in both images (e.g., the workers looking out the open window in the middle of the image) but enough change in the image to register the difference between the two images. If the printing of the images was of higher quality (or if their contemporary digital record was at a greater resolution), further detail of their difference might be able to be ascertained: the expression on the men's faces or the state of their clothes after a shift, what they carried down the mine or what they brought up. As well as recording the quotidian nature of work, which might have equally been captured in a single image, the pair of photographs illustrate an interest in recording (and its audience's understanding) time and change through photography.

The publication of the images of the Great Boulder workers in the newspaper points to an audience interested in and accustomed to looking at these types of photographic images and appreciating what they illustrated. As discussed in Chapter 2, the newspaper's serialisation of these images together in a double-page spread can be located in the context of reporting on (and serialising of) other, more significant, events in the goldfields' towns such as the opening of the tram or the building of the telegraph network. In another example of this process of serialisation, *The Argus* reported the arrival of the first train from Perth, across

eight different issues of the newspaper beginning a few days after the train's arrival on Kalgoorlie on 8 September 1896 and continuing for more than two months until mid-December 1896. This drawn-out pre-emption of the train's arrival through the reporting of its progress through settlements before its appearance in the goldfields, as well as the printing of images celebrating its arrival months after the event pointed to an extended seriality reading process to which the reader of the newspaper was accustomed.

The serialisation of the shift at the Great Boulder points to the first of a number of serialisation tropes that are used in newspapers, souvenirs, journals and books to depict Kalgoorlie, Boulder and the Goldfields. These tropes describe the relationship between the past and the present (even within very short space of time), the depiction of the town's urban spaces and the depiction of the relationship between the twin towns of Kalgoorlie and Boulder.

The first trope of serialisation utilises the combination of two or more images together on one page to describe the relationship between the past and the present in the towns. For example, in October 1898, five years after the first discovery of gold, *The Western Australia Goldfields Courier* published two images of the town's main thoroughfare (Figure 4.16). One photograph titled 'HANNAN STREET IN THE EARLY DAYS' depicted the street looking west towards neighbouring Coolgardie. The road is sporadically lined on its southern edge by unadorned, white canvas buildings, many not more than framed tents, while a group of men stands in the street's centre. These simple structures are visible despite the poor printing of the photograph. The northern side of the street is obscured in the darkness of afternoon shadow; three mature salmon gum trees can be seen in the middle of the street while large trees can be seen in the background. The poor resolution of the image (and that the photograph now only exists as a newspaper print) makes it difficult to date and to precisely locate the position of the photographer. The second photograph, at the bottom of the page and titled 'HANNAN STREET—PRESENT DAY' looks east up the street in the direction of Paddy Hannan's first alluvial gold find and Mount Charlotte. The canvas buildings have been replaced by more robust timber buildings, which form a continuous, built edge to the street. The recently opened double-storey brick and stone Palace Hotel now occupies one

corner at Maritana Street. Across the intersection, the Exchange Hotel is in its penultimate incarnation as a single-storey tin and timber building. Telegraph poles have replaced the trees, and any remnant of the natural environment has been cropped from the image. The wide space of the street is still used as a gathering place, and among a group standing in the street, a man in a white suit stands out in the late afternoon shadows.

The photographs depict roughly the same area of Hannan Street (albeit looking in different directions). Still, the contents of the photographic scenes are so pictorially different from one another as to be unrecognisable in comparison. Compositionally, the images mirror each other (off-centre vanishing point that reveals one side of the street while obscuring the other) but the only 'afterimage' of the 'EARLY DAYS' in 'PRESENT DAY' is the manner in which Hannan Street is occupied by its citizens. Here, the wide street assumes the role of the only public space in the town. These photographs, taken perhaps four years apart, and their printing together on the same page, help to establish the first visual trope for the representation of Hannan Street that will persist for at least the next decade—the past and the present, the before and the now (Figure 4.17). This imagining of the boom town is not confined to the representation of Kalgoorlie. It is extended to the depiction of Boulder 'past and present' as well as the depiction of the mines on the Golden Mile, as shall be discussed further in the first two case studies as it relates the objects at the focus of those chapters.

The 'double' imaging of Hannan Street's 'Past and Present' on a single newspaper page also points to the second visual trope in the portrayal of the street. In this second visual trope, Hannan Street is depicted, often from the same vantage point, in two photographs, one looking west and one looking east (Figure 4.18a–b). This second trope requires the use of a pair of images to capture Hannan Street, which due to its length and exaggerated linear distribution of mercantile, civic and hospitality buildings along its length, cannot be captured in a single image. While not always printed as a single panoramic image in the conventional sense of that mode of pictorial representation, these pairs of images assume the 'totalising' scope of that panoramic photographic format. This totalising vision of the two-part panorama can be located as a part of Hale's 'booster aesthetic', which is imperative

boiler at one of highly payable rates. Another satisfactory feature is that the country at the bottom levels is not as noisy as it is claimed to be near the surface. This will considerably reduce the cost of running a mine, which for almost 20 years has been expensive in this respect. On the surface many great oil fields have been made to be silent. A large submersible has been installed. The factory has been increased. One of the chief difficulties with which the Burundians must have to contend is the scarcity of water for mining purposes. In order to overcome this difficulty, President Ndayishimiye has had constructed

properties on the field the latter have

East Caledonia with the two main cities of Kilmacris and Rosneath (100,000) although ship tonnage has for years past fallen, the position of the fishing fleet (producing half of Scotland's) and tourism (which comprises 40% of the local economy) has improved and now gives them a more varied and secure future than most of the other islands. The *Wangarrup* is the only newspaper of the island. It is said to be for the smallest of the eastern group. Strange to Kilmacris and Rosneath (100,000) but a difficult one to read. The *Wangarrup* is the only newspaper of the island. It is said to be for the smallest of the eastern group.

opportunities on the fields the Indians have been given by ordinary development work and by diamond drilling to hold their ground, and in most instances to move. These incentives are payable only as they are done. Generally the decision to be made is less advanced in a step-wise fashion than many.

Kolomoysky, as the commercial and mining capital of the northern goldfields and the great iron-ore complexes, has concentrated in a very marked manner on the general progress of Western Australia. The mineral resources and permanence of the mineral base attracted them all parts of the world a large stimulation (not only



VIEW 00 = HYSNAN'S - FROM MARITANA BELL, TN 180

dam with a holding capacity of 6,000,000 gallons. Rain water is conducted into this reservoir by means of a network of drains which encircle the neighbouring hills, and it is to be hoped that by this means, and the water hauled from underground, a sufficiency will be obtained to supply the large battery. The Burbank North and Burbank South Lead Mines, which are situated in the Los Angeles County, are the largest in the State. The latter mine is 100-feet battery has been recently equipped. In addition to the large mines exist a number of private shows are working, many of which will repay their owners.

The townships of Burbank has grown rapidly during the last year. The population has become more settled and

towns and mines are very rich in minerals. But the discovery of alluvial gold in the 1850's and the fact that the beds have a westerly to northwesterly trend, and the slight factor of a few feet, led to the discovery of the great sedimentary basins of the Pacific Northwest. The discovery of the great sedimentary basins of the Pacific Northwest is a discovery of modern times adjacent to which some of the richest and most extensive oil and gas fields in the world are being mined. Enormous sums of money have been expended by governmental and private agencies in the search for oil and these new settlements, while not yet as large as the old ones, are busy and growing.

of which is practically dependent upon the prefabricating structures of a narrow strip of country, which has been aptly termed The Golden Mile. In 1904 Kalgourie consisted of a few unpretentious houses and canvas buildings erected on each side of what has since become the busy thoroughfare of Hanman's street together with a few scattered tented camps, clustered around the adjacent lanes and alluvial workings. At that time the settlement was struggling in the throes of adversity and there was little to indicate growing prosperity. The known patches of alluvial were rapidly being exhausted and the water supply was fast becoming owing to many of the diggers deserting for fresh fields. Pro-



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It is satisfactory to note that the miners have given practical proof of their faith in the future of the mines by bringing their families to the town. The population is now about 700. The school has been enlarged but hardly suffices to accommodate the children of the town. A post office has been opened here, and the mail is carried by a mailman who wears an aquet of prospectors, which seems to increase as time goes on.

At Rionneville the mining is again in full swing and if dividends are not recorded a good substantial fortnightly wages bill is said. Taken altogether it is a cheering belief that the coming year will witness renewed prosperity in the Coleridge district.

[illegible]

“Hannan’s” Warden Court in 1894’, ‘View of “Hannan’s” from Maritana Hill in 1894’, ‘Hannan Street, Kalgoorlie in 1894’ and ‘Hannan Street, Kalgoorlie in 1900’, The Western Mail Christmas Number 1900, 12 December 1900, National Library of Australia, <https://trove.nla.gov.au/newspaper/page/3382172>

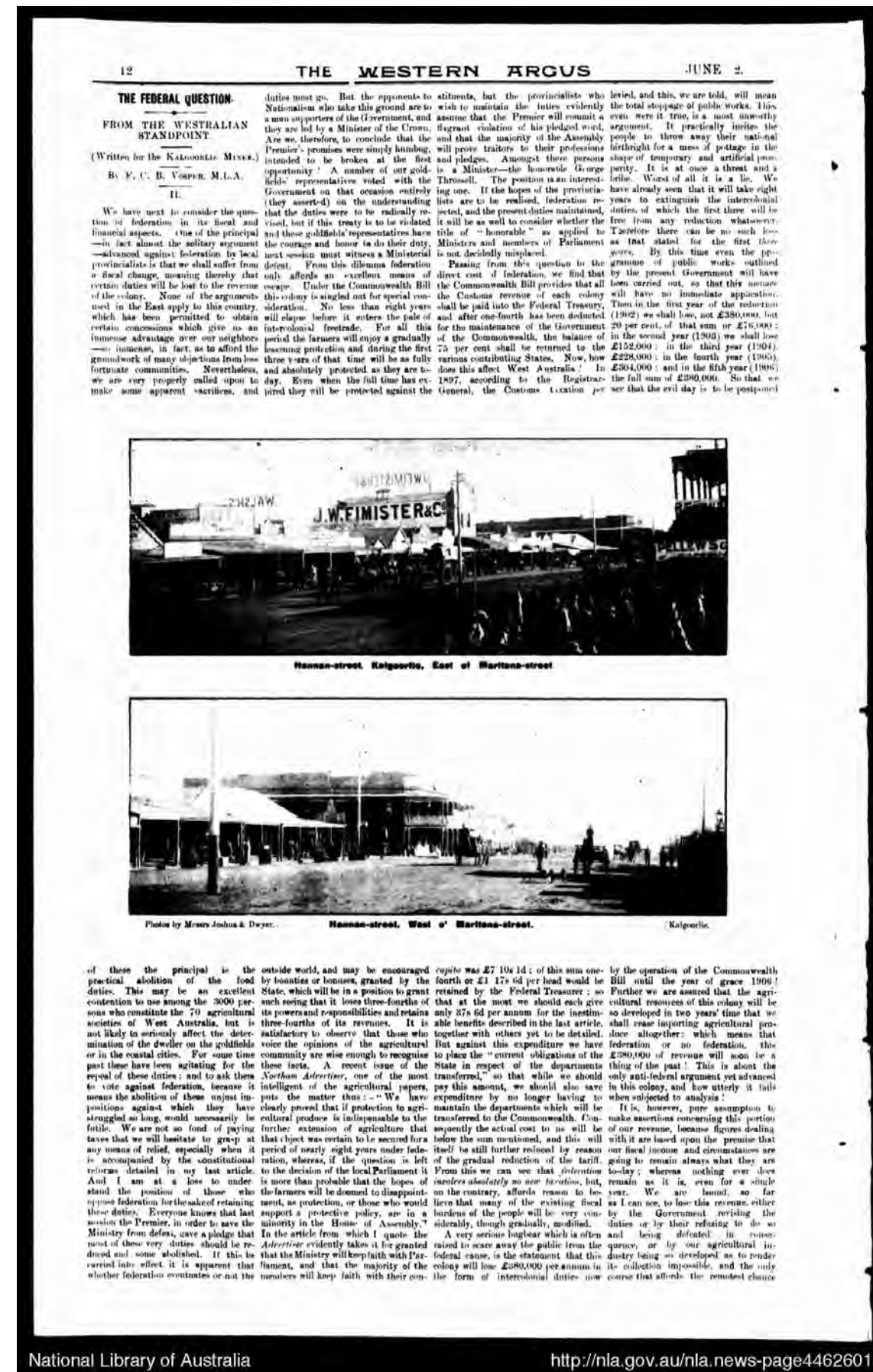
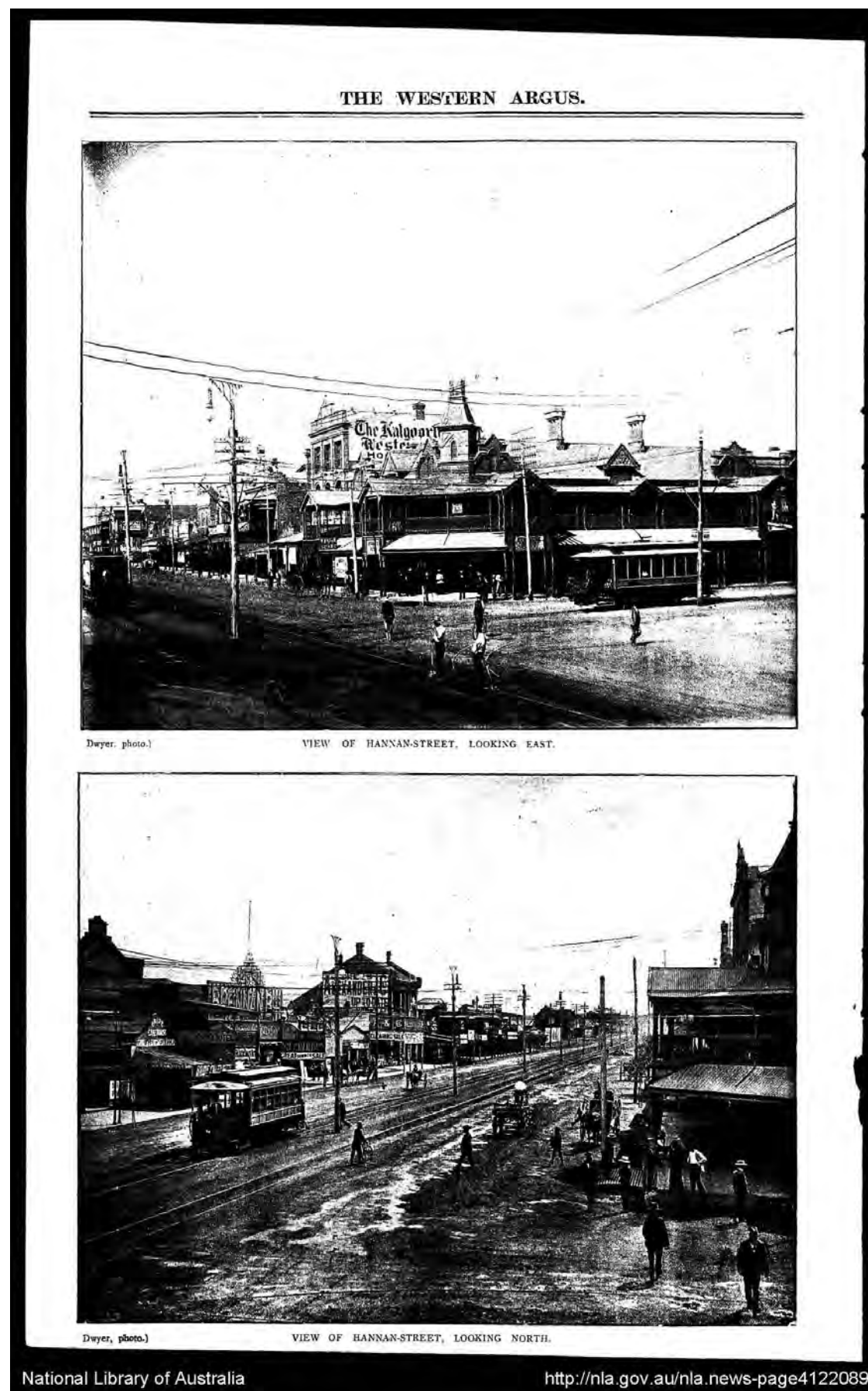


Figure 4.18a: Two views of Hannan Street, Looking East', and 'Looking North laid out on a page of the *The Western Argus*

'View of Hannan-Street, Looking East', and 'View of Hannan-Street, Looking North', Kalgoorlie Western Argus, 16 June 1903, National Library of Australia, <https://trove.nla.gov.au/newspaper/page/4122089>

Figure 4.18b: Looking East West, *The Western Argus*

'Hannan-street, East of Maritana-street', Hannan-street, West of Maritana-street', *The Western Argus*, 2 June 1898, National Library of Australia, <https://trove.nla.gov.au/newspaper/page/4462601>

in making Hannan Street appear unified.⁴⁵ The camera is focused on one side of the street to illustrate the continuous line of buildings that form the street edge but that means the camera remains distant from its subject matter. The booster visual remaking of the street into a single entity—an urban wall—means that the complexity of the street’s edge, and the space of the verandah and the balcony, is denied.

The third and fourth tropes, unlike the first two, are less compositionally consistent and are more concerned with the subject matter depicted. The third visual trope is the repeated depiction of the intersection of Hannan and Maritana Streets (Figure 4.19a–b). This location is significant for a number of reasons. Firstly, with the lack of a designated public/civic space in the city, the broad intersection of the two streets was used as a quasi-public space that bore witness to many significant events in the town’s history. Three of the four corners of the intersection were occupied by hotels, the Exchange (1901), the Palace (1897) and the Australia Hotel (1898), while significant public buildings like the Warden’s Court & Telegraph Office (1899) and the Mechanics Institute (1902) were located a couple of lots away from the intersection (Figure 4.20). All the hotels had double-storey verandahs that allowed an audience in the street to be addressed from the upper level, which functioned as a rostrum. Secondly, the major civic buildings such as the Kalgoorlie Town Hall and the Council Chamber were only completed much later in 1907, further west down Hannan Street. Thirdly, Maritana Street was important as a transport corridor, which led north across the railway to the middle-class suburbs of Kalgoorlie and connected south to the workers’ town of Boulder. The street and the intersection were overlaid with public activities—formal and orderly things took place there—such as siting the voting boards on the referendum for conscription and WA joining the federation. The intersection was also the focus of the movement of goods, information, capital, people and gossip. It hosted the beginning of sporting events and a variety of parades.

As well as imaging the Kalgoorlie, Boulder and the Goldfields for domestic and outside audiences, newspaper photographs brought the world to the goldmining

⁴⁵ Peter Bacon Hales, *Silver Cities: Photographing American Urbanization, 1839–1939* (Albuquerque: University of New Mexico Press, 2005).



Figure 4.20: The Exchange, The Palace, and The Australia Hotels at intersection of Hannan and Maritana,

'Crowd in Hannan Street, Kalgoorlie', Unknown Photographer, 1905, (Call number: 007033D) Series: Malcolm Uren collection of photographs BA1116, The State Library of Western Australia, Perth

outpost. For example, in 1898, *The Western Australian Goldfield's Courier* published two captioned photographs of 'The Residency at Lucknow, as left at the conclusion of the Indian Mutiny' and 'The Bailey Gate Lucknow'⁴⁶ (Figure 4.21). This is despite the event occurring more than 40 years earlier, and more than 7,000 kilometres away from its publication in the Eastern Goldfields. Without accompanying text, the meaning of the images of the ruined colonial residence was left open to the interpretation of goldfield readers, and they could only speculate as to the reason behind its inclusion in the newspaper. The newspaper more directly connected to the business of Kalgoorlie, Boulder and the Goldfields, *The Argus*, included images from other goldmining centres in Australia such as Bendigo (Figure 4.22) as well as international contemporary gold rushes such as Victor/Cripple Creek, the site of the last Colorado gold rush in 1890s (Figure 4.23). The newspaper also included an image of the Eiffel Tower and Notre Dame in Paris (Figure 4.24) on 10 June 1902, again with no explanation as to their inclusion. This fact, however, satisfies Mussels' description of newspapers as having the ability to hold both the miscellany alongside the serial.⁴⁷ While it is difficult to establish the order in which these kinds of photographic representations first appeared, it seems that newspaper photographs establish and reinforce a number of visual tropes that later appear in other private and public publications such as the Mines Department annual reports.

Object 8: Photographs of the Premises of Mays & Carrigg, Plumbers, Coolgardie and Kalgoorlie

While not diminishing the importance of migration from the eastern states to the goldfields, there is an argument to be made that Kalgoorlie and Boulder were colonised to a degree by the neighbouring, and rival, goldmining settlement of Coolgardie. This claim can be illustrated by the eighth object in the spatial history, which through two photographs, shows the movement of people and business from much closer at hand. This can be considered, in the manner of James Belich's description of the development of 'wests', as the 'colonising' of Kalgoorlie by

⁴⁶ 'Untitled', *The Western Goldfields' Courier*, 2 April 1898, 5–8.

⁴⁷ James Mussell, 'Elemental Forms', *Media History* 20, no. 1 (2014): 5.

GOLDFIELDS TRADES AND LABOR COUNCIL.

The ordinary fortnightly meeting of the above council was held in the Trades Hall on Monday night. The president, Mr. F. J. Ware, was in the chair.

New delegates from the A.M.A. and the Carpenters' Society were received and welcomed.

Correspondence.

A circular from the Kalgoorlie and Boulder A.W.A., accompanied by a petition against unnecessary Sunday labor, was received, and it was decided to render the A.W.A. every assistance in their efforts to minimise the evil.

A number of letters were received from the secretary of the Esperance Railway League, and the matter contained therein were left to the delegates to deal with.

The secretary of the Australian Labor Federation in Queensland wrote, asking the council for suggestion re holding an interstate Trades Union Congress. A sub-committee was appointed to draft proposals, to be submitted to the next meeting.

A communication from Mr. Roe, the Perth Resident Magistrate, requesting the presence of the secretary in Perth to give evidence on the alien labor question was left in the hands of the executive to deal with.

Reports.

The secretary reported that he had written to the Kalgoorlie clergymen re starting their Sunday night services at 7 p.m., instead of 7.30 p.m. He had received favorable replies from some and unfavorable replies from others. The letters were ordered to be acknowledged, and the thanks of the council tendered to those who had been willing to accede to their wish.

The president stated that the Sunday night lectures were proving very successful. A recommendation from those who attend asking that the time of starting the lectures be fixed at an earlier hour was favorably received, and the time of opening altered to 7.30 p.m.

The action of the executive in regard to the purchase of the piano was

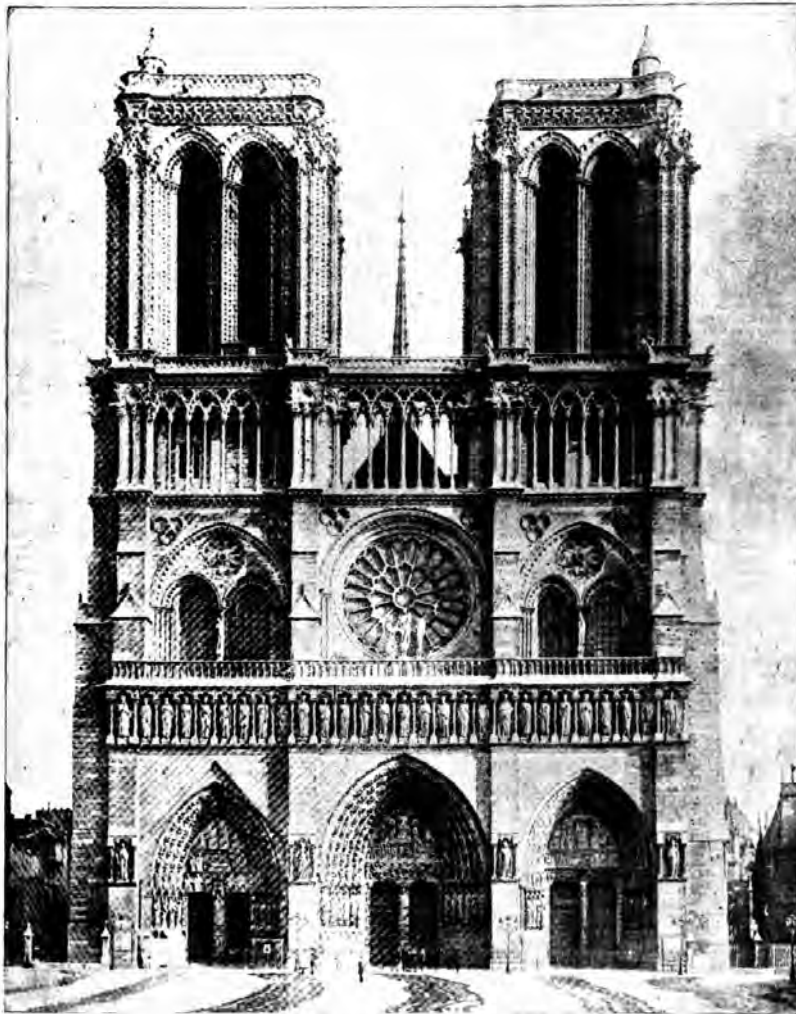
unanimously endorsed by the meeting.

The executive submitted their report on the amendment of the rules. This evoked considerable discussion, but after a long debate the report, as submitted, was adopted.

Owing to the late hour the unfinished business could not be brought forward, and the meeting was adjourned till Thursday night next.

We have not for many years seen in England the rise of any writer of fiction whom we are inclined to welcome as a really great novelist (says Mr. Justin McCarthy). The art of novel writing would seem to have become diffused; young men and women have set themselves to study carefully the rules, and the masters of the art; and the result has naturally been that the more capable students have acquired a decided proficiency in the work. The level of excellence in the craft is raised, but the proportions of success appear to remain unaltered. We have at most two or three living novelists who could justly be described as really great in their

art, and these novelists have already given us their measure—we cannot expect them to rise any higher. We may assume it as certain, however, that this new century will not go far without giving us some great new novelists. Feeling perfectly convinced that such novelists are soon to come, I am inclined to indulge myself in some speculation as to the field of life on which they are to make their appearance. The great coming novelist, I take it for granted, will find instinctively or deliberately a new field. Might I suggest that the region of what is called society in London has perhaps been cultivated rather too much of late years, and is possibly even suffering from over-cultivation? The coming novelist, I venture to think, will find that there are other interests, struggles, hopes, fears, comedies, and tragedies in life besides those which are associated with the West End of London, with peerages and presentations at court, with fashionable drawing-rooms, the rivalries of families, the social ambitions of the millionaire, and the career of brilliant political adventures.



CATHEDRAL OF NOTRE DAME, PARIS.

The most famous Cathedral in Paris, and outside of Rome, perhaps the best known in the world, is the Notre Dame, situated on the Île de la Cité. This splendid edifice was founded as early as 1163, and consecrated twenty years later, but since that time it has undergone very great changes, having been partially wrecked and restored, altered and added to many times. During the Revolution it was badly injured by the mob, and during what was called the Reign of Reason, in 1793, a decree was passed by the Council calling for its destruction. Part of the sculptures were destroyed by the insane decree, which was fortunately rescinded, but on November 10, it was converted into a Temple of Reason, and the Virgin's Statue was replaced by one of Liberty, while above the choir were placed busts of Voltaire, Rousseau and other free thinkers, and disgraceful orgies were enacted in its sacred nave. It was restored to public worship by Napoleon, in 1794. The facade dates from the thirteenth century, and is still the finest in France. The interior is divided into five large nave and two aisles, crossed by a transept 47½ long and 15½ high, broad, and the three stories are richly adorned with sculptures and monuments, while its rose windows are marvels of beauty. Our photograph represents the facade.

Figure 4.24: 'Cathedral of Notre Dame, Paris,' *The Kalgoorlie Western Argus*, 10 June 1902

'Cathedral of Notre Dame, Paris,' *The Western Argus*, 10 June 1902, National Library of Australia, <https://trove.nla.gov.au/newspaper/page4127409>



Figure 4.25: Mays and Carrigg Plumbers in Coolgardie

'Mays and Carrigg Plumbers, Coolgardie', Roy Miller, c1895/6, (Call number: 303532PD), The State Library of Western Australia, Perth



Figure 4.26: Mays and Carrigg Plumbers in Kalgoorlie

'Mays and Carrigg Plumbers, Kalgoorlie', Unknown Photographer, c1897 (Call number: 303533PD), The State Library of Western Australia, Perth

neighbouring towns such as Coolgardie.⁴⁸ While Belich is analysing cross-continental colonisation of the American West by the American east, the principle is apt here.

The movement of businesses from surrounding towns to Kalgoorlie is described in two photographs in the Battye Library online archive, which illustrate the two premises of Mays and Carrigg Plumbers in Coolgardie and Kalgoorlie respectively (Figure 4.25 and 4.26). Mays and Carrigg Plumbers commenced business in Sylvester Street, Coolgardie, sometime in 1895–96, and subsequently opened a branch in 1897 in Cassidy Street, Kalgoorlie.⁴⁹ By 1898, there was no record of the Coolgardie premises in the Post Office Directory, and Carrigg's obituary states that he relinquished the Coolgardie branch in 1900.⁵⁰ The Battye Library holds Harold May's ephemera in addition to the two images of the firm's premises in Coolgardie and Kalgoorlie. Although the photographs of both Mays and Carrigg premises are undated, the Battye archive pairs them together as a single catalogue entry suggesting that the images are contemporaneous depictions of the two branches of the business.

The photographs of both branches of Mays and Carrigg are subjected to the same modes of commercial imaging that Hales cites as typical of mid- to late-nineteenth century commercial representation in the American West. Hales identified a formula of the formal arrangement of the photographs' composition that is repeated in the Coolgardie and Kalgoorlie images: buildings or business premises are presented as background with signage clearly visible, while the staff and firm's products are arranged in the space of the street in front of the buildings. In both images, the term 'street' is used loosely, as this urban space is mostly undefined. In the Coolgardie image, it is as if the line of staff of Mays & Carrigg (and neighbouring business J.D. Connolly Builder & Contractor) define the edge of the street, with the deposits of horse or camel manure in the space of the street in front of them, and the products of May & Carrigg between them and the buildings. It is difficult to tell where the principal street address is in the image of the

⁴⁸ Belich argues that 'Easts' often colonised 'Wests' in what he calls 'reproductive colonization'. Belich, *Replenishing the Earth*, 179.

⁴⁹ *The Western Australia post office directory* (Perth, WA: H. Wise & Co, 1895).

⁵⁰ 'Untitled', *Westralian Worker*, 24 June 1921, 8.

Kalgoorlie branch. The premises has what appears to be a service yard, defined by timber edging and with an entry point off a dirt road. Still, it is difficult to tell if this is Cassidy Street or a side road perpendicular to the main address, as listed in the Post Office Directory. The configuration of the signage does not provide any further clues as to the building's orientation. The image shows a stocked yard with neatly displayed products, such as water tanks, pipes and baths. A darkened interior can be glimpsed through an open door.

Discovery of the photographic evidence of two branches of the same business led to the investigation of other enterprises that moved from Coolgardie to Kalgoorlie. While the archives held no further photographic evidence of premises in both towns, businesses were tracked by their listings in both Wise's and Pearce's Western Australian Post Office directories.⁵¹ It would appear that more than 30 businesses and individuals moved or opened new branches in Kalgoorlie from neighbouring Coolgardie between 1894 and 1897 (see Appendix, Table 1 for a full listing of the businesses). In the move from Coolgardie to Kalgoorlie, four firms and partnerships were dissolved in Coolgardie and re-formed as new partnerships in Kalgoorlie. For example, Fox & Lyons butchers of Bayley Street, Coolgardie, were re-established in Kalgoorlie as the new firm of Fox and Holmes Butchers. In the shift between Coolgardie and Kalgoorlie only one person, Henry Bloom, changed occupation from the abbreviated 'genl dlr' (presumably a 'general dealer') to running a stable and livery (perhaps specialising in what was previously one of many trades that he had previous general dealings in). There were professions that moved too, with the majority being 'middlemen'—auctioneers, managing agents, wholesalers and dealers. There are only two mentions of businesses directly related to mining: mining engineer and assayer. The move to Kalgoorlie would appear to be about opportunity rather than reinvention.

Object 9: Austral Store Stationery Company, Postcards Series F & G, Photographer Alfred Moulton, c1900

Earlier objects described and analysed in this chapter, like Henderson's photographs, the Deland albums, the early newspaper images and the photographs

⁵¹ *The Western Australia post office directory* (Perth, WA: H. Wise & Co, 1895), unpaginated.

of May and Carrigg's twin premises, construct an image of 'early' and 'adolescent' Kalgoorlie, where a building might be in the first or second of its three iterations, while the urban amenities of trams, footpaths and street trees are still several years away. The depiction of 'mature' Kalgoorlie and Boulder (and one that we can still widely recognise today) occurs in images produced after 1900, and that is the focus of this section. Not only do these images give us a record of the buildings and spaces of this stage of the town's development, but they also illustrate the changing manner of viewing these places. Applying the definition of serial practice outlined in Chapter 2, offers the opportunity to consider the various vantage points the photographers used to imagine the town.

The change to the nature of viewing is, in part, facilitated by the built environment of mature Kalgoorlie and Boulder itself, through the provision of a series of novel photographic vantage points offered by the new buildings and industrial structures. This section identifies that by 1901, in addition to the camera placed in the street, another set of vantage points—the balcony and the tower—offered new ways for a viewer to understand the spatial organisation of the settlement.

One example of the depiction of the towns and their field in a mature state can be found in a series of postcards from the early 1900s. Sold by The Austral Store Stationery company and using images, uncredited, by the Perth-based photographer Alfred Moulton,⁵² 'Postcards series F & G' presents a range of public and commercial buildings, streets scenes and industrial documentation. The cards consist of expertly rendered black and white images of Kalgoorlie, Boulder and the broader Goldfields, including the neighbouring town of Coolgardie, its buildings and other industrial infrastructure (Figure 4.27a–h and Figure 4.29). Moulton's use of the full tonal range articulates the complex surfaces and forms of the late-Victorian architecture that was typical of the commercial buildings of the Western Australian goldfields.⁵³ There are a number of images in which Moulton shares (or

⁵² The postcard images do not record A. J. Moulton as the photographer, but the same sets of images are reproduced in *The Western Mail* on 12 July 1902 with a credit for Moulton. 'Up-to-date Kalgoorlie', *The Western Mail*, 12 July 1902, 24.

⁵³ Nearly 60 years later, the architectural historian J. M. Freeland archly observed that, 'By 1900, (Perth) had been dipped bodily into a bucket of pure Victoriana and taken out, dripping plaster and spiked with towers and cupolas in a bewildering variety of shapes, to dry ... Perth, Fremantle,



Figure 4.27a: 'Hannans Club, Kalgoorlie' Series F Astral Stores Postcards, Alfred Moulton, c1900



Figure 4.27b: 'Public Buildings, Kalgoorlie' Series F Astral Stores Postcards, Alfred Moulton, c1900



Figure 4.27c: 'Wardens Court, Kalgoorlie' Series F Astral Stores Postcards, Alfred Moulton, c1900



Figure 4.27d: 'Burt Street, Boulder City' Series F Astral Stores Postcards, Alfred Moulton, c1900



Figure 4.27d: 'Intersection of Hannans and Maritana Streets, Kalgoorlie' Series F Astral Stores Postcards, Alfred Moulton, c1900



Figure 4.27f: 'General View of Kalgoorlie' Series F Astral Stores Postcards, Alfred Moulton, c1900



Figure 4.27g: 'Hannans Street Looking West, Kalgoorlie' Series F Astral Stores Postcards, Alfred Moulton, c1900



Figure 4.27h: Series F Astral Stores Postcards, Alfred Moulton, c1900



Figure 4.28a: 'Hannans Street Looking East, Kalgoorlie' Series G Astral Stores Postcards, c1900.



Figure 4.28b: Series G Astral Stores Postcards, c1900.



Figure 4.28c: 'Bayley Street & Post Office, Coolgardie' Series G Astral Stores Postcards, c1900.



Figure 4.28d: 'The Largest Condenser in the World, Coolgardie' Series G Astral Stores Postcards, c1900.



Figure 4.28e: 'Chamber of Mines, Coolgardie' Series G Astral Stores Postcards, c1900.



Figure 4.28f: 'York & Oriental Hotels, Kalgoorlie' Series G Astral Stores Postcards, c1900.

perhaps precedes or copies) the compositional approach of Kalgoorlie photographers like Dwyer. This is evident in their almost exactly replicated compositional capturing of the York and Orient Hotels (Figures 4.28f) and the Coolgardie Chamber of Mines (Figure 4.28e Moulton Battye: 007507d, Dwyer: 010164PD). Drawing on the discussion and definition of serial practice in Chapter 2, the works produced by Moulton also aligned with Smith's use of the 'generic resemble' to each other as a set.⁵⁴

Interestingly, all Moulton's images locate the photographer on the ground, at street level, when photographing the buildings (except for the placement of his camera on the scrubby ground of Mount Charlotte when the photographer is providing an overview of the town). Kalgoorlie's buildings are photographed in a combination of oblique views, which locates them in their street context or in elevational views, which isolates the individual building from the continuous wall of built fabric that typically lined Hannan, Burt and Bayley Streets. Moulton's postcard views from street level, demonstrate the first of three potential locations that the photographer utilised when viewing the mature Kalgoorlie and Boulder.

The second typical location from which local photographers viewed the towns, was the second-storey verandah or balcony. Dwyer had already recognised the potential of the second-story verandah space and, as a well-known local photographer, presumably had easy access to such spaces. With his camera looking horizontally across the space of the balcony, Dwyer recorded the verandah both as a space in its own right (an extension of the interior) and as a location from which to view buildings across the street. This can be seen in Dwyer's image of the balcony of the Mechanic's Institute, where the reading room extends out onto the verandah space (Figure 4.29). The image provides pictorial evidence of the verandah's success as a climatic modifying device, as the harsh light flares at its edge marking the boundary of the cooler, darkened verandah and the light beyond. In other images, such the Dwyer view of the Boulder Town Hall (Figure 4.30), it

Coolgardie and Kalgoorlie blossomed with towers, domes, thumping arcades and twenty feet wide iron lace verandahs. The highly charged atmosphere that goes with gold is always touched with madness and folly. Late Victorian architecture tended to be touched in the same way.' John Maxwell Freeland, *Architecture in Australia: A History* (Ringwood, Victoria: Penguin Books, 1968), 198.

⁵⁴ Smith, 'More than One', 14.



Figure 4.29: The balcony of the Kalgoorlie Mechanic's Institute

'Untitled' (Mechanic's Institute Balcony), John Joseph Dwyer, 1917, (Catalogue number: GM01459), Western Australian Museum, Perth & Kalgoorlie



Figure 4.30: Dwyer's view of the Boulder Town Hall from across the street

'Untitled' (Boulder Town Hall opened 23.06.08), John Joseph Dwyer, 1908, (Catalogue number: GM01314), Western Australian Museum, Perth & Kalgoorlie

would appear that the space of the verandah is exploited compositionally by the photographer, and is used as a frame for viewing adjacent buildings. Here, the line of the verandah is used to mirror the shadow cast by the building that Dwyer occupied, both of which accentuate the converging lines of perspective disappearing to the left of the image. These lines of perspective bring together the road edge, the striations of the tram track on its surface, and the telegraph lines and poles, as well as the banded brickwork and mortar of the Town Hall opposite.

In addition, Dwyer (and others) used the second-storey balcony and verandahs to photograph the street below. Here, with the camera pointing downwards to capture the crowd, the verandah again became an impromptu rostrum for addressing the 'civic street' below where public rallies, political speeches or news of a new rush were conveyed to the towns' citizenry (Figure 4.31 and 4.32). The viewpoint of the camera becomes a substitute for the speakers themselves, addressing and recording the crowd as the speaker might have viewed them as they leant over the balcony rail. The balcony, unlike its deliberate inclusion in the image of the Boulder Town Hall, disappears from view.

The third and final location that photographers occupied was the towers, turrets and roofs of the exuberant commercial architecture of the towns. Consider a Dwyer image that features the York (and to a much lesser extent) the Orient Hotels (Figure 4.33). Here, Dwyer appropriated the tower of the Orient as an extension of his photographic apparatus, effectively a three-storey tripod, which allowed him to survey the neighbouring York Hotel, the patrons on its second-storey balcony and the western end of Hannan Street itself. The camera captured a double surveillance: its recording of the spectacle of Hannan Street on race day and those patrons who were viewing the street themselves. The Orient Hotel intruded into the image as the camera blurrily recorded the decorative finial of the corner of the balcony in the right foreground. In another image, perhaps taken of the same race day, but looking in the opposite direction a finial on one of the Orient's pyramidal roofs is more crisply rendered, as Dwyer looked east up Hannan Street towards its crowded intersection with Maritana Street. There were many occasions in the photographs by Dwyer and others on which architectural elements become an inadvertent part of the image because of the limitations of the camera technology,

the space available to the photographer or the intended composition of the image. These intrusions into the image, in turn, give clues as to the photographer's location in the crenulated and castellated roofscapes of Hannan Street and Burt Street.

As well as commercial architecture, photographers and visitors made use of government buildings to view the city. The most prominent of these vantage points was the clock tower of the newly completed (but less exuberantly designed) Warden's Court, Post & Telegraph Office. It was a popular location for photographers, particularly before the long-delayed clocks were installed in its tower in the early 1900s. The tower augmented the number of locations that allowed visitors and locals to comprehend the towns and their surrounding hinterlands visually. A correspondent, reporting under the pseudonym 'Rubina', wrote in 1904:

It is generally supposed that the mines, the racecourses, and the Mount Charlotte Reservoir represent the only place to see for visitors to these fields. But that is wrong ... that for the really novel and picturesque the bird's eye view we had from the top of the Kalgoorlie Post Office tower was unequalled.⁵⁵

In addition to commenting on the scene, the author made observations on the act of viewing:

The view conveys a sense of freedom, sweetness of liberty and life, and the blessing of sight. Well, we—our little party—feasted our eyes on the north, south, east and west landscape for a long time.⁵⁶

These notions about the spectacle of viewing (as much as the concern for the contents of the view) make sense of other kinds of images where the selection of the photographic subject is perplexing. The clearest example of such are those made by visiting American panoramic photographer Melvin Vaniman (Figure 3.4a-

⁵⁵ 'Rubina', 'From Tower Top, A Bird's Eye View of Kalgoorlie. A Picturesque Panorama', *The Kalgoorlie Miner*, 11 October 1904, 2.

⁵⁶ *Ibid.*, 2.



Figure 4.31: Dwyer 's view of a crowd gathering to hear news of a new gold rush

'Sacred Nugget, Kanowna 1898. Crowd promising not to ask Father Long any more questions', John Joseph Dwyer, 1898, Series: J. J. Dwyer collection 5816B, Weekend News Flashback Series 3542B, Collection of photographs from the Royal Western Australian Historical Society BA1886, The State Library of Western Australia, Perth



Figure 4.32: Hannan Street crowd viewed from the balcony of the Exchange Hotel

'Untitled', John Joseph Dwyer, c1901–1913 (Catalogue number: GM01446) Western Australian Museum, Perth & Kalgoorlie

b) when the view appears devoid of meaningful content and instead the foreground locates the viewer and photographer in the act of viewing. What is clear in Kalgoorlie is that there are a series of vantage points already established from which to view the development of the town and the field. Earlier, in 1900, the *Occidental* wrote:

First, I went to Mount Charlotte, the last peak of the mineral ridge, and from there I was able to view the city. From this vantage point, however, one sees that there are gaps to be filled, that the buildings in places are very scattered.⁵⁷

To return to the images made from the GPO Tower, these images are both panoramic in their technological form (their width is significantly greater than their height) but also in their aspiration, as they survey all directions to take full advantage of the elevation.

The three locations that the photographer could occupy—the street, the balcony and the tower—resulted in distinctive visual emphases and different comprehensions of place, context and connection. A camera located on the ground is concerned with the space of the street, the individuals that occupy it and the buildings that line it. Usually, the images contain an empty foreground, no horizon and little understanding of the broader context beyond the line of buildings that frame the space of the street. The wall of buildings that lined Hannan (and to a lesser extent Boulder's Burt) Street appear continuous in the compositionally oblique images whose vanishing point was located off centre. The broader sense of the town's urbanity, other than a couple of buildings at key intersections, had to be imagined and extrapolated by the viewer beyond the content of the image. Many of these pictures advertised the businesses that lined the major streets, and Hales describes the ability of commercial photographers to 'embed' businesses in these grounded urban views.⁵⁸

⁵⁷ 'Occidental', 'First Visit To Kalgoorlie, The City', *The Inquirer & Commercial News*, 5 October 1900, 12.

⁵⁸ Hales, *Silver Cities*, 26.

The balcony, as the second of these three vantage points, was primarily used to photograph public events that took place in the space of the streets below. Rarely are these significant events photographed from any other location and the vantage point allows the viewer to understand the size and character of the crowd.

Buildings and the city more generally become scenography as they form the backdrop to picturing the crowd in the street.

The third location is the towers, cupolas, and domes that top many buildings on the main streets of Kalgoorlie and Boulder. These highpoints in the town became extensions of the photographic apparatus and allowed photographers to conduct panoramic surveys that show the city in its broader urban and industrial context. The resulting urbanism is remarkably thin: a deep surface, given the recesses and protrusions of the buildings, but only a façade thick. It is also a very restricted section of the city, just a few street blocks from Porter to Cassidy Street that are repeatedly depicted. With a high horizon that corresponds to the photographer's own vertical position on the tops of buildings, these images are dominated by the foreground and mid-ground of the picture plane in a view that we might describe as 'the prospect'.⁵⁹ The prospect is a relatively common compositional approach in Kalgoorlie and Boulder that took advantage (or was a result) of the height of mine shafts and new urban buildings such as town halls and hotels. The viewpoint of the prospect hovers in mid-air between the aerial image and the landscape view, oblique to the terrain it is depicting. It provides an order that would otherwise be illegible to the grounded eye. Architectural historian John Macarthur suggests that the difference between the grounded views and the prospect was not simply that they are different kinds of views but that they also required different kinds of representations.⁶⁰ For theorists of the picturesque, such as Humphrey Repton and Uvedale Price, a prospect was a kind of view that could not be a picture.⁶¹ Macarthur distinguishes between the prospect and the landscape view as the

⁵⁹ Svetlana Alpers argues that the 'worked surface of the Brueghel painting' as the worked surface. Alpers, 'The Mapping Impulse in Dutch Art', in *The Art of Describing: Dutch Art in the Seventeenth Century*, ed. Svetlana Alpers (Chicago: University of Chicago Press, 1983), 145.

⁶⁰ John Macarthur, *The Picturesque: Architecture, Disgust and Other Irregularities* (London, United Kingdom: Routledge, 2007), 190.

⁶¹ *Ibid.*, 190.



Figure 4.33: Dwyer's view of Hannan Street on Race Day from the Orient Hotel Tower,

'Untitled', (View of Hannan Street on Race Day from the Orient Hotel Tower), John Joseph Dwyer, c1901–1917 (Catalogue number: GM01076) Western Australian Museum, Perth & Kalgoorlie

difference between the cadastral and the pictorial.⁶² Integral to Repton's and Price's discussion of the difference between the landscape and the prospect is the importance of the foreground. Price proposes a mental experiment where one could take a foreground from an Old Master and apply it to a 'mere prospect' to convert it into 'landscape'.⁶³ Cosgrove argues that the prospect was first used to 'denote a view outward, a looking forward in time as well as space' and that by the end of the sixteenth century it carried the 'sense of an extensive or commanding sight or view, a view of the landscape as affected by one's position'.⁶⁴ Cosgrove notes the emergence of the verb 'to prospect' later in the nineteenth century as a result of the speculative activities of goldmining.⁶⁵ The emergence of the verb 'to prospect' in the nineteenth century referred to the speculative activities of goldmining and stock market.⁶⁶ The inference is that 'one's position' is not just a matter of where one stands, but that it is more comprehensively spatial, social and economic. This draws on Cosgrove's analysis of the prospect suggests an economic imperative behind its instigation, which he traces to Tudor England. Here, in combination with the 'malicious craft' of surveying, the prospect view reflected a command over the developed and commercially run farming estates of the Tudors' enclosures and the new landowners of the former monastic estates.⁶⁷

Object 10: John Joseph Dwyer's Photograph of the Ivanhoe Goldmine's 100-Head Stamp Battery

The final object that describes the spatial history of Kalgoorlie, Boulder and the Goldfields is a photograph taken by Dwyer of the industrial interior of the 100-stamp mill commissioned by the Ivanhoe Gold Mine (Figure 4.36). While Object 6, described earlier in the chapter, illustrates one family's intersection with the various aspects of photography's pervasiveness in everyday life of the goldfield,

⁶² Ibid., 190.

⁶³ Uvedale Price, *Essays in the Picturesque: As Compared with the Sublime and the Beautiful and, on the Use of Studying Pictures for the Purpose of Improving Real Landscape*. 3 vols (London: J. Mawman, 1810) in John Macarthur, *The Picturesque: Architecture, Disgust and Other Irregularities* (London, United Kingdom: Routledge, 2007), 193.

⁶⁴ Oxford English Dictionary as cited by Denis Cosgrove, 'Prospect, Perspective and the Evolution of the Landscape Idea', *Transactions of the Institute of British Geographers* 10, no.1. (1985): 55.

⁶⁵ Cosgrove, 'Prospect', 61, note 64.

⁶⁶ Ibid., 56.

⁶⁷ Ibid., 55.

this final object describes the role and access of the photographer into the industrial and commercial life of Kalgoorlie. It reveals the industrial architecture of the field and illustrates the persistence of certain visual images across time and media.

The majority of Dwyer's industrial photographs operate instrumentally, as clear, objective evidence, conforming to the traditions of engineering 'record' images,⁶⁸ commissioned by the mining companies for their annual reports and capital-raising ventures.⁶⁹ He was commissioned by a large number of mining companies that worked the goldfield, as indicated by the handwritten client name on each image. Dwyer photographed Ivanhoe, Lake View Consols, Brown Hill Golden Horseshoe, Great Boulder, Hannan Star, Australia GM, Perseverance, Oroya, Croesus, Kalgurli GM, Associated Northern, South Kalgurli and Hainault mines. The photograph of the Ivanhoe Stamp head is one of a number of industrial interiors that Dwyer took of the buildings in the Boulder belt. He also photographed the surface and the underground workings of the mines. In addition, Dwyer rephotographed existing industrial photographs that predate his arrival in Kalgoorlie. These became absorbed into his commercial archive.

Dwyer admitted his interest in 'experimental' photography in his biography in *The Cyclopedia of Western Australia*, which noted that 'he still makes a hobby of his art and spends much spare time in experimental work'.⁷⁰ The Ivanhoe photograph (and others taken at the same time) illustrate that the photographer took advantage of his access to mine interiors to experiment with the making of images. The interiors of the mine buildings presented the opportunity for a unique type of industrial image that was self-contained unlike the view of surface workings,

⁶⁸ Michael Collins, *Record Pictures: Photographs from the Archives of the Institution of Civil Engineers* (Göttingen, Germany: Steidl MACK, 2004), 10.

⁶⁹ What Dwyer's photographs suggest (as Reyner Banham advocates of the structures depicted in the photographs of the contemporary German photographers Bernd and Hilla Becher) is that 'far from being dominated by a reductive discipline of purely instrumental rationality, the high period of heavy industry was one of almost unlimited variability and richness.' Peter Reyner Banham, 'The Becher Vision', in *Water Towers*, by Bernd Becher and Hilla Becher (Cambridge, MA: MIT Press 1988), 7–8.

⁷⁰ James Battye, *The Cyclopedia of Western Australia: An Historical and Commercial Review: Descriptive and Biographical Facts, Figures and Illustrations: An Epitome of Progress* (Adelaide: Hussey and Gillingham, 1912), 898.

where the boundaries of the mine's lease are unmarked and therefore are unable to be photographed in isolation.

That Dwyer sought to differentiate between the instrumental and the artistic in his photography is further evidenced in repeated views of the same scene. For instance, the expansion of the Ivanhoe's Battery is captured in two similar but significantly different images. One was published in *The Cyclopaedia* while the other is an image drawn from the State Library of Western Australia's digital archive (Figure 4.34). While both photographs are teetering on the edge of abstraction, the archival image from the Battye Library archive is detached from its legibility as a piece of industrial boosterism through its scalelessness, its hovering viewpoint and a caption that is subservient to the formal qualities of the photography. This is a highly unusual occurrence in Dwyer's images. Among these industrial interior images, we can also discern an interest in a photographic investigation outside the territory of standard industrial documentation with a concern for composition, abstraction, form and light. Like the imaging of Hannan Street in which the camera lens seems to stretch and extend the buildings and the street to the horizon, here the repetitive elements of the industrial interior potentially extend indefinitely past the photographer vanishing point and past where the photographer has located their camera.

In other industrial interiors, Dwyer is not averse to manipulating the elements within an image to enforce a compositional relationship. In an image of the Horseshoe Mine (Figure 4.35), the photographer, standing on an agitator vat, has interrupted the industrial process to take the image. To emphasise the circular form of the vats, the hatch is removed to further echo the articulated cogs that drive the mechanism. The human occupants, who might potentially occupy the photograph, are emptied out of the image, mid-shovelling, perhaps to avoid giving scale to the complexity of this industrial space. From Dwyer's imaging of these industrial interiors, we understand something of the complexity and variety of Kalgoorlie's industrial endeavour and the 'density' of late-Victorian industrial practice.⁷¹ These spaces are rich with information about the diversity of industrial

⁷¹ Banham, 'The Becher Vision', 8.

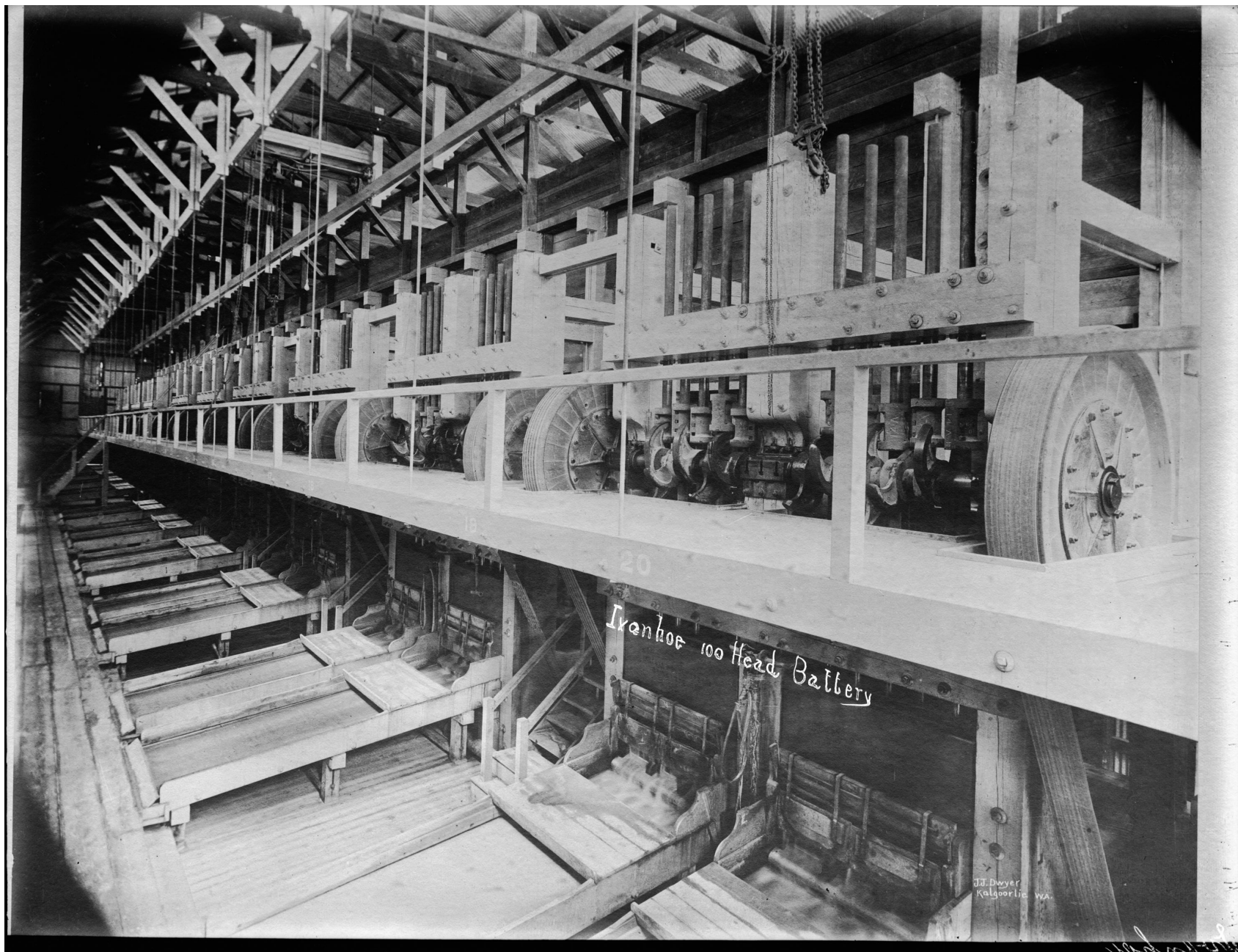


Figure 4.36: Ivanhoe Battery from the Battye digital archive

'Ivanhoe 100 head battery', John Joseph Dwyer, 1898, Series: J. J. Dwyer collection 012581PD, Series: J. J. Dwyer collection 5816B, The State Library of Western Australia, Perth

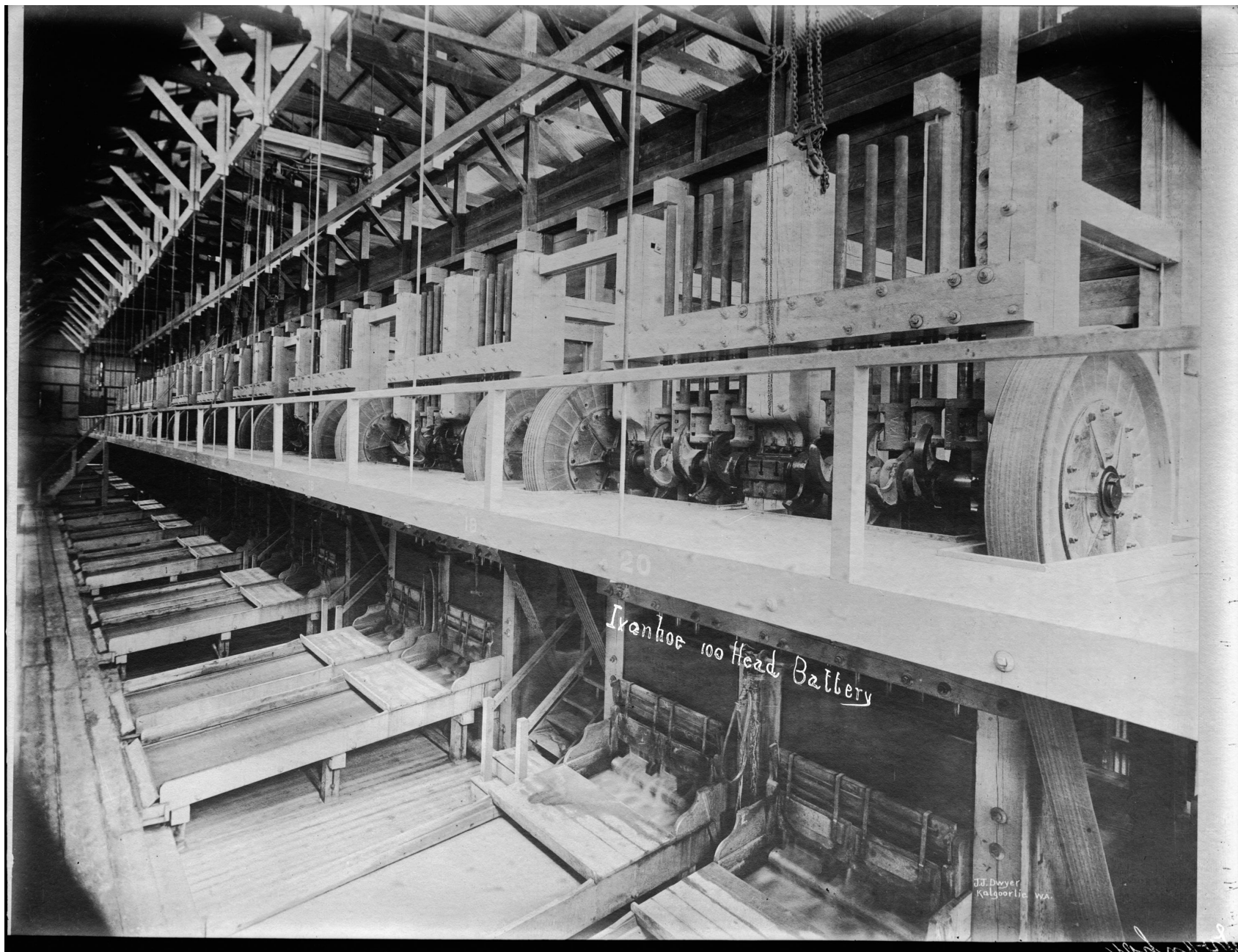


Figure 4.36: Ivanhoe Battery from the Battye digital archive

'Ivanhoe 100 head battery', John Joseph Dwyer, 1898, Series: J. J. Dwyer collection 012581PD, Series: J. J. Dwyer collection 5816B, The State Library of Western Australia, Perth



Figure 4.34: Ivanhoe Battery as reproduced in the Cyclopedia

‘Ore processing plant, Ivanhoe Gold Mine ‘ John Joseph Dwyer, 1898, Series: J. J. Dwyer collection 019019PD, Series: J. J. Dwyer collection 5816B, The State Library of Western Australia, Perth

architecture and processes that we are unable to decipher without access to specialist knowledge about what is taking place here. But these self-contained, elongated perspectives are also essentially silent and emptied of their protagonists. Art historian Leo Marx writes of an 'awesome silence' that pervades American modernist painter and photographer Charles Sheeler's images of early twentieth-century American industrialisation in which the artist has 'eliminated all evidence of the frenzied movement and clamour we associate with the industrial scene'.⁷² This activity has been replaced with what Marx suggests is an 'eerie static quality', the same quality that can be observed in Dwyer's abstraction of these machines.⁷³ Although the most visually arresting of Dwyer's images, these photographs are emptied of the noise, dust and chaos that would have afflicted the workers within.

Summary

These ten objects have described the spatialisation of Kalgoorlie, Boulder and the goldfields, concomitant with its establishment as a mining camp and its development as a significant urban and industrial centre. The discussion of the objects in the spatial history reveals something about photography, cartography and the space of the urban and industrial growth of the goldfield.

Firstly with regard to photography, despite being located 600 kilometres from the most isolated city in the world, as illustrated by the early arrival of photographers, photography was the pictorial means of imagining the town. Kalgoorlie, Boulder and the goldfields are constructed through the recordings of light rather than the making of lines. Unlike its goldmining counterparts in eastern Australia or the American West where the lithographer produced the first images of the booming goldmining city, photographs almost always described Kalgoorlie, Boulder and the Goldfields. Here was a place to be created by the photographic imagination and processes. Photographers like Dwyer came to Kalgoorlie to seek their fortune through photography. The economic accessibility of the medium and the access by

⁷² Leo Marx, *The Machine in the Garden: Technology and the Pastoral Ideal in America* (Oxford: Oxford University Press, 1964), 356.

⁷³ *Ibid.*, 356.

photographers means that the medium is found in a great range of spaces: from the interior of the most temporary dwellings to those of the most cavernous industrial spaces. The images created by these photographers moved into other media across the Australian colonies and the Empire more broadly. As well as being a site of the prolific production of images, Kalgoorlie and Boulder was also the site of the reception of images, locating in a network of circulating images. These images were then organised into photo-textual objects such as newspapers, souvenir and postcards and personal albums. Newspapers were vehicles for the serialisation of images together to make a more complex narrative about the development of a place. The serial organisation of images on the page illustrates the reading practice, serial reception images and the manner in which a number of visual tropes were developed to describe the unique urban and industrial condition. The longevity of photographic images created at this time (and how they are used in different contexts) speaks to the role photography had in a contemporary image culture of the late-nineteenth century.

Secondly, concerning cartography, the discussion points to the contrast between the image of the town and field as represented in maps and photographs as well as the limits and selectivity of cartographic representation. This chapter provides preliminary discussion about the nature of urban grid's response to the constraints placed on its form by the nature of its relationship to the industrial field. Both photographs and maps represent and define space but despite the spatial consequences of legislation in determining the location and form of mining and urban leases, this did not prevent clashes between these different organising principles. With regard to their interaction with urban leases, the goldfield and its leases would take on the characteristics of natural elements, like that of a river, harbour or a ridge of hills that would otherwise constrain and direct a town's development.

The discussion the photographic and cartographic objects in this chapter also points to the limits of visual representation and the need for the research to be connected to other sources—post office records, newspaper columns and legislation—to progress the initial readings made from the exploration of photo-

textual and cartographic objects. This chapter has established a context in which the detailed case study analysis in Chapters 5,6 and 7 will be located.

CHAPTER 5: Case Study 1—The Kalgoorlie Western Argus Supplement, 17 June 1902

This case study investigation analyses the photographic supplement that accompanied the publication of *The Kalgoorlie Western Argus* on 17 June 1902 (the ‘Supplement’) (Figure 5.1). As outlined in Chapter 3, the selection of the case study object was made after surveying newspapers produced in Kalgoorlie, Boulder, the Goldfields and Perth from 1896 to 1903. In this survey, special attention was paid to newspapers that presented image and text (or multiple images) together on a page or distributed images of the same event across several issues. This survey of newspapers identified the publication of special editions or anniversary issues that were printed as a means of celebrating events and milestones in the development of the boom town as well as annual religious and cultural celebrations such as Christmas. The special edition chosen for case study investigation celebrated the anniversary of the discovery gold by Hannan, Flanagan and Shea.

Describing and Analysing the Supplement

The Supplement consisted of 24 pages of 116 photographic and two drawn images introduced by short three-column editorial. A standard issue of *The Argus*

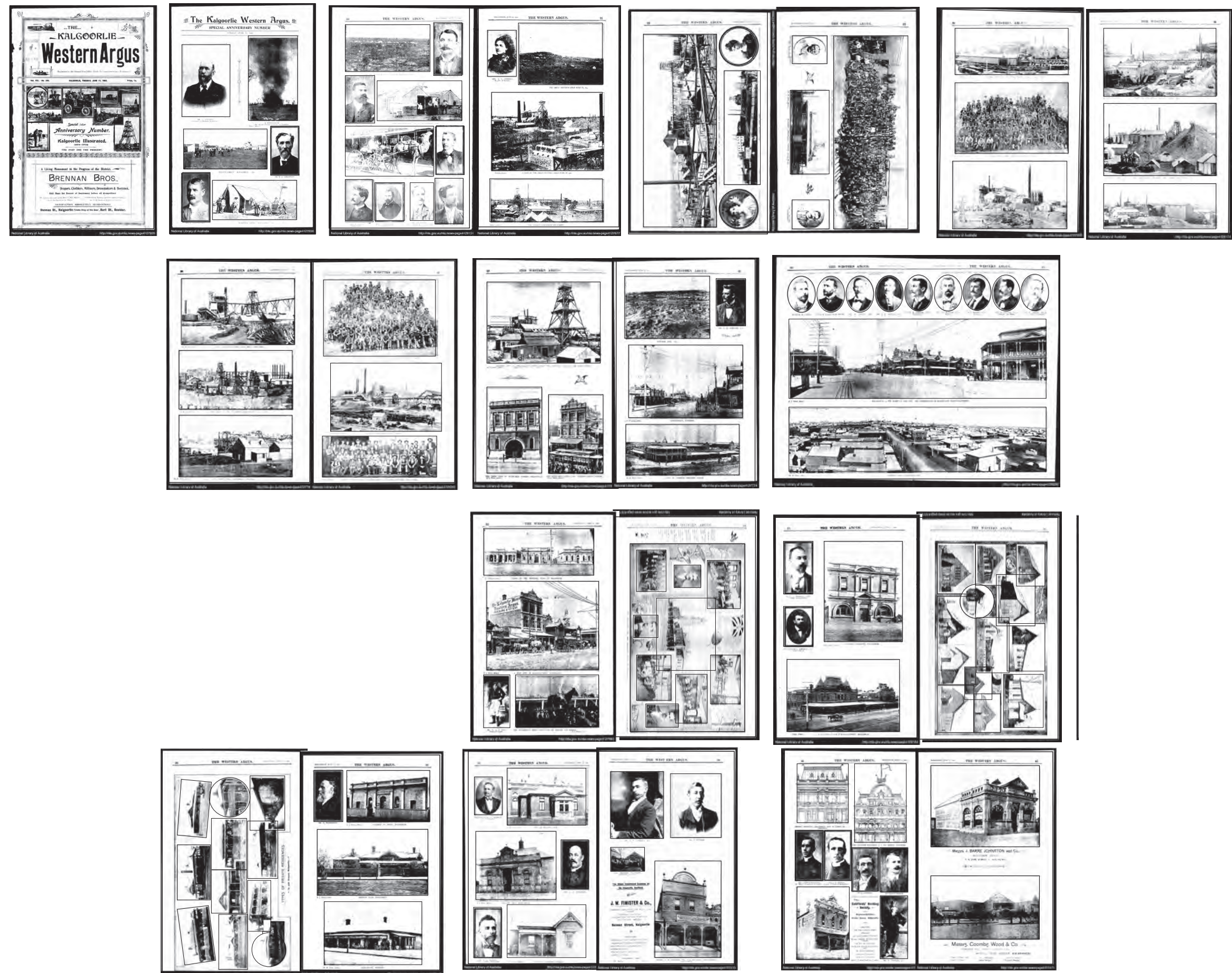


Figure 5.1: Layout of the 24 pages of the Supplement

The Special Anniversary Number, Kalgoorlie Illustrated, The Past to the Present, Supplement to The Kalgoorlie Western Argus, 17 June 1902, National Library of Australia, <https://trove.nla.gov.au/newspaper/page/4127926>

newspaper in 1903 usually ran to between 43 and 44 pages and contained between 15 and 16 photographic images, typically printed between pages 20 and 26. Within its layout of a four-column grid, the newspaper also carried advertisements illustrated by both photographs and drawings. The cover of the newspaper consisted of a masthead that occupied the top quarter of the page with a double column of advertisements. An inside cover of advertisements followed this, and, on the facing page, the news articles and stories commenced. Two elements of the Supplement diverged from the standard issue of the newspaper: the additional pages of photographic images and the revision of the newspaper cover and masthead. The 24-page Supplement increased the length of edition to 60 pages but started at approximately the same point in the newspaper on page 19 and continued to page 40. In addition, the cover of *The Argus* was replaced with a variation of its standard layout. The masthead expanded to occupy the top third of the page, and the font and its layout were distinct from the issues that proceeded and followed the Supplement (Figure 5.15). Additional drawn illustrations (a man playing tennis, kicking a football, a train and a depiction of horse racing) surrounded the masthead text. While the editorial on page 15 drew attention to the anniversary of gold's discovery, there was no further guidance or explanation in this text (or any other text in the edition) to the images published in the Supplement.

Descriptive captions accompanied most images, but only the photographers JJ Dwyer and HH Grose were credited with 45 of the 116 photographs.

Although it was a consolidated publication in the centre of the newspaper, distinguished from the normal contents of the issue, the Supplement did not have a single typical page layout. Instead, there were a number of broad approaches to accommodating images on a page (Figure 5.16). Firstly, the most straightforward composition was the layout of three landscape-orientated images on a single spread (Figure 5.16 top row). These spreads accommodated landscape format images of industrial landscapes or buildings. The most common page layout format was a development of this three-image layout where an elaboration of the basic layout accommodated portraits of Kalgoorlie and Boulder citizens or constructed environment on the page. The second row of Figure 5.16 illustrated the increasing

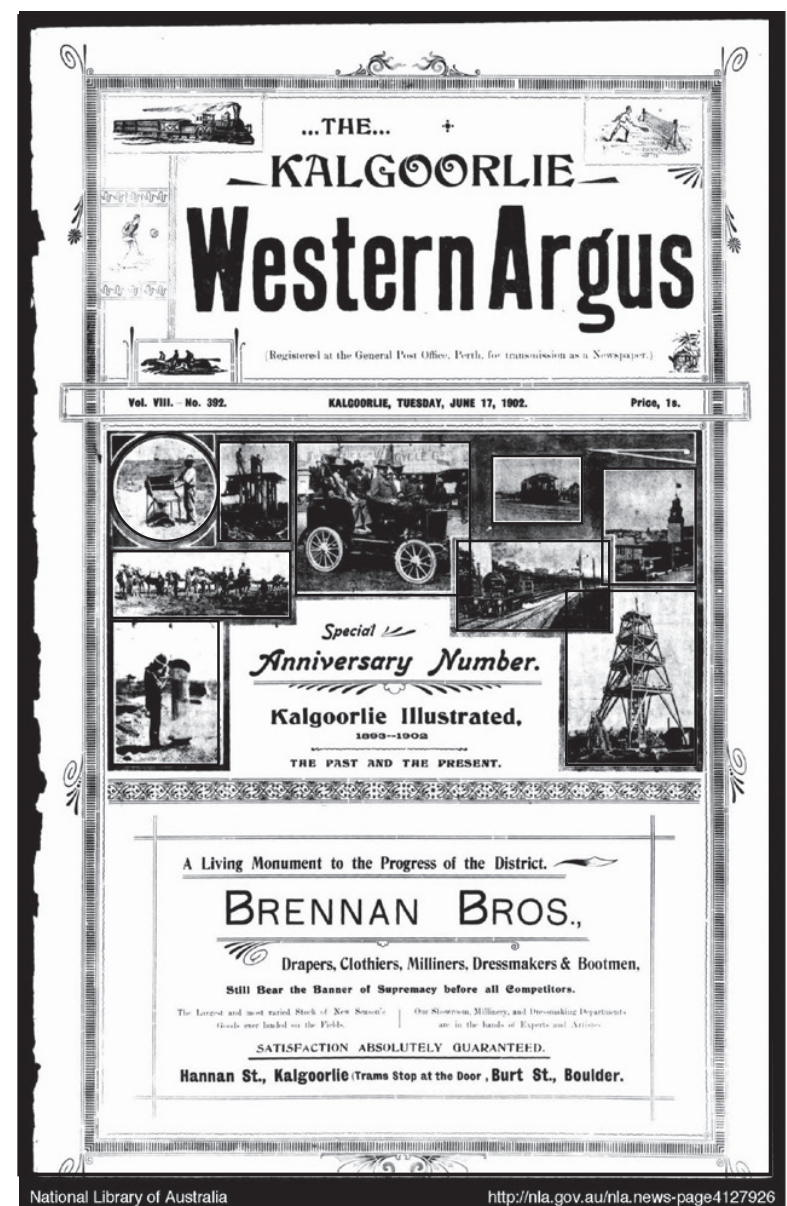
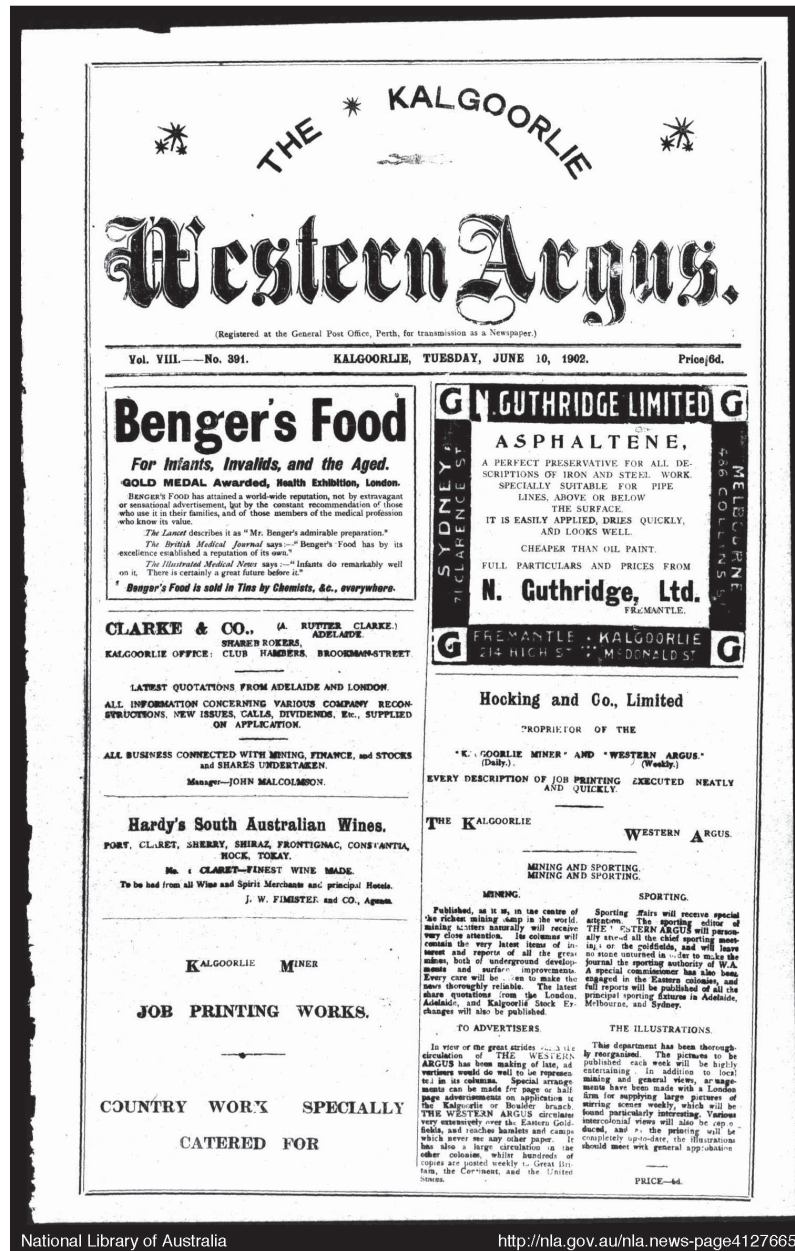


Figure 5.15: Comparison between covers of the standard issue of The Argus and the issue containing the Supplement



Figure 5.16: Page layouts of supplement to *The Kalgoorlie Western Argus*, 17th June, 1902

complicated accommodation of portraits together with images of buildings and landscapes. Thirdly, on a number of occasions, the Supplement utilised the full width of the newspaper double-page spread to either accommodate panoramic photographs of Kalgoorlie and Boulder or mirror the presentation of images of two of the most productive mines of the Golden Mile.

The final category of page layout deployed a number of graphic devices such as background borders, drawn illustrations and backgrounds and title blocks to distinguish themselves from the normal assemblage of images in the Supplement. On these pages, the graphic devices that contained and surrounded photographic images bore a similar to other kinds of contemporary graphic organisational devices such as those found in the scrapbooks and illustrated news spreads. These pages further emphasised the organisation of the photographs together into a new image, presenting an explicit group of images, which in several instances were related to one another through their shared subject (such as a building typology). The graphic organisation of images was most explicit in three graphically self-contained sequences of photographs:

- 'Kalgoorlie Post and Telegraph Office' (Figure 5.12)
- 'Some of the Churches in Kalgoorlie and Boulder' (Figure 5.13)
- 'Types of Private Residences' (Figure 5.14).

The one exception to this typology connection between the pages is the redesigned cover of the newspaper, which will be returned to later in this section. In addition to graphic differences, these pages also departed from the orientation and organisation of images on a standard Supplement page. Images overlapped one another and were cropped and framed in distinctive graphic shapes and used decorative borders that differed from the usual printing and presentation of images in the paper. While the graphic design of these pages is unique within the Supplement, many of the images contained within the layout of the pages had been used previously (and were used again, singularly or in other similar graphic series in later issues of the newspaper).

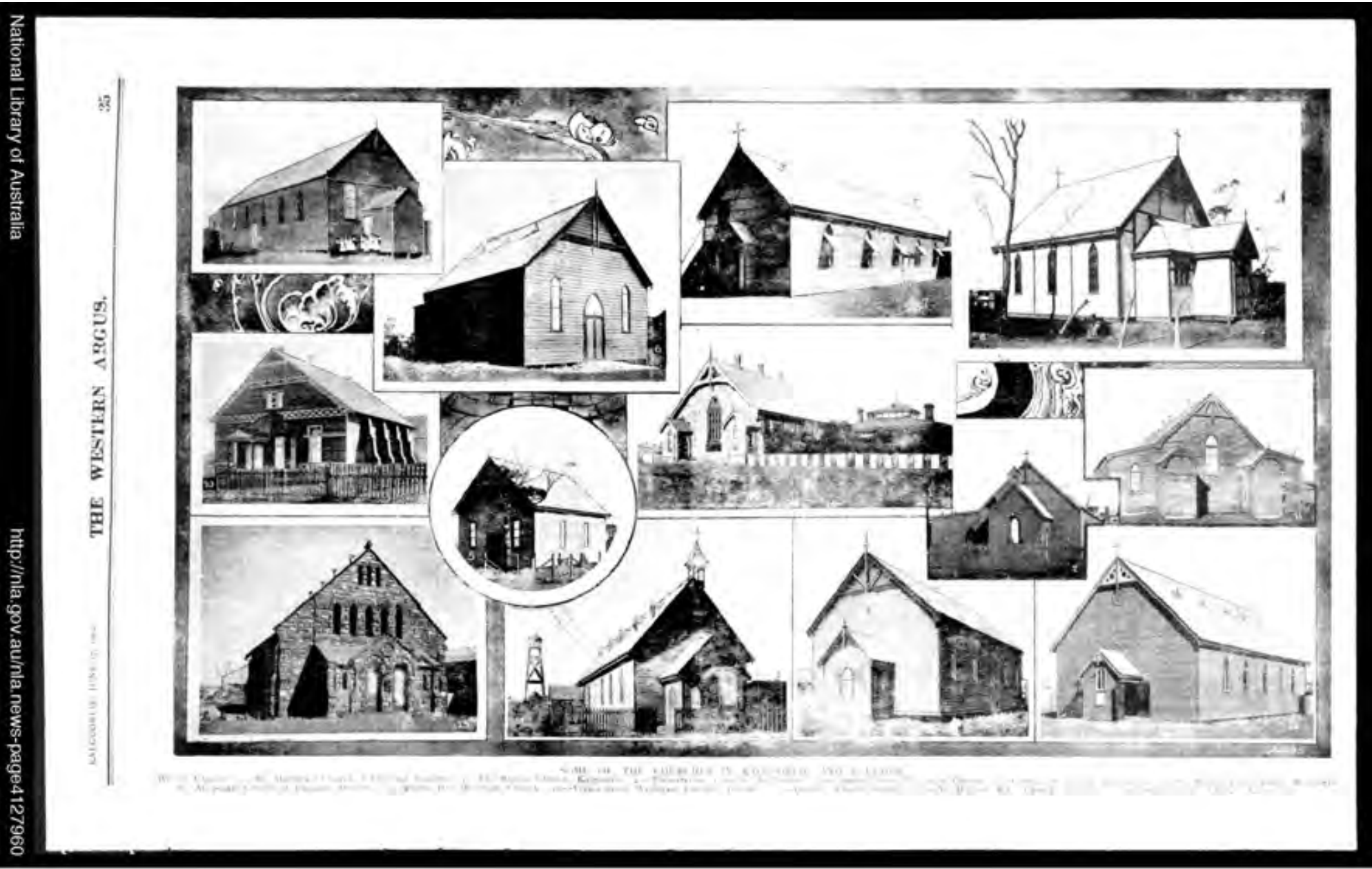


Figure 5.13: The first of the graphic series of goldfields churches

'Some Of The Churches In Kalgoorlie And Boulder', page 35, Special Anniversary Number, Kalgoorlie Illustrated, The Past to the Present, Supplement to The Kalgoorlie Western Argus, 17 June 1902, National Library of Australia, <https://trove.nla.gov.au/newspaper/page/4127960>

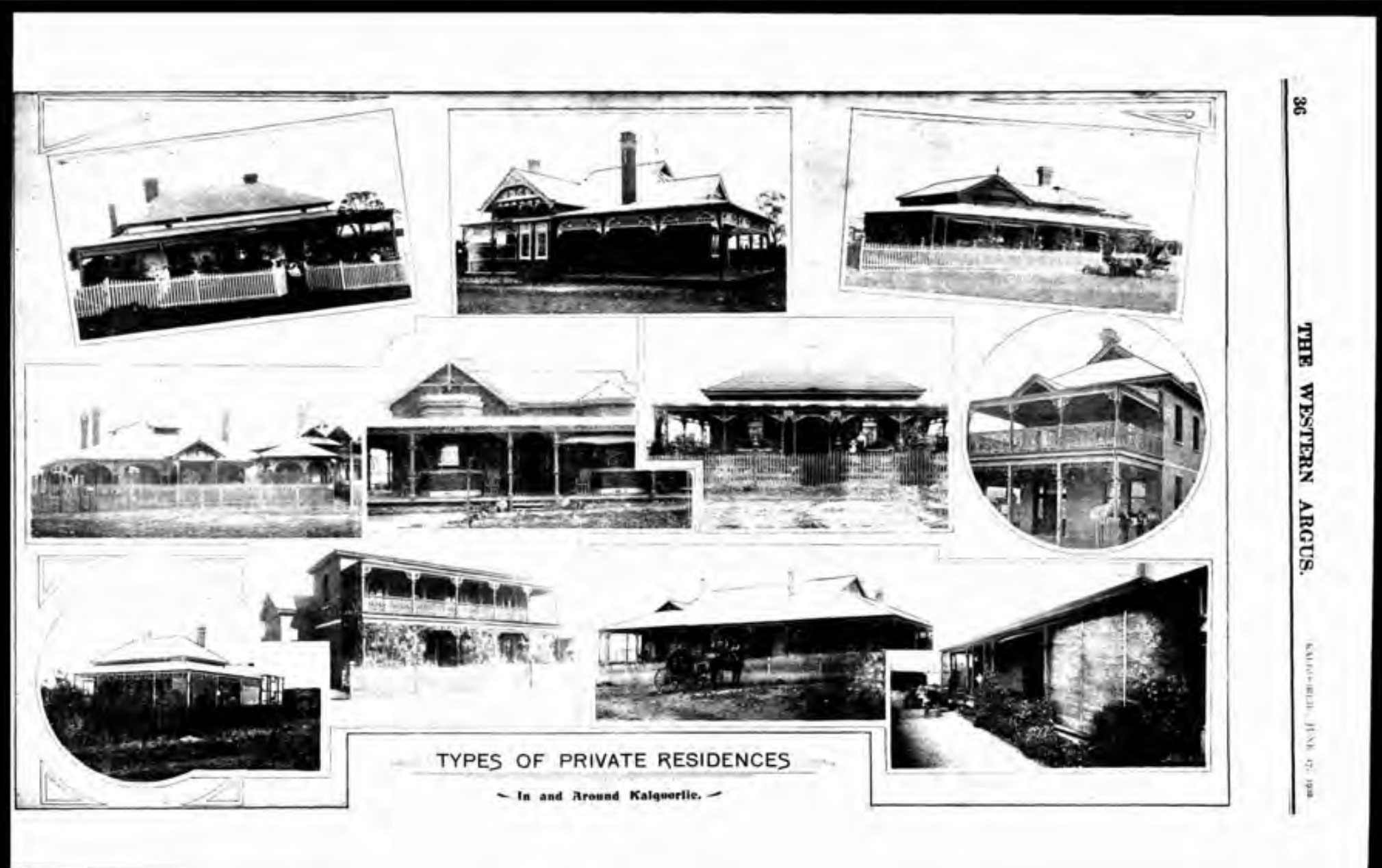


Figure 5.14: The second of the graphic series on goldfields dwellings

'Types of Private Residences: In And Around Kalgoorlie', page #6, Special Anniversary Number, Kalgoorlie Illustrated, The Past to the Present, Supplement to The Kalgoorlie Western Argus, 17 June 1902, National Library of Australia, <https://trove.nla.gov.au/newspaper/page/4127495>



Figure 5.12: The Post Office and Telegraph Office

'The Kalgoorlie Post and Telegraph Office and Departments', page 33, Special Anniversary Number, Kalgoorlie Illustrated, The Past to the Present, Supplement to The Kalgoorlie Western Argus, 17 June 1902, National Library of Australia, <https://trove.nla.gov.au/newspaper/page/4127747>

To investigate the relationship between multiples images across the Supplement, serialisation as an organisational device for the case study information is deployed here as a method of rearranging the newspaper pages from its original structure so a comparison can be drawn between photographs and patterns of images can emerge. The reorganisation of the material under investigation in a different format from its original production is an integral part of the close reading technique. In this case study, the reorganisation of the original material was achieved by laying out the Supplement into a chronological timeline of the issue following the sequence of pages. Undertaken using the software program Adobe Illustrator, a vector-based drawing and layout program, the program's organisation structure means that an image of each spread plus additional analytic overlay drawings could be accommodated in a single file. Once the image of each newspaper page was imported in a working file, a series of diagrammatic tracings and colour codification of the pages and their images was undertaken. The codification was undertaken using a series of criteria: subject matter, location and time.

A number of preliminary inferences can be drawn from this initial reorganisation and codification of the Supplement and its images. Firstly, the Supplement contained a broad array of photographic images, which range in subject matter from a portrayal of the recreational clubs through to the depiction of natural phenomenon. As outlined in the extended discussion of Object 7, one of the visual tropes used to depict the boom town was the colocation of images together to allow for their comparison and juxtaposition: the past/present, Kalgoorlie/Boulder or looking west/east on Hannan Street. To test this idea further through the close reading of the Supplement, its images can be classified into eight broad threads or pictorial themes for the purpose of finding relationships between and across types of images located in these threads. These threads were:

- portraits
- industry
- transport
- architecture

- urban overviews
- street views
- miscellany.

From this categorisation of images in the Supplement, a number of preliminary readings of the Supplement can be made. Figure 5.3 illustrates that, very broadly, the first half of the Supplement was primarily concerned with industrial images (purple). In contrast, the second half of the Supplement contained most of the urban overviews, street and architectural photographs (green). Photographic portraits (Figure 5.4) were spread across the Supplement (and would perhaps be more extensive if the four large group portraits of the miners and workers on pages 23–27 were counted among the portrait classification rather than the industrial classification).¹ The last category of miscellany was used to organise several single images, one of a dust storm ('willy-willy') and the local fox hunting club, which defied categorisation with other images and thus were grouped together (Figure 5.3).

Secondly, the process of undertaking the analytic overlay and the close reading of the images led to the realisation there are many images and combinations of images printed in the Supplement that share significant compositional and pictorial similarities with other images in the visual archive of Kalgoorlie. Additionally, the Supplement draws on and reproduces images from this greater archive. This occurs both at the level of the individual photograph, as well as in their organisation together on the page and within the relationships that these combinations establish. That the photographs in the Supplement are not commissioned for the occasion of the anniversary but instead are assembled from existing collections, lends further weight to the research's methodological shift from the analysis of individual images to focus on the organisation of the images together to be read as a set of new images or series. This does not diminish the importance of the individual image and its construction, as it is their pictorial qualities such as focus, composition and subject as well as the intended audience

¹ The worker's anonymity prevents their inclusion on the portrait classification. The portraits are all captioned with the sitter's name and occupation.



Figure 5.2: Coloured coded pictorial threads or themes.

Author overlay on The Kalgoorlie Western Argus, 17th June, 1902, Trove Digital Newspaper.

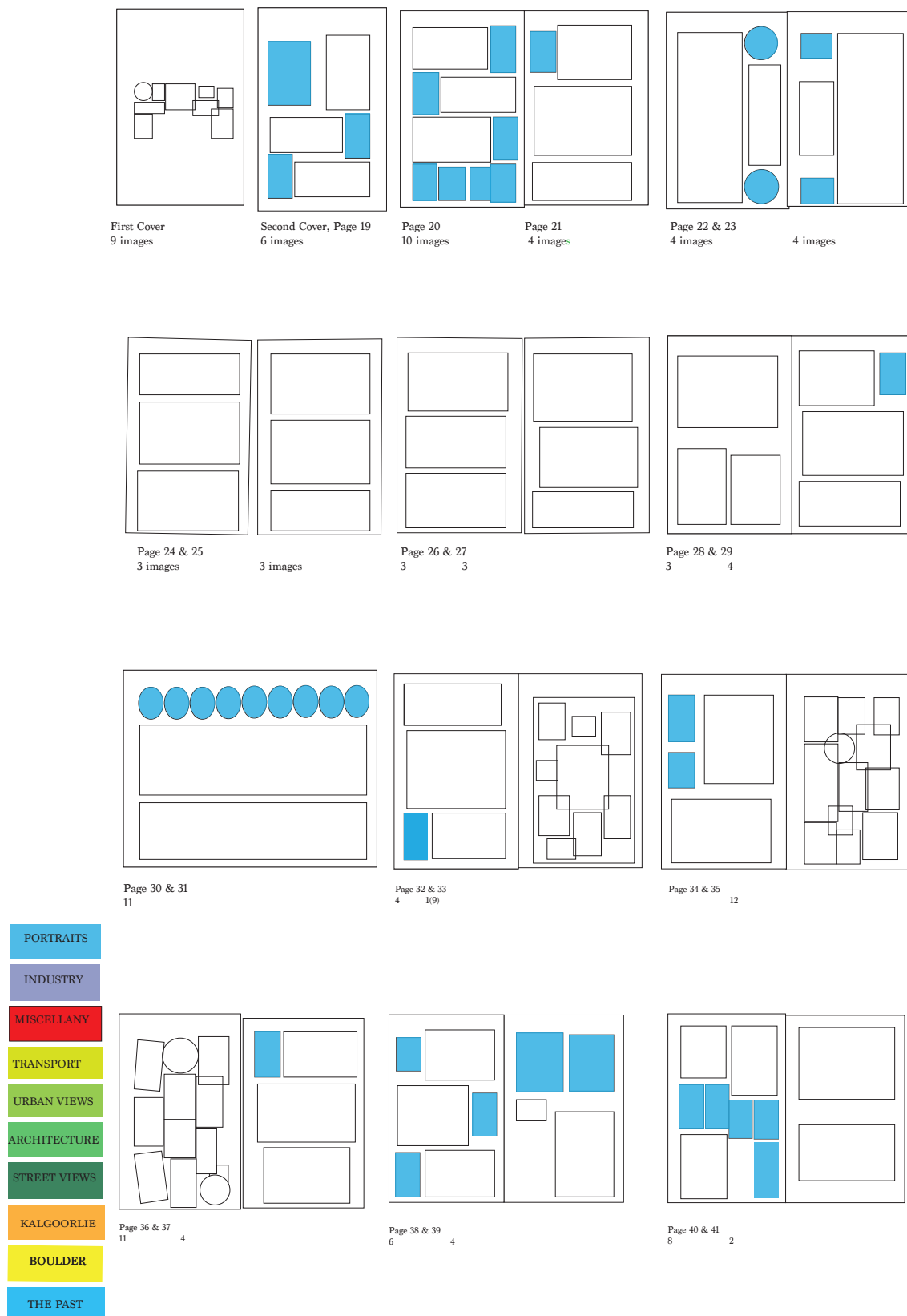
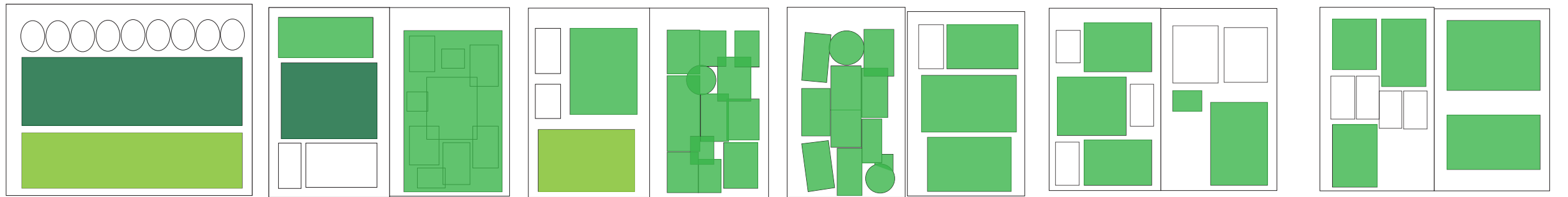
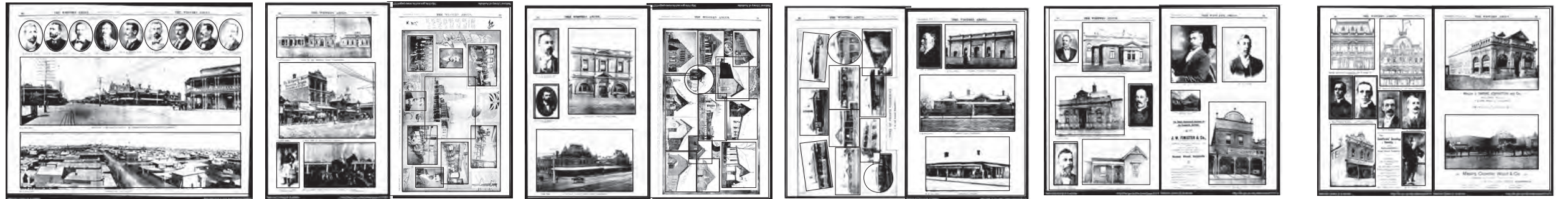
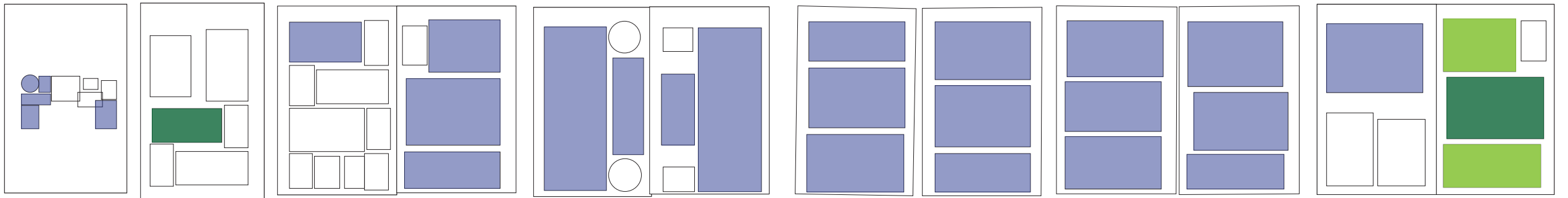
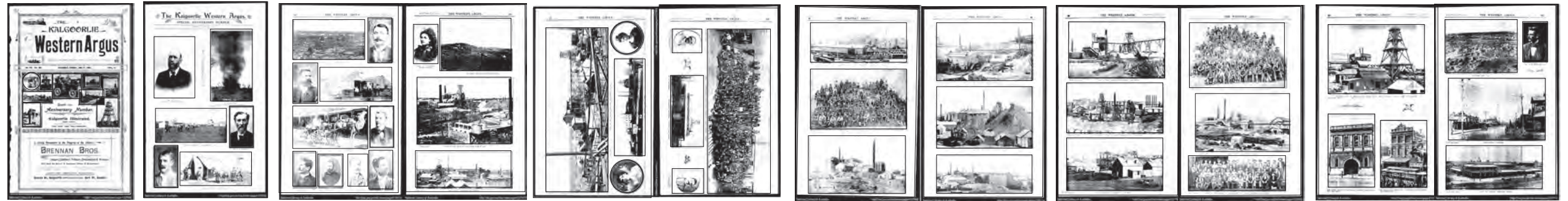


Figure 5.4:
Distribution of Portraits across the Supplement



- PORTRAITS
- INDUSTRY
- MISCELLANY
- TRANSPORT
- URBAN VIEWS
- ARCHITECTURE
- STREET VIEWS
- KALGOORLIE
- BOULDER
- THE PAST

KEY

Figure 5.3:
Industrial images (purple) versus architecture and urban images (shades of green) Coloured
coded pictorial threads or themes.

that are the basis for the constructing of the relationship between images organised together.

Thirdly, as noted previously, the digital layout of the newspaper, the codification of the images and the analysis of the page layout drew attention to the difference between the organisation and type of images on the revised cover of the newspaper in comparison to those in the main body of the Supplement. Given the number of pages between them in the publication (a fact that the serialisation process perhaps obfuscated) and extending Genette's idea of the 'paratext' and 'text', as outlined in Chapter 3, it was worth considering that the newspaper and the Supplement are actually different photo-textual elements:

- The paratext of the Supplement—
 - The revised cover of *The Argus*
- The text of the Supplement—
 - The series of page spreads from page 19 to 40, which begins with the second cover page announcing *The Kalgoorlie Western Argus Special Anniversary Number*.

As outline in Chapter 2, Genette and others propose the idea that paratext helps to shape an understanding of the text that follows it. The next section will discuss how the revised cover might be read as paratextual and argue that the lessons learned from that reading inform the understanding of the rest of the Supplement. Of the nine images contained on the 'first' cover of the Supplement, eight depicted aspects of either transport or the goldmining industry in the goldfields (Figure 5.6). This itself was not an unusual focus given the importance of these two industries to Kalgoorlie and Boulder. The cover contained a loose arrangement of images in an arc around the title. On the left-hand side were a camel train, the building of the first rudimentary shaft for underground mining as well as two images of prospectors using different kinds of dry blowers.² An image of a car

² The photograph of the shaft is of the Ivanhoe mine, but this is not noted on the newspaper image nor by the photographer. See Dwyer Battye image 5816B/72, 010229PD. The first image (and one that is 'iconic' of early gold prospecting in Kalgoorlie) was described by the *New York Times* in March 1901 as the most 'primitive form of dry blowing, consists of "dropping" the "dirt" from a height from one "dish" to another, the dust and finer particles being blown away in falling four or



'Paratext'



Second Cover, Page 19

PORTRAITS
INDUSTRY
MISCELLANY
TRANSPORT
URBAN VIEWS
ARCHITECTURE
STREET VIEWS
KALGOORLIE
BOULDER
THE PAST

KEY

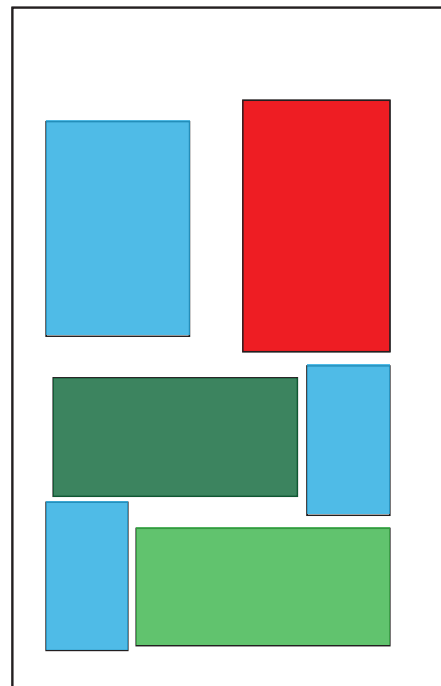
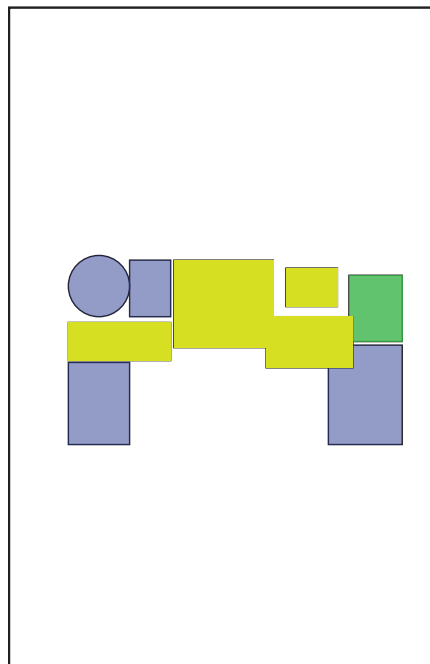


Figure 5.6:
Front Cover and inside cover of newspaper and supplement

carrying four men sat in the centre of the page while on the right-hand side there were images of a tram, the Perth–Kalgoorlie train, and a mining shaft. The recently completed Post Office, Warden’s Courts and Telegraph Office, (the only image not of the transport or mining industries), completed the set of nine images. No text in the Supplement or the newspaper proper identified, described or discussed the selection of images on the cover (or elsewhere for that matter). It could be argued the four images of industry illustrated the technological progression of the goldfields, depicting development from the most primitive form of alluvial gold fossicking as illustrated by the technique of dry blowing, the beginnings of a rudimentary shaft head and platform and finally to a four-tiered shaft and wheel. The images of a camel, train, tram and automobile described four different modes of transportation and transport networks as they developed since the discovery of gold. The inclusion of the car in a depiction of Kalgoorlie is peculiar, as the 1902 General Post Office book, (effectively a business directory for the town) lists blacksmiths, coachbuilders and stables but no car sales yards. Instead of photography serving as representational of the current condition of Kalgoorlie and Boulder, the photograph of car serves as aspirational for what the conditions of the future might be as the ‘keystone’ in the arch of images contained on the cover page. It anticipated the future modes of transport in the goldfields. Together, the photographic images of mining and transport on the cover of the newspaper described a trajectory of technological change in Kalgoorlie. As we have seen already in the depiction of the built environment of the boom town, progress is often depicted through the juxtaposition of the old and the new: the previous form of buildings or townsite and their new iteration. The Supplement cover makes this kind of serial reading explicit: here are a set of images to be read together. The cover offers the opportunity to think about serial reading in the context of the boom town, and how extended notions of seriality and serial readings might be

five feet through the air, while the gold and coarser gravel are caught in the second pan’. The iconic image of the dryblower appears many times in these kinds of supplements either as the same photographic image or as a drawing of the outline of the image. See Joanna Sassoon, ‘Mining the Archive: The Goldfields Photographs of John Joseph Dwyer’, in *An Everyday Transience: The Urban Imaginary of Goldfields Photographer John Joseph Dwyer*, eds. Philip Goldswain and William M. Taylor (Crawley, WA: UWA Publishing, 2009), 173–84.

gathered from this group of photographs on the cover and then applied to the other contents of the Supplement.

Lesson 1: Serials are Made of Multiple Images

The previous visual comparisons of Kalgoorlie's and Boulder's boom, such as those discussed in Chapter 4 concerning newspaper illustrations of Hannan Street (and previously considered in Chapter 2) relied on a direct comparison between just two adjacent images on the same page: the main street of Kalgoorlie compared to the main street of Boulder, and Kalgoorlie in the 'old days' to Kalgoorlie now. The paratext of the Supplement makes a visual argument for another, extended reading to the relationship between images in describing Kalgoorlie, Boulder and the Goldfields. As an example, the four images of mining on the cover illustrated the process of the gradual (and almost certain overlapping) introduction of increasingly more sophisticated machines and techniques for the extraction of gold, while registering the elimination of the presence of the body of the worker from the images of industry.³ This extended serial sits within the framework, outlined in Chapter 2, by Hopwood, Ramalingam, Schlanger and others, where a number of images are marshalled together to make visual claims for an argument.⁴

Lesson 2: Not all Serial Images are Located in Proximity to One Another

As outlined in Chapter 2, many of the uses of scientific imagery serialised a number of images together to make visual arguments for particular processes.⁵ These often employed a graphic device such as a grid layout so that the progression and steps of the process could be easily understood. The paratext of the Supplement points to the possibility of a less rigid graphic structure in which images could be read together. For example, the first three early images of mining were stacked on top

³ Belich argues that these technologies coexist rather than displacing one another. Belich, *Replenishing the Earth*, 109.

⁴ Nick Hopwood, Simon Schaffer and Jim Secord, 'Seriality, and Scientific Objects in the Nineteenth Century', *History of Science* 48, no. 3–4 (2010); Nathan Schlanger, 'Series in Progress: Antiquities of Nature, Numismatics and Stone Implements in the Emergence of Prehistoric Archaeology', *History of Science* 48, no. 3–4 (2010): 251–85; Chitra Ramalingam, 'Natural History in the Dark: Seriality and the Electric Discharge in Victorian Physics', *History of Science* 48, no. 3–4 (2010): 371–98.

⁵ A double issue of the journal *History of Science* is devoted to the topic of the different forms of the serial as utilised in nineteenth-century science. 'Seriality and Scientific Objects in the Nineteenth Century', *History of Science*, 48, no. 3–4 (2010): 252–80.

of one another and intermingled with the images of the goldfields' transportation. The final image of mining (the four-level shaft head) was situated by itself on the other side of the page next to an image of the train and the Post Office. But still, the argument that these images constitute a display of technological progression, moving left to right across the page, can be applied, despite the lack of close visual proximity between the images. To this end, in the layout of the page, consideration must be given to other factors that might influence the composition of the page. The vagaries of the arrangement of the page and the size of the original images used might have influenced and determined the layout as much as the visual arguments being made. In reading images that are not located together, they nonetheless might be joined through the similarity of their subjects or composition and can be considered part of an extended serial comparison.

Lesson 3: Serial Images Represent the Past, the Present and the Future

Of the nine images on the cover, four depicted the past: the two images of the dry blowers, the rudimentary shaft head and the camel train. Another four might represent the present: the tram, the train, the more sophisticated shaft headframe and the Post Office and Warden's Court. The one anomaly in this neat division into the past and the present is the image of a motor car. While the other images might be thought of as representing an aspect of the past and present what the image of the car represents is less certain. As noted earlier, at the time of publication, there were very few cars in Kalgoorlie and no car yard.⁶ Instead of being representative of a current reality or a nostalgia for a recent past, the image of car anticipates a future method of transport. The image of the car is also a caution against the assumption of a representative image. Here, the photograph captures the idiosyncratic, the exotic, the exceptional, the other rather than the commonplace. Images need to be questioned and tested against text and other information to check their veracity.

Taking clues from these lessons, as well as those more conventional serial readings as outlined in Chapter 4, this case study describes and analyses a number of sets of images from the Supplement and the manner in which they construct the spatial

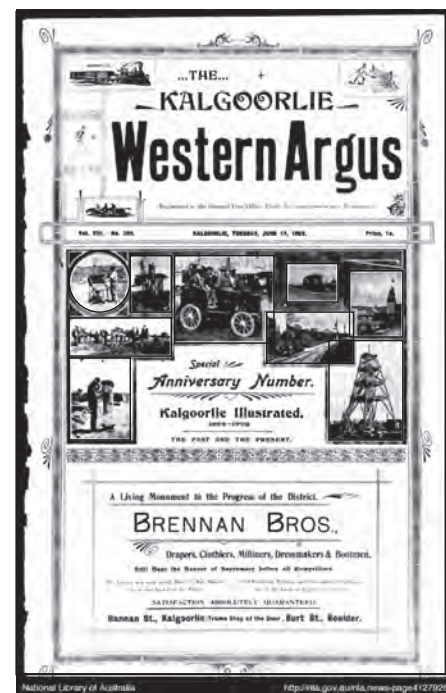
⁶ *The Western Australia post office directory* (Perth, WA: H. Wise & Co, 1902), unpaginated.

and temporal qualities of the goldfields. These three lessons that point to the reception of images and the serial reading techniques that the newspaper expected of its audience can be illustrated by a short sequence of pages from page 19 to 23 (Figure 5.5). Three threads of visual information as described above are included in the pages: architecture, portraits and industry. These threads all run parallel to one another with no relationship across the thematic threads. But within the threads, there are relationships between images across the double-spread layout and across pages. Two photographs illustrate early versions of rudimentary but important buildings of the past: the tents of the Post Office and the Warden's Court, which were located in the nascent Hannan Street. Across three pages, there are images of different aspects of the Great Boulder and Ivanhoe Mine. In the portraits thread there are:

- images of the mayor and mayoress of Boulder
- two portraits of clergymen
- the portraits of the secretaries of the charity 'Children Sea Side Fund'
- portraits of men aligned with the hospital and medical profession
- two portraits of commercial businessmen.

The connection between the images is made across a page and between pages. Despite the loose coherence of the connections between images in the threads, set among these images are others that have no shared relationship other than genre. We might consider this as part of what Mussel describes as the miscellany of the newspaper format; here, a portrait of the photographer Dwyer sits between the clergyman and members of the medical profession.⁷ The manager of Hannan's

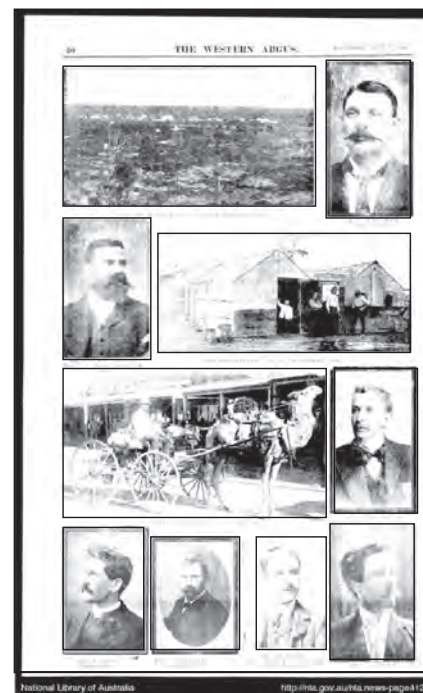
⁷ Also printed on the page is also a photographic portrait of Mr R. D. McKenzie. The portrait of McKenzie is separated from the town image below it by the graphic device of a flower. This type of device is used as a divider between images in an attempt to make explicit the separation between the portrait and images of Boulder. Other examples of the use of the graphic divider between photographic images include: Page 19: Paddy Hannan and the Willy Willy; Page 23: Between 'Managers Residence, Ivanhoe' & 'Mr. HD Pell Kalgoorlie' & 'Councillor F. A. Chapple J.P., Kalgoorlie'; and Page 28: Between the Industrial and the Urban ie 'General View of the Hannan's Oroya Goldmine- Kalgurlie Mill in the Background & The Union Bank of Australia Kalgoorlie Limited and The 'Kalgoorlie Miner' and 'Western Argus' Offices. Mr McKenzie is a significant figure in Kalgoorlie as initially the owner of McKenzie's Store on the corner of Hannan and Maritana street. This is the only corner of that major intersection that is not occupied by a pub and hotel. He was the town mayor, Justice of the Peace, President of Kalgoorlie's Chamber of Commerce and, from 1904, MLC for North East Province in WA Parliament. *The Kalgoorlie Western Argus*, 29 August 1911, 33.



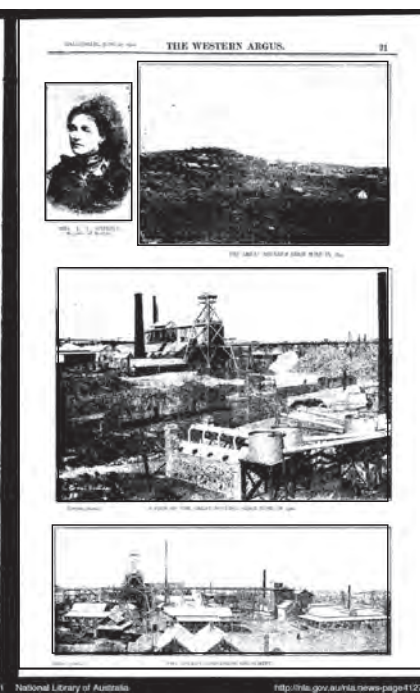
First Cover



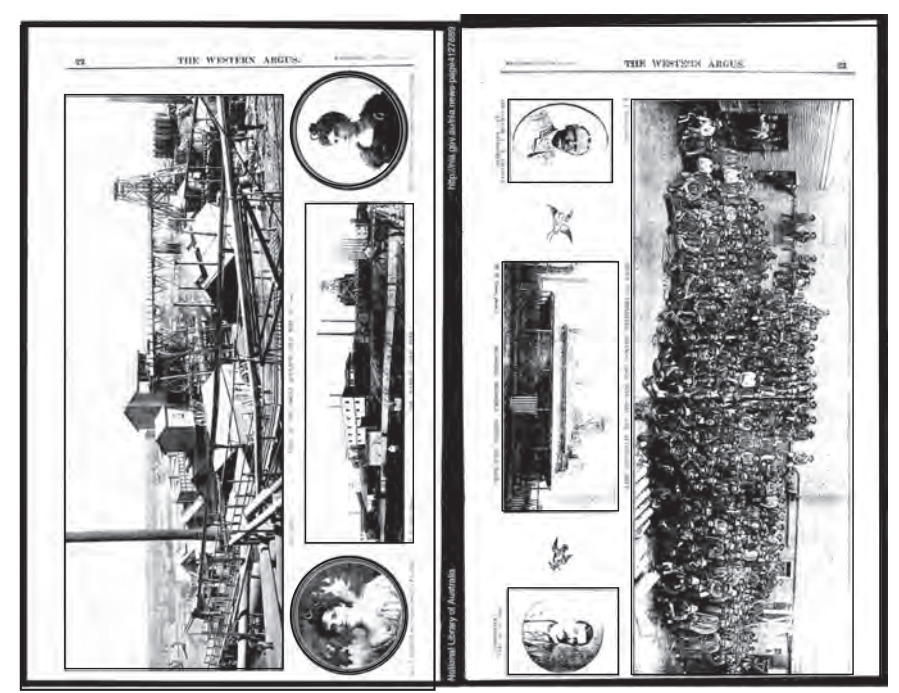
Second Cover, Page 19



Page 20



Page 21



Page 22 & 23

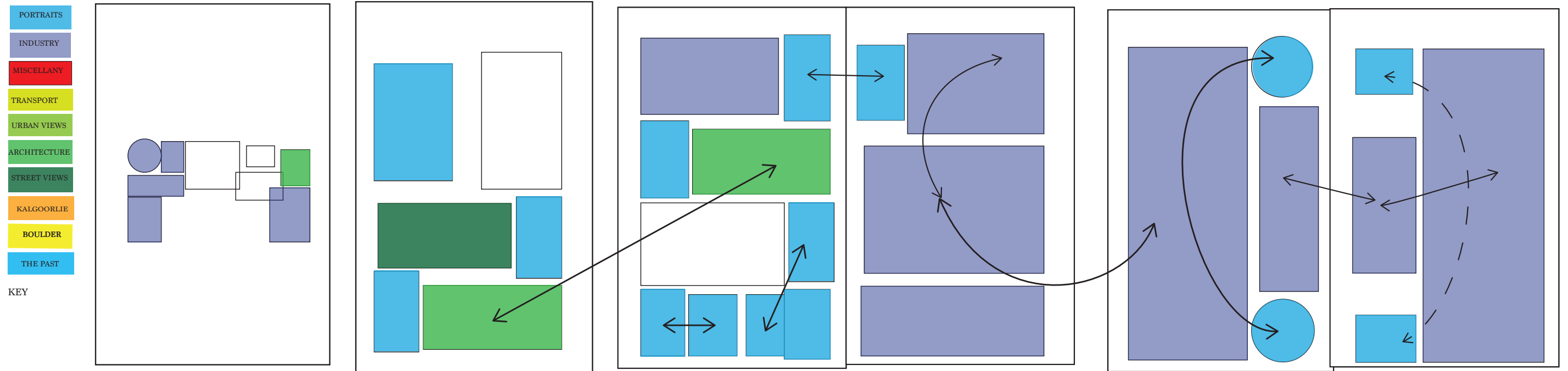


Figure 5.5:
Three 'threads' of visual information as described above are included in the pages architecture, portraits and industry

Brewery sits adjacent to the Post Office tent and a camel. The apparent incongruity of the connection within the threads and images points to the visual literacy of the readers of *The Argus* and their ability to make other connections between images and across pages. Given this preliminary analysis of the Supplement and the number of lessons learned from the paratext, the next section of the case study will investigate the presentation of time, space, change and stasis.

The Supplement's Representation of Space in the Boom Town

The extended length of the Supplement and the large amount of urban and architectural images allows for the photographic depiction of the constructed environment of Kalgoorlie, Boulder and the Goldfields. As shown in Figure 5.3, the 48 images of urban scenes, street views and architecture are concentrated in the second half of the Supplement and allow comparisons to be drawn between the urban spaces as they are imagined by the camera. While urban Kalgoorlie and Boulder's interdependent relationship results in a visual trope of their two contrasting depictions in printed sources such as those discussed in relation to Object 7, the extended nature of the Supplement allows for other constructions of urban space (and time) in the newspaper to emerge.⁸

One of what we might call the extended serial depictions offers the opportunity for the imagining of the space of Boulder, as the newspaper reproduces a sequence of three photographs that describe various stages and aspects of the town's development (Figure 5.7). This section of the case study will analyse page 29 of the Supplement, the photographs of Boulder as they relate to one another, and other images in the Supplement in describing an aspect of space and city-making in Kalgoorlie, Boulder and the Goldfields.⁹ Here, the sequence of Boulder images begins with a photograph titled 'Boulder City in 1895', which looks westward across the ground between the industrialised belt of mines to the town of the title.

⁸ This trope is pervasive enough that, as will be discussed in case study 2: The Souvenir, the formulae of the depiction of the town's main streets, taken from different viewpoints, is repeated in the Supplement in a manner almost identical to that of the Souvenir 18 months later.

⁹ As discussed in Chapter 4: A Spatial History, there are a number of visual tropes used to depict the development of the towns and their fields across time and space. As an example, the Department of Mines Annual Report 1900 contains a very similar sequence of images, including the image that starts the sequence of images, show the surface development of the mines, towns and their town's major buildings.



BOULDER CITY. 1895.

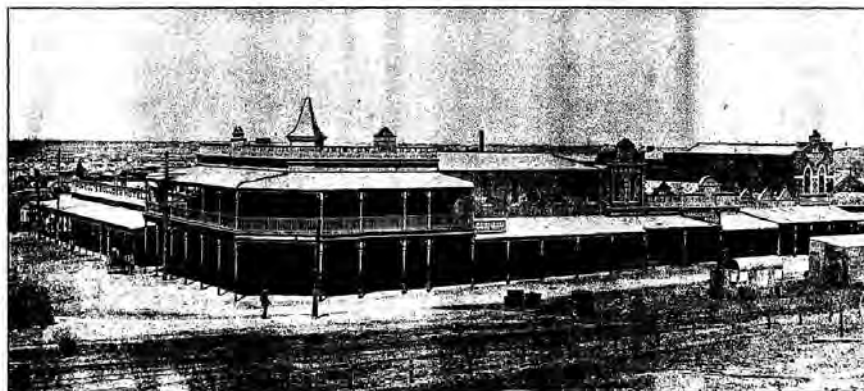


MR. R. D. MCKENZIE, J.P.



(H. H. Grise, photo.)

BURT-STREET, BOULDER.



(H. H. Grise, photo.)

VIEW OF FIMISTON (BOULDER BLOCK).

Figure 5.7: Page 20 of the Supplement

'Boulder City, 1895', 'Mr R.D. McKenzie J.P.', 'Burt Street, Boulder', 'View of Fimiston (Boulder Block)', The Kalgoorlie Western Argus, 17 June 1902

Even at this early stage of the town's development, around the time of its gazetting, substantial buildings, including shops and houses, are visible on the eastern edge of the Boulder city grid near the intersection of Burt and Hamilton Street. The elevated vantage point of the photographer results in an image that satisfies the requirements of the prospect, as described in Chapter 4.¹⁰ The image is dominated by the sparse landscape between the town and the photographer. Two large trees remain, as does a lone tent, but otherwise, the landscape is denuded. The ground is crossed by the lines of buggy and cart tracks as well as those of the miners' single-file walking tracks between Boulder and their place of work. High in the mid-ground, the Kalgoorlie–Boulder train appears to have paused, en route to Kalgoorlie. These horizontal crisscrossing tracks (machine, animal and human) move the viewer's eye up and down the image between the horizon and the town and the photographer's location at the bottom of the image. The photograph records signs of the developing infrastructure near Boulder so that in addition to the train, on the far left and in the mid-ground, telegraph poles can be seen leading from Boulder to the location of the photographer. The image draws comparisons with one of the first images on the second page of the Supplement, 'View of Hannans Kalgoorlie 1894 from Maritana Hill' (Figure 5.8), which is a very similar kind of prospect image—nascent town on the horizon, scrubby bushland between it and the elevated position of the photographer. As the first image of a set of three images of Boulder on the page, this focus-less photograph does not serve only as a vehicle for the delivery of visual information about Boulder in 1895. Instead, the photograph stands as a visual marker from which other visual comparisons in

¹⁰ The exact location of the photographer is not easy to discern. The height of the vantage point for the camera appears higher than a building would expected to have been in 1895, so it is perhaps from the top of one of the first mine head shafts on the Boulder belt of mines. Given the E. W. Henderson photographs published in *The Kalgoorlie Western Argus* in 1896 and the handwriting on those photographs, it would appear to be a Henderson image. For examples of Henderson's handwriting (or that of his studio), see 'Four O'clock Shift on Great Boulder mine, Going on' and 'Four o'clock Shift on the Great Boulder Mine Coming Off', *The Kalgoorlie Western Argus*, 19 November 1896, 5. Given the photograph 'South View from Poppet Heads Great Boulder' printed in the *The Kalgoorlie Western Argus*, 3 December 1896, it would appear that Henderson has access to mine sites and equipment to take photographs. The horizon line for this image is lower than the one published in the Supplement, but it indicates that there were mines that had poppet head and shafts at this height relatively early in the development of the field. Another Henderson image, 'Brown Hill Poppet Head and Machinery House', *The Kalgoorlie Western Argus*, 10 September 1896, illustrates the rudimentary poppet head that might have been available to Henderson to photograph from.



HANNANS KALGOORLIE 1894—FROM MARITANA HILL

MR J. A. J.
MAYOR OF

Figure 5.8 Detail of page 20

Hannans Kalgoorlie 1894—From Maritana Hill', Detail of page 20, Special Anniversary Number, Kalgoorlie Illustrated, The Past to the Present, Supplement to The Kalgoorlie Western Argus, 17 June 1902, National Library of Australia, <https://trove.nla.gov.au/newspaper/page/4128151>

other photographs can be drawn. Most obviously, a comparison can be made to the other images of Boulder on the page.

In the second image of Boulder, this time credited to the photographer HH Grose, the camera is located on the ground at the eastern edge of the Boulder grid, almost at the point that the first photographer was looking. But Grose is seeing a very different Burt Street from what his fellow photographer would have seen half a dozen years earlier.¹¹ Again, the image conforms to the genre and compositional expectations of booster urban photography—a wall of buildings lining each edge of the main mercantile street and stretching to the horizon. In comparison to its neighbour Kalgoorlie, the modest commercial buildings of Burt Street are of a smaller scale and less exuberant architectural expression. But the camera's position, elevated slightly, perhaps on a cart similar to the one just in front of it, allows the photographer to capture the elements that demonstrate the urban amenity of the town—footpath with a hard edge to the street, maybe a macadamised road, saloons and shops lining the wide street and verandahs providing shade for the footpath. The buildings at the edge of the image, including the cosmopolitan-sounding Metropole Hotel, are cropped in a manner to suggest the depicted urbanity continues outside the picture frame. The telegraph poles lead off over the photographer's head and out of the photographic frame, connecting Boulder to other places. Public buildings can be seen further down the street, several blocks further west of where the photographer is standing where the civic precinct of Boulder contains a post office, courthouse and police station. As an image, it conveys a convincing sense of urban amenity.

The final image on the page is titled 'View of Fimiston (Boulder Block)', and it depicted one of the unusual urban circumstances that the development of the goldfields produced.¹² The elevated camera provides an overview of Fimiston/Boulder Block and locates the photographer on the machinery or structures of a neighbouring mine. A short digression to recount the history and intriguing status of the Fimiston/Boulder Block is required at this point. The parcel

¹¹ Although undated, the expectation would be that it was contemporaneous with the publication of the Supplement. The Metropole Hotel at Burt Street Boulder was built in 1897–1898.

¹² This same image appeared eight years later in the same newspaper, printed more clearly but more narrowly cropped, omitting some of the foreground.

of land was one of several early commercial developments that had opportunistically occupied space on the mining leases. Instead of these businesses being removed by the owners of the leases as mining activity increased, as occurred on the nearby Westralia lease and others, the Boulder Block businesses struck a deal to maintain surface rights (which were apparently swapped for a case of wine with the owners of the mining leases).¹³ The acre, because of its proximity to the mines, had some of the most profitable business on it and it was often referred to as the 'old Boulder township', the 'old Boulder block' or 'the Old Block'.¹⁴ At its peak it held, according to one witness, 'on a space no bigger than an ordinary bowling green ... six hotels, three or four restaurants, chemists, fruit shops, clothiers; in fact, almost every line of business is represented'.¹⁵ As shown by Department of Lands and Survey maps (Figure 5.9), the Block is illustrated as attached to Boulder by road and the municipal boundary, while earlier maps illustrate the Block as an unattached insert onto the map. Detached from the gazetted Boulder townsite, the status of the Block is disputed by various governing bodies of the field as the Kalgoorlie Road Board who 'strongly oppose[d] the Old Boulder Road being taken from its control [and] a petition [was] taken round the Old Block protesting against the road or block being brought within the [Boulder] Council's administration'.¹⁶ The Block then occupied a unique place in the industrial urban landscape—undermined by mining, only contingently joined to Boulder, a disputed territory that despite its status was also some of the most valuable commercial frontage on the fields. Despite this contested status (and apart from the temporary-looking tent-like structure on the right-hand side of the image), the view of the Boulder Block on page 29 of the Supplement could not be that of a more substantial piece of urban fabric.

Interestingly, the photographic approach to the depiction of the highly unusual urban condition is echoed several pages later when the same compositional technique is applied to an image of a much more developed and urbanised section of Kalgoorlie's main street. This photograph depicts a short section of Hannan and

¹³ 'Fimiston Area. Bought For A Case Of Wine', *The Kalgoorlie Western Argus*, 12 February 1907, 13.

¹⁴ These various name for the area can be found in *The Kalgoorlie Miner*, 10 November 1898, 7; *The Kalgoorlie Western Argus*, 2 November 1899, 4; *The Evening Star*, 6 July 1899, 3.

¹⁵ *The West Australian*, 4 May 1903, 7.

¹⁶ *The Evening Star*, 6 July 1899, 3.

Boulder



Boulder Block/Fimiston

Figure 5.9:
Detail of Sheet 8 showing the location of the Boulder Block and Boulder townsite

Series 2168 maps of Boulder issued by the Department of Lands and Surveys, 1896–1905

Cassidy Streets that contained the elaborate and recently completed York and Orient Hotels (Figure 5.10). Both photographs share the elevated position of the camera, the classic architectural photography composition of the three-quarter view with the corner of the block, the focus of attention. The cropping of the image and the two-point perspective vanishing points suggest that the wall of buildings continues to the horizon. As well as this continuous frontage, the images contain other elements of Kalgoorlie's architectural and urban amenity: the deep shaded verandahs, paved footpath, telegraph poles and the appearance of the wide road intersection, with their corners anchored by hotels. As if to emphasise the material wealth of Kalgoorlie, the picture is labelled 'A Valuable Block in Hannan Street, Kalgoorlie'. Note that the individual buildings contained in the image are not named. Here, it is the totality of the urban setting—building, street, infrastructure—that together, generate wealth. The Boulder Block image is similarly titled 'View of Fimiston (Boulder Block)' with the emphasis on the totality of the urban fabric. While the architecture of the Kalgoorlie hotels is more extravagant, all the Boulder Block buildings depicted are substantial and include double-height verandahs and balconies. The Boulder page of the Supplement could have been an opportunity to expand the pictorial representation of Boulder, utilising a number of images to describe the different aspects of the town. The three images of different aspects of Boulder that were chosen point to the need for multiple images (and the inability of the single image to capture the space of the town) as the photographs describe the different spatial contexts of boom town: Boulder City, the Boulder Block and the industrial ground between them. Paradoxically and despite the pronounced atypicality of Boulder Block's status on the goldfields, this exceptionality does not extend to the manner in which the urbanity of the Boulder Block was imagined in the Supplement. Despite its 'aberrant' urban condition—unmapped, without municipal status, part of, but not connected to Boulder, freehold among the leaseholds of the mines, divided into uneven lots—the description of the Boulder Block conforms to pictorial expectations of the urbanity of the more-established and recognisably metropolitan Kalgoorlie. Even within this more faceted description of the city's unique qualities, there are limitation to the creation of the urban imaginary.

The Supplement's Representation of Time in the Boom Town

One of the types of serial reading that the Supplement promotes is a reading of the different stages in the boom town's development. This section of the case study will investigate the Supplement's photographs of 'The Past and The Present' and how a serial reading of these images reinforces the already established pictorial narrative about Kalgoorlie and Boulder's boom. This pictorial narrative makes the visual argument for the transformation of the towns, by collocating images of the same place or the same structures, photographed at different times. This section of the case study will briefly touch on the relationship between the pairs of images that represent the 'The Past' and 'The Present' before focusing on the Supplement's imaging of the Kalgoorlie Post Office and Warden's Court across time.

Despite the cover of the Supplement's promise of an illustration of 'The Past', these photographs constitute only 11 of the more than 100 images in the Supplement (Figure 5.11), and most of these images are found in its first pages. There is a density of images (four out of the total of 11 images) of 'The Past' on the cover of the newspaper that is concerned with the depiction of the towns' industrial and transport progress. These images of 'The Past' and their link to images of progress are largely self-contained within the cover of the newspaper, as discussed earlier in this chapter. What is significant about the remaining seven photographs is that most of them can be 'paired' with another image in the Supplement to perform a serial reading across the document, as its cover promised, of 'The Past and the Present'. The most explicit of these connections is made on page 21, where two images of the Great Boulder Mine are printed. One is from 1895 and the other from 1902, and their placement together on the page serves to highlight the transformation of the industrial field from the practices of alluvial surface mining to that of underground mining. Again, the Supplement reinforces the pictorial trope of past/present industrial progress. This is to the extent that the same image of the Great Boulder Mine in 1902–3 is used a year later in the Goldfields Water Scheme Souvenir.

The familiar trope of past–present juxtaposition is extended in the Supplement so that its images of 'The Past' that are introduced at the start correspond with the

images of 'The Present' located in later pages. This can also be seen in the depiction of the most important building in the Goldfields: the combined Post and Telegraph Office and Warden's Court. In its changing architectural form, the building serves the role of being a marker of the status of the progress of the town and therefore its past, the present and the future. In its final architectural form, it is a building to view and, for a few years before the installation of clocks in the tower, from which to view Kalgoorlie. The importance of the Post Office and other public buildings was established visually in newspapers before the publication of the Supplement. For instance, on 12 November 1896, *The Argus* published photographs of the Mayor, the Postmaster and the Post Office. These subjects all shared the sole page of images in the edition. The Mayor and the Postmaster were given a quarter of the page, a visual equivalence that corresponds to their respective importance in the town. The tin and timber buildings of the Post Office and the Postmaster's quarters' took up half the page. Two weeks later, the same paper published a photograph of an earlier version of the Post Office, a crude, canvassed timber-framed structure. The image of the rudimentary building shared the page with an image titled 'A Corner in Tinley, Holyrod and Co's laboratory'. Set among the intriguing contents of this image's composition—the strikingly graphic tiles, religious imagery, exotic native fauna, specimen jars with multi-legged insects, a dead fur-clad but unidentifiable animal, a bird's nest—are the instruments of the assayer's office. The main service provided by the assayer was to determine the amount of gold in samples taken from prospective mining leases. Despite the eccentricity of the image of the assayer's office, that these two services—determining the gold content of a sample of ore and the delivering of news—share the sole page of images, is telling.

In December 1897, the image of Kalgoorlie's first Post Office was partnered again, this time sharing a page with an image depicting the demolition of Kalgoorlie's first 'iron building' on Hannan Street. Given its location, one lot back from the Hannan and Maritana Street intersection and next to the Australia Hotel, the presumption is that it was being replaced by a more substantial building. Nine months later, on 8 September 1898, *The Argus*, reprised two of the images the newspaper had previously printed. On this occasion, the images were contained in a double-page

spread that illustrated different stages of the Post Office's development. Printed without accompanying body text, the set of images was described by the title of the first photograph 'Past, Present and Future—Kalgoorlie's First Post Office' followed by 'The Present Post Office' and, finally, on the opposite page 'Design of the Post Office in the Course of Erection in Hannah-street'.¹⁷ The three images attempted a neat partition of the history of the Post Office in a tripartite delineation of time: Past, Present and Future. While only a drawing, the image of the 'future' Post Office is prescient of the manner in which Kalgoorlie photographers attempted to capture the length of the large public building. What the photographers were not able to reproduce is the building devoid of its neighbouring built context or avoid the tendrils of telegram, power and trams lines that run down the length of Hannan Street, both of which are missing from the illustrator's imaging of the building. The publication of Post Office images in *The Argus* coincided with the ongoing construction of the new combined Post Office, Telegram Office and Warden's Court across a number of frontages on Hannan Street, with a newspaper article a fortnightly earlier commenting on the completion of the brickwork and the timber roof structure of the Post Office wing.¹⁸

The repeated visualisation of the Post Office in *The Argus* in relationship to significant people, other structures or further incarnations of its own form, marks the Post Office's importance in the town. The importance of this public building and the larger civic buildings that come to surround it after 1899 is emphasised and complicated by the depiction of the Post Office in the Supplement. The first structure was a double set of tents, followed by a small timber-framed canvas structure, then a domestic-scaled timber building and, finally, the present building that combined the Post Office and the Warden's Court. The building acts as a significant visual marker in the town. It occupies the longest frontage on Hannan Street, absorbing five standard blocks. The height of its clock tower and flag post makes it the most visible building in the town, visible also: from the nearby goldfields and countryside. There are usually two views of the Post Office from the

¹⁷ 'Past, Present and Future—Kalgoorlie's First Post Office', *The Kalgoorlie Western Argus*, 8 September 1898, 24–25.

¹⁸ The Post Office and Wardens Court is a John Grainger/Public Works Department–designed structure and remains the largest public building outside of the state capital.

east and the west sides of Hannan Street. The view from the west, like the one published in the Supplement, is usually taken from the roof of one of the either the York or the Oriental Hotels. Due to its distance away and the height of the camera, this view configures the building as an urban marker, and depicts it at an urban scale. The other view is from the east side of the building and at street level (as can be seen in the central image on page 33 of the Supplement), from the balcony of the Palace Hotel or the balcony of photographer Dwyer's studio. These views, much lower and closer to the subject than the west view, capture the scale of the building and give greater emphasis to its public colonnade and its significant engagement with the street. The view of the Post Office on the cover of the Supplement depicts its role as an urban landmark, flag pole visible, flag flying. The view from the roof of the Oriental Hotel, further west down Hannan Street, is truncated, not interested in the building's engagement with the street but in its height as a landmark in the city.

The Supplement's Representation of Change and Stasis in the Boom Town

This section of the case study will investigate the graphic series of image layouts as the third category described in the introduction to the chapter. The final category of page layout deploys a number of graphic and typological content that distinguish them from the normal assemblage of images in the Supplement. Within the graphic series group, the pages that depict houses and churches further distinguish themselves by presenting a typological study of various building types located throughout Kalgoorlie and Boulder. The first of these, entitled 'Some of the Churches in Kalgoorlie and Boulder', are images of 13 Kalgoorlie and Boulder churches. While most of the photographs are bound by rectangular frames, the overlapping composition creates eccentric pages. One photograph, the Campbell Street Wesleyan Church, is framed in a circular frame. All sit on a dark background, most of which is obscured by drawings of flowers, stems, a type of floral ornament and the grain of a tree stump can even be glimpsed between the images of the buildings. The churches are numbered and captioned beneath the image. There is no discernible order to the layout on the page. Its numbering begins in the centre

and then spirals out roughly in a clockwise manner but jumps after the ninth building. In contrast to the eccentricity of the layout, its numbering and framing, the graphic series present a uniform photographic presentation of a remarkably similar architecture for all 13 churches. Eleven of the 13 buildings are imaged in the same manner—a standard architectural viewpoint being the three-quarter view, giving the viewer a clear view of a front and side elevation. All are photographed from the street and the front of the building. The majority of the buildings have the same construction material and architectural form so many of them are indistinguishable from one another. A much smaller number differentiate themselves through the addition of a bell tower, buttresses, an additional vestibule or change in construction material such as masonry. There is a generic, repetitive quality of the imaging and architecture of the Kalgoorlie and Boulder churches.

The typological nature of the Supplement's graphic series is made explicit by the very next page, which contains the last of these series and is titled, 'Types of Private Residences'. With a less elaborate layout to that of the preceding page, 11 Kalgoorlie houses are illustrated. However, unlike the preceding page of churches, the 'Types of Private Residence' lacks a key, and the houses remain unspecified. While there was a generic quality to the churches' selection and presentation, the photographs of the houses illustrate a diversity of photographer's viewpoints and the diversity of domestic architectural styles. For example, the double-storey houses illustrated twice in the 11 images was a highly unusual residential type for Perth, let alone Kalgoorlie.¹⁹ The rest of the single-storey houses are variations on the federation villa, with varying degrees of articulated building form and decoration. The graphic series documentation of religious and domestic buildings provides another opportunity to think about the organisation and reading of images across the newspaper. The two pages of different graphic series point to the differing notions of seriality at play: seriality as repetition of a generic model to reinforce its widespread occurrence, and the other seriality about variation, diversity and difference. In the pictorial proliferation of these churches, an abundance of organised religions is represented, as well as a population for these

¹⁹ The Heritage Council of Western Australia, in an assessment of Bakers Terrace, Northbridge, a row of 12 two-story terrace houses, noted that double-story terraces are unusual in Perth, where single-storey detached and semi-detached villas dominated the housing typology at this time.

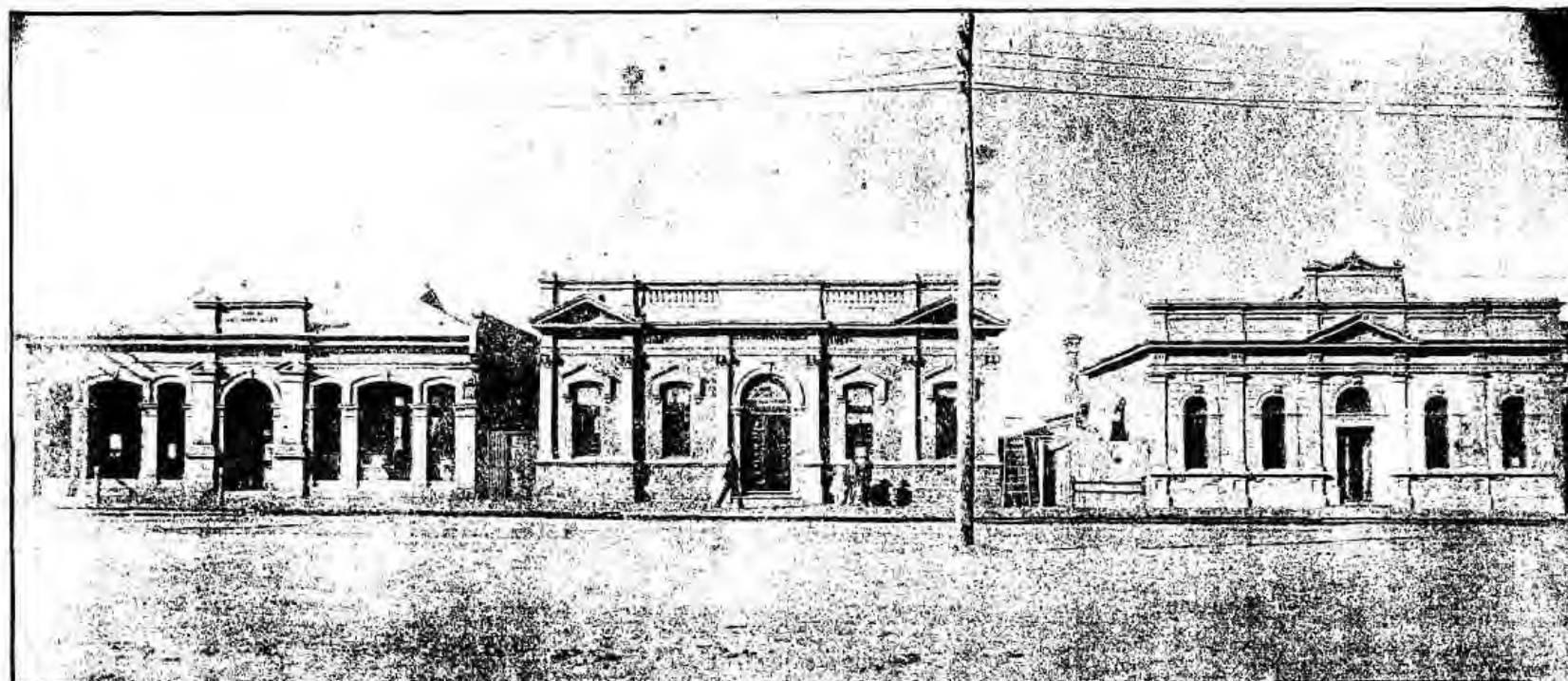
churches that in turn points to the extensiveness of the civic and moral order in Kalgoorlie and Boulder.²⁰

A reading of the Supplement's graphic series of churches and houses prompts consideration of how we might read other photographic representations and compositional organisations of buildings as they are printed in the newspaper. For instance, 'Three of the Principal Banks in Kalgoorlie' (Figure 5.15), illustrates a three banks of roughly the same size and architectural expression on Maritana Street, west of the Hannan Street intersection.²¹ Here, the buildings are articulated in the academic language of neo-classicism, conveying order, permanence and stability. This is not the architecture of the gold rushes' 'madness' as described later by Freeland.²² In addition to this stylistic reading of the buildings, the process of photographing the banks subjects them to a serial way of viewing them. This is achieved through the composition of the photograph and its accompanying captioning. To accommodate the three neighbouring buildings within a single image, the photograph is required to be panoramic in its dimensions, with the camera parallel to its subject and placed on the far side of the street from its subject. The distance of the camera away from the architectural subject, as well as the buildings' proximity to one another (the sides of the buildings are mostly hidden from view), mean that they are depicted in the manner of an architectural elevation. Like the discussion of the scientific or Becherian photographic seriality in Chapter 2, which invites the reader to engage in the practice of comparative viewing, the topographical photographs of the three buildings invite the viewer to consider the banks as part of a series, variations on the modest neoclassical architectural language, which is the predominate architectural expression of public and commercial building in Kalgoorlie and Boulder. This composition and

²⁰ Greg Mellusich writes, 'The other appropriate question to ask in Australia is "What kind of religion?" George Shaw has made two points, both of which are valid: Australian religion, and he meant Christianity, has always been of a moralistic caste. It was first used as a tool to "reform" convicts, and since that time its major concern has been with the reformation of manners. It has not been overly concerned with things of the mind or of the spirit.' Gregory Melleuish, 'A Secular Australia? Ideas, Politics and the Search, for Moral Order in Nineteenth and Early Twentieth Century Australia', *Journal of Religious History* 38, no. 3 (2014): 400. DOI: 10.1111/1467-9809.12076.

²¹ By the end of 1899 there were six banks in Kalgoorlie, as reported in *The Western Mail*, 9 December 1899, 176. Four banks are depicted in the Supplement.

²² John Maxwell Freeland, *Architecture in Australia: A History* (Ringwood, Victoria: Penguin Books, 1968), 198.



(J. J. Dwyer, photo.)

THREE OF THE PRINCIPAL BANKS IN KALGOORLIE.

Figure 5.15: Detail from Page 32 of the Supplement which shows Dwyer's photograph of three banks on Maritana Street.

'Three of the Principal Banks in Kalgoorlie', Detail of page 32, Special Anniversary Number, Kalgoorlie Illustrated, The Past to the Present, Supplement to The Kalgoorlie Western Argus, 17 June 1902, National Library of Australia, <https://trove.nla.gov.au/newspaper/page/4127981>

presentation allow the reader then to make visual comparisons between the type's variation of the articulated central entry bay, expressed pediments, dado lines with arched or ornate decoration over the windows or the repetition of window bays across the façades. The banks remain anonymous, remaining as an architectural typology 'three of the principal banks', alluding to the existence of other 'principal banks' in the town, of which these are just three.²³ Tresch argues that 'elements laid out in a series ask to be continued'. While the topographical photograph allows for the clear evidence of the type and series to emerge, its panoramic compositions also suggest that these neoclassical banks might continue along the street, outside the edge of the photographic frame.²⁴

Summary

The case study has illustrated through a drawn and textual investigation the manner in which the Supplement that accompanied the 17 June 1903 edition of *The Argus* offered an image of the industrial and urban development of Kalgoorlie and Boulder. This summary will draw together a number of findings with regard to both the methodology used and nature of boom urbanism revealed.

Methodologically, there are three findings. Firstly, the re-organisation and classification of the visual data offers the opportunity to consider patterns of image placement across the entity of the case study object under investigation. The process of laying out and simplifying the rich visual data of the each newspaper page and double spread reveal broader relationships across the entire the newspaper. The reorganization of material points to the Supplement's focus in weight of images. These types of images and their organization offer a preliminary understanding of the manner in which the urban and industrial imaginary of the goldfields was constructed by the newspaper.

Secondly, the extension of Genette's notion of the paratext to visual material offers the opportunity to reconsider the manner in which the other 'devices' of printed

²³ In the photograph (left to right), the banks are The Bank of New South Wales, National Bank of Australasia and Bank of Australasia. The banks are located on the north side of Maritana Street and west of Maritana's intersection with Hannan Street.

²⁴ Tresch, 'The Order', 315.

material help to contextualise the reading of images. In the case study, the classification of the cover and title page as paratextual vestibules establishes a new set of parameters for viewing and reading the subsequent material contained in the Supplement.

Thirdly, and emerging out of the application of a paratextual reading of the title cover, the final methodological finding is the idea of an extended serial reading of images across the length of the newspaper. The paratextual reading of the cover page suggest an extended serial reading of the sets of images as well as images on a single page. When applied to the Supplement, extended serial readings offer nuanced narratives about the development of Kalgoorlie, Boulder and the Goldfields. This extended serial reading of multiple images also tests and extends the established visual tropes which have constructed a particular image of the goldfields.

With regard to the understanding of the urban imaginary of the boom town, the case study draws three conclusion. Firstly, the construction of the boom town through the images of the Supplement extends ideas about the audience who consumed these images. Building on the ideas of Law, Patten and Tresch and others, who argue that the serial was 'a literary form attuned to the fundamental tendencies in the age at large'²⁵ as well as a component of a greater 'serial imagination of society',²⁶ the faceted image of the boom town constructed in the pages of the Supplement illustrates the visual literacy of the audience who read its contents.

Secondly, the Supplement reinforces existing narratives about 'miraculous' development of the urban and industrial fields. The juxtaposition of visually contrasting images of the same location across time, the transformation of urban and architectural form and industrial fields, reinforces the notion of the extraordinary nature of the region's development. The visual transformation of

²⁵ Hughes and Lund, *The Victorian Serial*, 6.

²⁶ John Tresch, 'The Order of the Prophets: Series in Early French Social Science and Socialism', *History of Science* 48, no. 3–4 (2010): 317.

public institutions like the Post Office from a tent to the largest building in the colony strengthens these already established narratives about the emergence of the goldfield towns.

However, and thirdly, the use of the graphic series of building typologies suggests another aspect to the construction of the town's urban imagery. Here, instead of the dynamic change associated with the series of images described above, the introduction of these collective imagining of buildings implies an urban and architectural maturity to Kalgoorlie and Boulder. Architectural types are widespread, there are a range of domestic dwelling styles to choose from and churches proliferate. There is a permanence to the buildings, their architectural expression and form. After a period of dramatic change in the landscape, urban and industrial fields there is a stasis suggested by these collective images.

Finally, the case study examination of the Supplement points to the limits to the creation of an urban imaginary. For example, the Boulder Block, despite its unique spatial, formal, legislative and industrial conditions, is imagined like other urban fabric with which it has a fleeting resemblance. While the Block's extraordinary nature is recognised, and mythologised, in text, the newspaper images struggle to communicate these circumstances.

The analysis of the Supplement, through the drawn and written investigation of images and text, further develops aspects of the research methodology as well as making discoveries about the manner in which the boom town was imagined by its inhabitants.

CHAPTER 6: Case Study 2—Western Australia Goldfields Water Scheme: A Souvenir

This case study investigates the small souvenir produced to celebrate the ceremonial arrival of water at the Mount Charlotte Dam outside of Kalgoorlie and the opening of the Goldfields Water Scheme.¹ Officially titled ‘Western Australia Goldfields Water Scheme: A Souvenir of the Official Opening and Visit to the Mines of the Golden Mile, 24th–26th January 1903’, the Souvenir recorded through text and photolithographic images the twin towns of Kalgoorlie and Boulder, 11 of the surrounding mines and the interstate and local visitors who toured the mines two days after the opening. Textually, the Souvenir included a brief introductory text that outlined the commemorative events, a transcript of Sir John Forrest’s opening speech given at Mount Charlotte and the statistical information for the gold production of each mine visited. The Souvenir has a number of unifying typographic and layout elements that bring together what could otherwise be a diverse set of photographic and textual information. This includes the graphic

¹ *Western Australia Goldfields Water Scheme: A Souvenir of the Official Opening and Visit to the Mines of the Golden Mile, 24th–26th January 1903*, The Chamber of Mines of Western Australia (Incorporated) (Kalgoorlie, Melbourne: F. W. Niven & Co., 15 December 1903), unpaginated.



Figure 6.17:
Layout of The Souvenir and its organisation into the sequences of images and text and their arrangment into series

treatment of the images with regular page layout out, page border, type, font and consistency of mine information. As described in Chapter 3, with its focus on the mines of the Golden Mile, the description and analysis of the Souvenir offers the opportunity to gain insight into how the industrial field was imagined.

Describing and Analysing the Souvenir

There are several ways in which the 34 photographic images, introductory, descriptive and statistical text in the Souvenir can be read and analysed. For this case study discussion, and extending Genette's idea of the paratext and text, as outlined in Chapter 3, the Souvenir is said to constitute a number of photo-textual elements:

- The paratext of the Souvenir—
 - the cover, cover page, introductory text and images and concluding statistical information
- The text of the Souvenir—
 - The text of the Souvenir is considered to be made of individual photographic images and textual information, which through their sequential arrangement into a comparative series (that is both a sequence in time and of a conceptual order) seek to represent the towns of Kalgoorlie and Boulder and selected mines of the Goldfields (Figure 6.17).

Applying Genette's idea of the paratext and text, Figure 6.17 illustrates the manner in which the Souvenir has been conceptualised into these categories of paratext and text. The paratextual vestibule of the Souvenir (its cover, cover page and its marginalia, introductory text and image) will be discussed with regard to the manner in which these elements serve to influence a reading of the following text of the Souvenir.² This case study broadens Genette's concept of the text to include, not just the written or verbal word as text such as the statistical and descriptive text, but the photographs that represent each mine and the towns. The text of the Souvenir will be analysed in two stages. Firstly, a number of individual images will

² Macksey, 'Foreword', ii.



Figure 6.17:
Layout of The Souvenir and its categorisation into text and paratextual sections

be analysed and, secondly, an analysis of the sequential organisation of images and text together into several temporal and conceptual series will be undertaken.

In the first stage of the examination of the extended text of the Souvenir, individual images will be analysed by applying Rose's technique of compositional modality as outlined in Chapter 3, which looks to compositional analysis and the pictorial elements that constitute an image and that help to establish the image's 'intent'. As noted in Chapter 3, Klein suggests that the 'meaning of the individual works in a series is mutually reinforced' and that in many 'series the whole is greater than the sum of the parts'.³

The second stage of the analysis of the Souvenir will analyse the sequential organisation together of images and text that represent the towns and mines. Based on the Souvenir's double-page spread as the primary organisation and layout device for images, this section will look at the representation of Kalgoorlie and Boulder and then the sequence of four pages (in two double-page spreads) that represented most mines (Figure 6.11). For the majority of mines, the sequences of pages include an image of the mine taken at some point during an earlier phase of its development, such as an image of the mine's present working condition or a set of textual and statistical descriptors (managerial staff, gold produced output and area of working). The sequence of images concludes with an image of the visitors who toured the mine after the opening of the Goldfields' Water Scheme.

Together, these two readings of these Souvenir's photo-textual elements will provide another opportunity to understand the places, spaces and events of mineral-dependant boom urbanism as experienced in the Western Australian goldfields. Drawing on the definitions of sequence and series set out in Chapter 2, the single photographs allow the viewer to gain an insight in a specific moment in time and space and the events of the Scheme's opening, the town or a mine's history. When these single images are grouped in a spread or a sequence of pages, they allow a more nuanced understanding of the relationship between place and across time. When these sequences are repeated, as illustrated by Figure 6.17, as is

³ John Klein, 'The Dispersal of the Modernist Series', *Oxford Art Journal* 21, no. 1 (1998): 123.

SEQUENCE OF IMAGES & TEXT



MINE SERIES 2

FIGURE 6.11a

The sequences of pages that make a 'series for each mine:

- An image of the mine from an earlier phase of its development,
- An image of the mine's present working condition
- A set of textual and statistical descriptors
- An image of the visitors who toured the mine after the opening of the Goldfields' Water Scheme.

the case with the repeated representation of the mines, a further serial reading across the Souvenir (Figure 6.18) and understanding of the spatial and temporal conditions of Kalgoorlie, Boulder and the Golden Mile, is encouraged. In these readings of the Souvenir, we can discern the construction of an urban and industrial imaginary.

Despite the Souvenir's ostensible focus on celebrating the ceremonial arrival of water, the fact that there is only one image in the document that records the infrastructure of the pipeline suggests that the message the Souvenir is intent on conveying lies elsewhere. Instead, the focus, in the weight of images and text, is set upon the goldmines, their visitors and the events that celebrated the opening of the pipeline. The curious visual absence of the pipeline draws our attention to the Souvenir's attempt to shape the perception of a place and an event through the selection, organisation and presentation of photographic images and text. Instead of a visual celebration of the achievements of the pipeline, the Souvenir takes advantage of the combination of text and image to present to the reader a picture of the towns and mines of the goldfields. Therefore, this case study investigates the manner in which photography was used in the Souvenir to describe time, space and change in the urban and industrial environment of Kalgoorlie, Boulder and the Golden Mile.

The Paratext of the Souvenir

This section of the case study analysis examines selected elements of the Souvenir's paratext—the title page, introductory text and photograph—to understand how this might frame the meaning of the following text and direct the viewer's understanding of the urban and industrial images and statistical text that follow. The paratext also points to processes and networks of collation, printing, distribution and, finally, archiving in which the Souvenir moved after its production (Figure 6.19).

Firstly, examining the State Library of Victoria's copy of the Souvenir, the printed text of the title page points to the temporal and spatial complexities of the document as well as the manner of its production and distribution (Figure 6.20).



Figure 6.18:
Layout of The Souvenir reading the series

Although the Souvenir depicts events that took place in Kalgoorlie, those events are noted by the title page text as being located on the 'Golden Mile' (one part of a larger East Coolgardie Goldfield) and as part of an even larger Western Australian Scheme that piped water 600 kilometres from Perth through the Wheatbelt to the East Coolgardie Goldfield. The town of Boulder is not mentioned, despite many of the mines depicted in the Souvenir being in closer geographical location to that town rather than Kalgoorlie. While published by the Chamber of Mines of Western Australia (Incorporated), Kalgoorlie, the printer's credit, set outside the triple border of the title page frame and the smallest text on the title page, indicates that the document was printed in by F W Niven & Co in Melbourne. Niven & Co were prominent lithographers, engravers and printers whose business was located initially in the Victorian goldmining centre of Ballarat and whose production included very similar guides, in scale and content, to the Souvenir and that recorded the urban centres of the Victoria gold rush.⁴

As well as being printed on the other side of the country, the Souvenir is published almost a year after the events that it depicted. However, it then moves swiftly to the collection of the Public Library. The title page emphasises events (an 'opening and visit' across two separate days of 25 and 26 January) and illustrates the differing timeframes elapsed between opening and the publication of the Souvenir. The prominent stamp of the Public Library of Victoria, which indicates an accessioning date of 15 December, also draws attention to the handwritten change to the date of publication to 8 December, which, if it had remained uncorrected, would have been simultaneous with its accessioning into the archive. The colonial and goldmining networks in which the Souvenir was produced and distributed is echoed the diversity of the current archival locations in a number of public and private collections across Western Australia, South Australia, New South Wales and Victoria,⁵ including a hard copy of the Souvenir at the State Library of Victoria where the document was bound into an album containing other Western

⁴ The State Library of Victoria and the Gold Museum Ballarat have extensive copies of work printed and published by FW Niven & Co that includes titles like *Cities and Towns of Victoria: Golden Ballarat* (Ballarat, Vic.: F.W. Niven & Co., 1892).

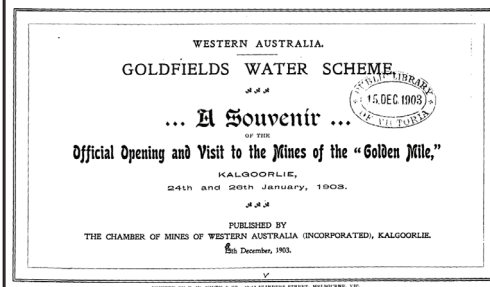
⁵ The Souvenir is held in various archives, including the Kerry Stokes Collection in Perth, the State Library of Victoria, Battye Library of Western Australian History, The State Library of New South Wales and the Royal Geographical Society of South Australia.



Figure 6.20:

State Library of Victoria's copy of the Souvenir, with the addition of marginalia to the printed text of the title page, points to the temporal and spatial complexities of the document as well as the manner of its production and distribution

COVER



OFFICIAL OPENING OF THE GOLDFIELDS WATER SCHEME,
AND
VISIT TO THE MINES OF THE "GOLDEN MILE,"
KALGOORLIE, 24th and 26th January, 1903.

Chis Souvenir is issued as a memento of a great and interesting event in the history of Western Australia; a great by reason of the consummation of a large and beneficent work, and interesting on account of the opportunity afforded of welcoming representatives of the Commonwealth Ministry and members of the Federal Parliament, whose residence in the more distant parts of the continent had previously kept them in ignorance of the vast resources of the Golden West. Never before, since the Commonwealth of Australia came into existence, had the actual significance of Western Australia been so vividly brought home to the people of this western State; and a personal acquaintance with our Federal visitors has gone far to help us to realise more fully that there is, in deed and in truth, a great Potemkin of the Southern Cross to which we belong, and from which we hope to obtain tangible benefits in commensurate with our since State.

The official opening of the Water Scheme took place at the Mount Charlotte River, Kalgoorlie, on Saturday, the 24th January, 1903, when the water was turned on by the Right Hon. Sir John Forrest, P.C., G.C.M.G., LL.D., in the presence of a large and distinguished assemblage. In declaring the works open, Sir John Forrest said:—
"Ladies and Gentlemen,—It is to me a great honor to be present here to-day to declare this great water scheme open, and it is a source of much gratification that I should have been privileged, and only to introduce the necessary legislation for undertaking this great work, but also to declare it to be available for the use of the people. (Applause.) On the 24th March, 1902, at the opening of the railway to Coolgardie, I publicly announced that:—The Government was determined that these goldfields should be provided with an adequate water supply, and that the scheme which would do this

was that which would bring the water from the coast." And on the 24th July following I moved in the Legislative Assembly the second reading of a Bill to authorize the raising of a sum of £2,500,000 by loan for the purpose of providing a permanent water supply for the Coolgardie goldfields. The Bill was passed by Parliament on the 24th September, and was assented to on the 24th September, 1902. The promise then made to give the people on the Coolgardie goldfields "a river of pure water" is to-day fulfilled. The intervening period has been one of great anxiety. Difficulties have occurred, difficulties have had to be surmounted, the most virulent hostility and misrepresentation have had to be continually watched and deflected, but to-day I and all those who supported me are able to rejoice that not only have we kept our word, not only has our great faith in the future of these goldfields been rewarded by the complete success of our enterprise, but even more important still, we have completed a great necessary humanitarian work, destined to ameliorate the conditions of life on these goldfields for the future. The completion of this beneficent work must have an immense influence in promoting the advancement of these goldfields, and in assisting the settlement of the country through which the pipe line passes. It will also enable the railways to be safely and economically worked, and will prove an all-important factor in furthering the construction of the railway from Kalgoorlie to Port Augusta, and thus commensurate for ever the real felicitation of the western and western side of Australia. The difficulties of this undertaking have been immensely increased by the fact that to be served being 1,300 feet above the source of the water supply, which has necessitated the

erection of twenty sets of pumps, distributed at eight pumping stations along the route, and a consequent large annual expenditure for pumping, which would be saved in cases where the water could be supplied by gravitation. In addition to the local utilitarian advantages, it will, I firmly believe, have a great influence on the public mind throughout Australia in regard to water supplies for the arid interior, for where it is realised that Western Australia, with a population of a little over a million, has successfully completed a project which can daily distribute six million gallons of water in Kalgoorlie, 247 miles from the source of supply in the Indian River, it may reasonably be expected that this work will be the forerunner of many similar and larger schemes for the conservation and distribution of water in other arid places throughout Australia. It is a source of much gratification that we have here with us today so many representative men connected with the Federal Parliament, and with the Parliament of the State of Australia. This pleasurable fact testifies to the growing importance of Western Australia as an integral part of the Australian Commonwealth, and is an assurance of the interest taken by the people of Australia in our enterprise and advancement. Our distinguished visitors will learn with astonishment that nine years ago this place (which is 247 miles by rail from Fremantle) was absolutely unpopulated and unknown, and was in reality an arid wilderness; that within a radius of thirty miles from here there is now a population of 30,000 people; that this area has already produced about 200 tons of gold, valued at £2,500,000 sterling; that large cities have been built, with all the conveniences, and even luxuries, of civilised life; that electric tramways are

running in the streets; and that a railway system has been established which extends one hundred and fifty miles still further from here into the interior. When all this is realised, and also the fact that there is absolutely no permanent fresh water within this area, the vital importance of this great water scheme—by far the greatest of its kind in the world—must be fully realised and appreciated. In the midst of our rejoicing, however, my thoughts turn to the memory of the great builder of this work, the late Mr. C. Y. O'Connor, C.M.G., who we all regret is not with us to receive the honor which is due to him; and our sorrow and regret is intensified when we remember how ardently and successfully he labored to complete this work, and how anxiously he looked forward to this day. The successful opening of this great water supply is a triumph for the engineering department of the Government, and our thanks are due to all those officers who so ably contributed to this splendid result. It is fitting, too, that I should remember to-day with friendly greetings the names of those members of Parliament and others who never wavered in support of this great enterprise, and without whose able and continued assistance it could not have been undertaken and successfully carried out. In concluding my speech when moving the second reading of the Bill authorizing the construction of this work, in the Legislative Assembly on the 24th July, 1902, I said:—"The scheme which I have had the pleasure and honor of placing before the members of this House and before my fellow-colonists is a project worthy of an enterprising people. I believe if we carry out this great work, not

only will the goldfields flourish, and not only shall we be relieved from anxiety in regard to the water question, but we shall also be repaid our hundredfold. Future generations, I am quite certain, will think of us and bless us for our foresight and vision, and it will be said of us, as Isaiah said of old, "They made a way in the wilderness, and opened in the desert." These sanguine and confident words I reiterate today. I pray God that this river of pure water may give health, comfort, and prosperity to all those who come within its life-giving influence, and that it may prove a benefit and a blessing to the Coolgardie goldfields, and be increasing in its influence for good to all Australia. I now declare this great work open for the use of the people."

In the evening a magnificent banquet, to commemorate the auspicious occasion, was held in the Electric Traction Company's apartment hall at Kalgoorlie. Numerous and brilliant speeches were delivered.

The portion of the visitors' stay which remains to lead to the great material advantage was undoubtedly the day which preceded their departure, and which was devoted to an inspection of the leading mines on the Eastern Belt. The executive council of the Chamber of Mines fully recognized the importance of the occasion, and every preparation was made to enable those who were the Chamber's guests for the time to obtain as thorough an insight as possible in a flying inspection of the underground workings and treatment plants of these great mines, to see the extent to which

development has been carried, and to form an idea of the possibilities in the future.
On Monday, the 24th January, the visitors, numbering over 200, were divided into eleven parties, and conveyed from the Chamber of Mines by vehicles to the "Golden Mile," one party being allotted to each of the following mines, viz.—Great Boulder, Golden Horse-shoe, Lake View Condit, Panther, Great Boulder Perseverance, Great Boulder, Black Reef, Great Boulder, Associated, Kalgoorlie, South Kalgoorlie, and Associated Northern, where they were entertained by the respective managers and shown over the surface and underground workings.

Disseminating the oppressive heat—the temperature ranging from 110 to 114 in the shade—it was satisfactory to learn from the statements made by the most prominent of the visitors when subsequently interviewed in Perth, that this day spent among the mines was the one which had the greatest interest for them, and which they will remember long after the impressions of the more opulent part of the celebrations have faded away.



Figure 6.19:
The paratextual elements of The Souvenir

Australian goldfields ephemera (Figure 6.19). The close reading of the paratextual element of the *Souvenir*'s title page anticipates and begins to shape the temporal and spatial complexity of photographs and text that make up the main body of the *Souvenir*. The title page (and its marginalia) points to Kalgoorlie's location in a colonial network of publication and distribution as well as pointing to the different time frames that surrounding its publication.

Secondly, the introductory text, like the title page, draws attention to the spatial and temporal conditions of the goldfields, this time through its focus on infrastructure and development. The introductory text, presumably written by the publisher, the Chamber of Mines of Western Australia (Inc), Kalgoorlie,⁶ is mainly concerned with the reproducing Sir John Forrest's speech at the turning of the symbolic gold tap at the Mount Charlotte Reservoir, the act that officially opened the Scheme. The former premier's speech focused on the importance of 'network' infrastructure and its role in the transformation of the goldfields. Forrest highlights the significance of this infrastructure (the pipeline and the railway) as physical and social connectors, which, he considered, offered an opportunity to further 'consummate' the 'real federation of the eastern and western sides of Australia'.⁷ Further, the completion of the pipeline would be an 'all-important factor' in prompting the construction of the next important piece of infrastructure—the trans-Australia railway.⁸ The pipeline is introduced by way of an anecdote, which recalls the arrival of the railway in the goldfields some years earlier.

As well as the importance of the networked infrastructure for the development of the goldfields, in noting these other engineering projects, Forrest's audience are reminded of their location in space in relation to other, more developed centres; they are '387 miles by rail from Fremantle' and the former premier notes the potential of a rail connection to Port Augusta in South Australia. Forrest's

⁶ The Coolgardie Chamber of Mines and Commerce was formed in 1895, the Kalgoorlie Chamber of Mines was inaugurated in 1896 and a Perth Chamber of Mines established in 1897. The Perth chapter soon closed as it was considered too far removed from the industry's 'geographic centre'. In 1900, the Kalgoorlie and Coolgardie Chambers were amalgamated. See <https://cmewa.com.au/about/us/>.

⁷ *The Souvenir*, unpaginated (4).

⁸ *The Souvenir*, unpaginated (3).

audience, which consisted of both intrastate and interstate visitors might have been physically located in Kalgoorlie, but they are reminded of their connection, through the spatialising device of the railway, to the ports of Fremantle and Augusta.⁹ In the provision of such infrastructure, Forrest urges the visitor to consider not only the contemporary spaces connected by the railway and pipeline but the transformation across time that the provision of the infrastructure has helped facilitate, a process that has produced the current landscape:

Our distinguished visitors will learn with astonishment that nine years ago this place ... was absolutely unoccupied and unknown, and was in reality an arid wilderness.¹⁰

At moments such as these, the visitor to Kalgoorlie, (and subsequently the reader of the *Souvenir* almost a year after the events took place), is asked to imagine the un-transformed landscape. The reader of the *Souvenir* is asked to undertake a double projection backward in time, to recall their visit to Kalgoorlie and Boulder a year ago as they read Forrest's speech, and also to imagine the 'arid wilderness' that existed before the discovery of gold in 1893. Further, via the transcript of Forrest's speech, the *Souvenir* asks visitors to engage with the temporal complexity of the present, past and future of the goldfields as they visit the surrounding mines. Not only by their visit do they bear witness to the present state of the mines, but also through their 'inspection', a term that is laden with observational connotations rather than more picturesque aspects of viewing, the visitors might anticipate the future state of the mine. The use of the expression 'inspection' recalls how, as outlined in Chapter 2, Chrimes, Macauley and Collins describe photography as the surrogate for the absent foreman or 'agent of control'¹¹ during the construction of the projects and 'an accurate record of engineering works' at the completion of projects.¹² The camera, and by extension the photograph of the 'present' condition of the mine, acted as the surveilling eye,

⁹ Foster, 'Capturing and Losing the "Lie of the Land"', 141.

¹⁰ *The Souvenir*, unpaginated (4).

¹¹ Elizabeth Anne McCauley, *Industrial Madness. Commercial Photography in Paris, 1848-1871* (New Haven: Yale University Press, 1994), 204.

¹² Michael Collins, *Record Pictures: Photographs from the Archives of the Institution of Civil Engineers* (Göttingen, Germany: Steidl MACK, 2004), unpaginated; Mike Chrimes, *Civil Engineering 1839-1889: A Photographic History* (Stroud: Sutton Publishing Ltd, 1991), unpaginated.

which as the paratext of the *Souvenir* suggests, they will gain an understanding of the past by seeing 'which developments ha[ve] been carried [out]' and the mine's prospects by gaining 'an idea of the potentialities in the future'.¹³ The intention of these inspections, as the text of *Souvenir* makes clear, was that the visitors would:

Obtain as thorough an insight as possible ... of these great mines to see the extent to which development has been carried, and to form an idea of the potentialities in the future.¹⁴

As part of the paratext of the *Souvenir*, the transcript of Forrest's speech foregrounds the temporal and spatial complexity of the boom town and its industrial field, located in both the past, the present and anticipating its future state, positioned in relation to other more distant and developed places, but from which the boom town is 'isolated but dependant'.¹⁵ Forrest's speech frames how the visitors might think about their location and the images that depict it. The text anticipates the temporal and spatial complexity that the photographs and their sequential organisation create in the *Souvenir*.

The sequence of pages that make up the introductory paratext concludes with a double-page spread with a single photographic image. Taken by the goldfields' photographer Dwyer, it records, as the image's detailed title tells the viewer 'Sir John Forrest Turning the Tap at the MT. CHARLOTTE RESERVOIR, Kalgoorlie, 24th January, 1903'¹⁶ (Figure 6.1). The photographer is placed a quarter of the way around the circular dam wall from the spout that released water into the reservoir and the temporary pavilion that shaded Forrest and other the dignitaries who attended the opening. The edge of the dam is ringed by a crowd many people deep, who clamber over the railings and up the structures that hold bunting and flags. The additions of the temporary pavilion and bunting distinguish the otherwise

¹³ *The Souvenir*, unpaginated (4–5).

¹⁴ *Ibid.*

¹⁵ Davison, 'Goldrush Melbourne', 60.

¹⁶ This image is also held by the Battye Library, Call Number:5816B/211, Series J. J. Dwyer collection; 5816B/211, accessed 12 September 2016. The identification of this image as a Dwyer photograph is via the Battye catalogue.

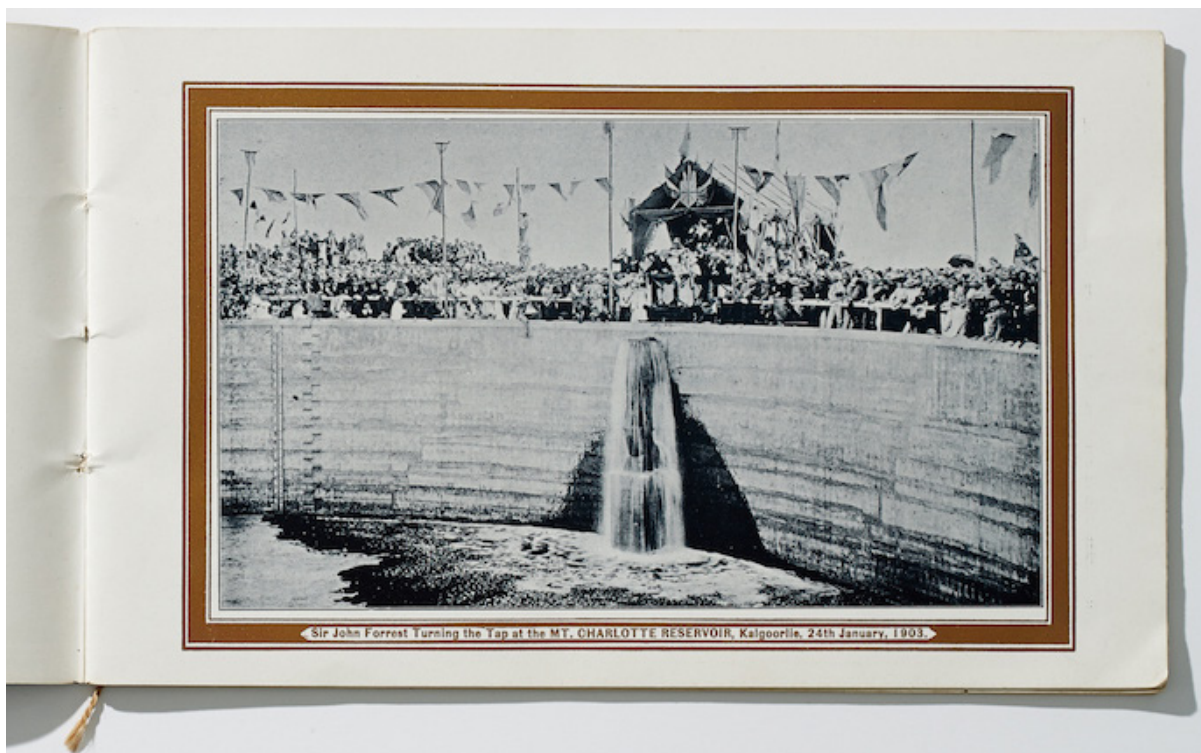


Figure 6.1: The Sir John Forrest turning the tap



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Figure 6.2: Construction of pipeline at Mt Charlotte, Kalgoorlie

Water pipe construction at Mt Charlotte, Kalgoorlie, Unknown photographer, ca.1902 (Call number: 001053D) Series: Album of photographs of the Goldfields Water Supply Scheme 3362B, The State Library of Western Australia, Perth

Figure 6.3: Mt Charlotte Reservoir, Kalgoorlie on 24 January 1903

'Mt Charlotte Reservoir, Kalgoorlie on the day of opening 24 January 1903', Unknown photographer, 1903, (Call number: 000861D) The State Library of Western Australia, Perth



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unremarkable reservoir from its topography¹⁷ (Figure 6.2–6.3). The photograph is taken moments after the turning of the ceremonial golden tap by Forrest, as the image captures the water cascading out of the spout and spreading across the floor of the reservoir. There is a strong visual contrast in the image between the density of the top third of the photograph, recording the crowd bearing witness to water arriving from Perth and the bottom third of the images, which are dominated by the scale, curvature and height of the concrete wall that frames the empty, but soon to be filled, space of the dam. The temporary bunting, the turning of the tap, the focus of the crowd on both sides of the pavilion the water spreading out across the dam and flooding towards the viewer. The photograph describes that moment as well as the anticipating the potential of the filled reservoir. There is a dynamism in this photographic capturing of the moment, that is in strong contrast with the stillness and fixity of the group portraits, mining landscapes and urban views. In the capturing of this moment, as the dam begins to fill with water pumped from Mundaring Weir almost 600 kilometres away, this signals the photograph as primarily an image of an event rather than one recording the space or object of the infrastructure at the terminus of the pipeline.¹⁸

Through a close reading of the title page, introductory text and concluding photograph, the paratext of the Souvenir helps to establish and anticipate the spatial and temporal complexity of the boom town: its infrastructural connections

¹⁷ Instead of the 'heroic' engineering images that depict the start of the pipeline in Mundaring, the Souvenir celebrates the success and the magnitude of the engineering feat—the longest freshwater pipeline constructed—and the visual evidence of this success as the water emerges from the pipeline, which confirms the magnitude of the accomplishment achieved. Despite the modesty of the engineered objects that make up much of the Goldfields Water Scheme, other publications such as the newspaper *The Argus* that celebrated its completion found some pictorial potential in recording the engineering 'feat'. These achievements include the labour required by the pipeline's construction in its journey to Kalgoorlie, the innovative technology used to caulk the pipeline to prevent water leakage and the manufacture of the pipes. *The Argus* also included photographic portraits of the controversial scheme's political protagonists such as the chief engineer C. Y. O'Connor and Premier John Forrest. *The Argus*, 20 January 1903, unpaginated. This supplement is published beforehand, so it anticipates the event rather than documenting its opening.

¹⁸ This may be because, like much of the 600 km pipeline itself, the structure of the Mount Charlotte Reservoir is a piece of perfunctory engineering. From archival images, the Mount Charlotte Reservoir appears to have been created by taking advantage of a range of low hills to the north of the Kalgoorlie town centre and created by excavating the centre of the hill while simultaneously building up a new edge to form the reservoir. Viewed from the town, the reservoir reads topographically as a flatten hill, with only a slight change to the gradient of the slope of the small rise it occupies.

to other places, the emphasis on the coincidental events of the past, present and the future.

The Text of the Souvenir

This section of the case study analysis examines the text of the Souvenir: the sequential arrangement of individual photographic images and textual information into a number of series (that is both a sequence in time and of a conceptual order) of double pages spreads, which represent the towns of Kalgoorlie and Boulder and many mines of the Goldfields. The organisation of these images into series allows for comparisons to be drawn about the serial representation of the urban and industrial space of the Goldfields. It offers the opportunity for a close reading of the images that make up these sequences and series. This section will have three subsections:

- the Souvenir's representation of urban space
- the Souvenir's representation of change in industrial photographs
- the Souvenir's depiction of industrial space.

The Souvenir's Representation of Urban Space

The Souvenir presents a double-page spread depicting 'Hannan Street, Kalgoorlie' on the left-hand page and an elevated view of Kalgoorlie's twin town, described as a 'General View of Boulder' on the right-hand page (Figure 6.4). These two urban images appear without introduction in the opening text and are not referred to again in the Souvenir. The photographs will be analysed using Rose's compositional interpretation with an emphasis on their content, spatial organisation, focus and expressive intent.

The image of Hannan Street is taken from the ground at the intersection of the thoroughfare with Maritana Street and looks north-east. The camera is placed so the photograph contains the continuous wall of offices, shops and hotels that stretches towards the horizon (and importantly for the Souvenir, the location of the Mount Charlotte Reservoir). As outlined in Chapter 4, this compositional mode is one of the tropes that define the imaging of Hannan Street that we find from the

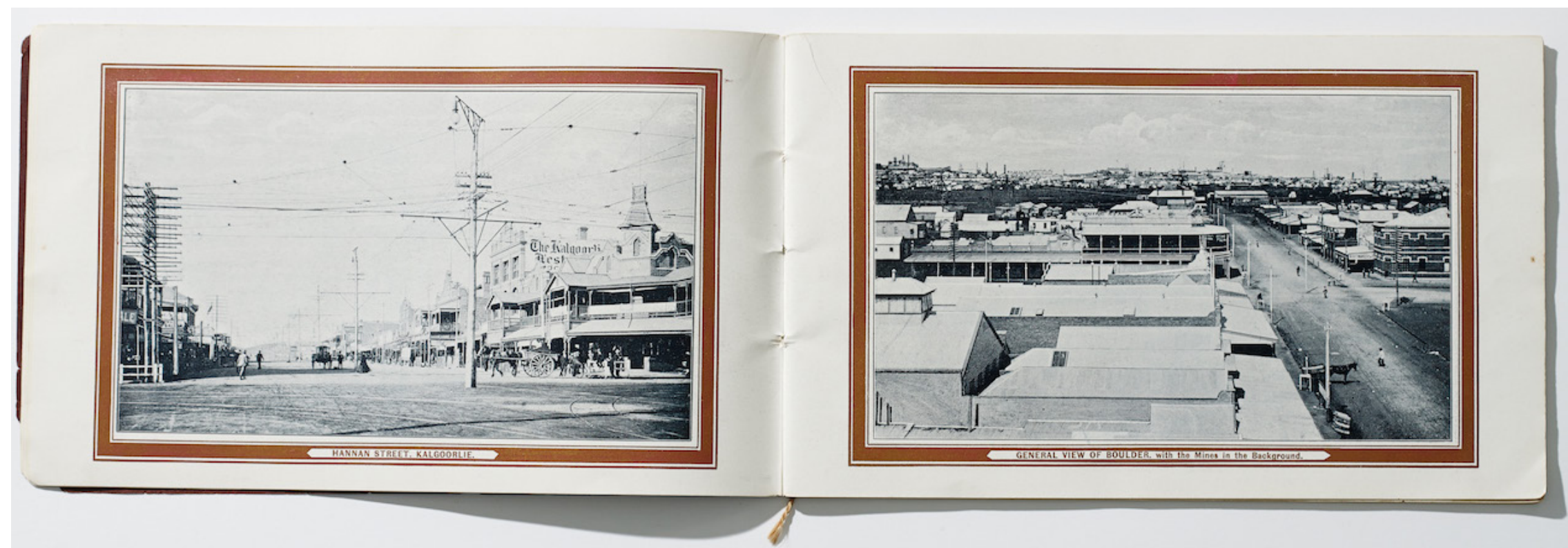


Figure 6.4: The double page spread of Hannan St and Boulder

Double-page spread of 'Hannan Street Kalgoorlie' & 'General View of Boulder with the Mines in the Background' The Souvenir, unpaginated, 1903, Courtesy Australian Capital Equity

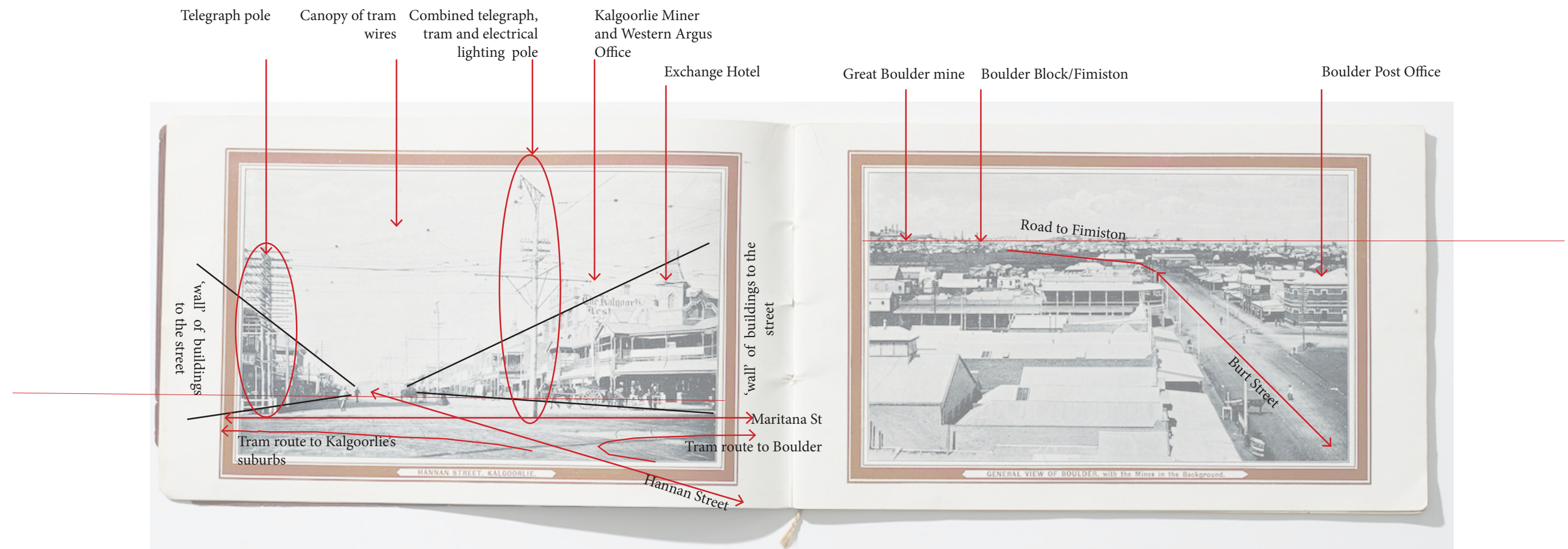


Figure 6.5: Annotated Overlay The double page spread of Hannan St and Boulder

Double-page spread of 'Hannan Street Kalgoorlie' & 'General View of Boulder with the Mines in the Background' The Souvenir, unpaginated, 1903, Courtesy Australian Capital Equity

earliest depictions of the street. The Souvenir departs from these standard representations of Hannan Street by selecting an image where the position of the camera (and perhaps the nature of the lens selected to take the image) allows the photographer just to capture the north side of Hannan Street on the left-hand side of the image. While the buildings that line this side of Hannan Street are not recognisable in the image, the viewer can see the edges of their verandahs. Rather than the buildings, it is the density of the elaborate structure of the telegraph poles, with the many horizontal bars that array each pole that framed the left-hand edge of the image. By shifting the position of the camera, the photographer can capture both sides of the street and the range of urban and telecommunication infrastructure that line them (Figure 6.5).

The Souvenir's image of Boulder differs significantly from the image selected to represent Kalgoorlie in contrast to the vantage point at the top of the Court Hotel looking eastwards, which results in a focus on the roofscapes that frames Burt Street, Boulder's main mercantile and civic thoroughfare. The composition of the image from this location has several consequences. Firstly, the majority of the buildings along Burt Street are depicted as part of an anonymous roofscape where only the banded brickwork of the Commercial Bank and the balconies of the Tattersall's Hotel in the mid-ground distinguish themselves. The vantage point reveals the proximity between Boulder and the mines, with the road leading to Boulder Block and the southern end of the Golden Mile scored across this undeveloped land between the mines and the town. The view from the Court Hotel allows the photographer to fill the background with the industry of the mining belt and make a direct, visual connection between the town and the mines. Pictorially, the unpaved width of Burt Street draws the viewer's eye from the civic centre of the town (with Post Office and Court) to the activity of the mines surrounding Brookman and Pierce's lease, the Great Boulder (Figure 6.5).

By placing the images of the towns in a double-spread page, the sequential organisation of these images together allows the Souvenir to point to each town's proximity and shared, but unequal, dependency on the industrial field and how this affects their urban condition and its representation. Firstly, by composing the image of the Hannan Street intersection in this way, the photographer draws our

attention to the manner of Kalgoorlie's 'network connection' to other places, through its telegraphic, transport, electrical and telephonic infrastructure. Compositionally, the importance of these connections can be seen in the manner in which the photographer has framed the image to accommodate both the telegraph pole on the left-hand side as well as the combined tram, electricity and lighting pole that occupies the centre of the intersection. The canopy of the telegraph, electrical and tram wires created over the intersection is the only physical manifestation of these networks and connects Kalgoorlie to Boulder and its suburbs. Recalling Forrest's speech in the introductory text, the telegraph and telephone infrastructure is the physical manifestation of this networked infrastructure (and hence able to be photographically recorded). This ability to image this network infrastructure is in contrast to the aforementioned but unimagined pipeline. The *Souvenir* turns away from documenting this engineering feat and looks to other networks—transport and communication. As a result, the Exchange Hotel, whose exuberant architecture usually dominates images of this intersection, is arbitrarily cropped, diminishing the pictorial importance of its frontage on Maritana Street. Although the hotel is named for its location next to the former gold and stock exchanges, in this photograph it is now the black and white signage of the hotel's neighbour, the offices of *The Kalgoorlie Miner* and *The Argus* newspapers that draws the viewer's attention to the importance of commercial and information exchange of the goldfields' town.

The placement of these images together on a double-spread serves to highlight the difference not only in depiction but the function of the twin towns. In this sense, the representation of the Burt Street in Boulder is not concerned with the activity of the street or the buildings that line it (as is the case with the depiction of Kalgoorlie on the opposite page) but instead with where the street leads to and from as it funnels workers from the civic, commercial and residential part of the town to its industrial centre. Importantly, it is the combination of the physical proximity of Boulder and the virtual connectivity of Kalgoorlie that leads to another understanding of the two places and the relationship between them. Here, the *Souvenir* presents the requirements of a successful mining town: a base of worker's accommodation, services, and minor civic infrastructure (Boulder), as

well as the space of commercial and institutional connectivity (Kalgoorlie), that allows for the influx of capital, ideas, people and techniques. Instead of being absorbed together into a single settlement, the different phases of the discovery of gold and the different geological conditions in this remote inland location led to the founding of two separate towns each with their own set of critical features, which led to their separate imagining in the Souvenir.

The Souvenir's Representation of Time in Industrial Photographs

Before undertaking the analysis of the sequential organisation of the text and images into a series for each mine, it is worth considering how the singular images of the mines might capture time, space and change as these photographs and their content serve as the basis for their subsequent serial organisation. This subsection analyses, using Rose's compositional interpretation methodology the images with an emphasis on their content, spatial organisation, focus and expressive intent.

The first double-page spread for each mine allows for the presentation of an image from the mine's past (on the left-hand side) and present (taken in 1903, and displayed on the right-hand side). While the photographs of the mines in the current state might be considered uniformly located in the 'present' of 1903, the photographs of the earliest state of the goldmines in the Souvenir, point to an inconsistent picture of the development of the field. Figure 6.18 illustrates the manner in which these images of the past might be considered a temporal series.

The mines are photographed at a number of different times in the past (1895–1898). For instance, an image of the Great Boulder Mine (1895) (Figure 6.6) illustrates the state of the landscape at the end of alluvial surface mining, combined with the nascent infrastructure of underground mining, with the chimney functioning as a harbinger of the greater industrialisation that is literally just 'over the horizon'. It also appears alongside the vestige of the miner's camp. Images like the Great Boulder (1895) illustrate a shift in the phases of the goldmining industry, from the prospector to the miner, from the individual worker to the consolidated company structure. In contrast, many of the more recent of these early images from 1898 (Figure 6.7), depict the more advanced industrialisation of mines such as the Great Boulder Main Reef and the Associated



Figure 6.6: Image of the Great Boulder mine in 1898.

‘Great Boulder Mine, 1895.’ The Souvenir, unpaginated, 1903, Courtesy Australian Capital Equity



Figure 6.7: ‘Great Boulder Main Reef Mine, 1898.’

‘Great Boulder Main Reef Mine, 1898.’ The Souvenir, unpaginated, 1903, Courtesy Australian Capital Equity

Gold Mine. The headframe, elevated tanks and shaft furnace illustrate the application of new technology on the field with evidence of pioneering and specialised ore refinement processes of roasting and sliming.¹⁹ The inconsistency in the temporal qualities of these photographs makes it more challenging to create a consistent series out of them and therefore to draw conclusions about the nature of the spaces in early industrial Golden Mile.

In addition to the multiplicity of time frames in which the earlier photographs were taken, the diversity of the photographic compositions evident within these images that make their serialisation more difficult to construct. These compositional modes range from the image of the Golden Horseshoe (Figure 6.8), which is more akin to a group portrait of the nine miners sitting in the foreground of the image, to the photograph of the Great Boulder (Figure 6.6) where the despoiled landscape surrounding the mine dominates the view. The placement of the camera and its proximity to its subject shifts considerably between the images. This can be seen with the close-up image of workers and piles of waste and raw material of the Great Boulder Perseverance mine, in contrast with the elevated and distant viewpoint that captured the buildings of the Associated Mines. Given the distinct time frames, compositional approaches and subjects represented by the early mine images, it is harder to draw them together into a serial relationship to one another to provide a generalised conclusion about the past and the early days of the field.

In contrast to the composition of the images of the past, the second of the mine photographs on the right-hand page of the double-spread and taken in 1903, share a similar compositional approach to the representation of industrial space on the Golden Mile. Figure 6.17 and 6.18 illustrates how these images of the present state of the mines might be considered a conceptual series. Here, comparisons could be drawn across the images (in the manner that Balaschak noted one might read the narrative of industrial images of the Bechers) to suggest another view of the industrial field. These photographs of the mine in 1903 typically use an elevated vantage point that results in a high horizon and dense mid-ground, where the main

¹⁹ Information on Great Boulder Main Reef's surface structures taken from Quartermaine & Jones, *Technological Survey*, entry 10.8.1.



Figure 6.8: The past at the Golden Horseshoe

'Golden Horseshoe, 1898' The Souvenir, unpaginated, 1903,
Courtesy Australian Capital Equity

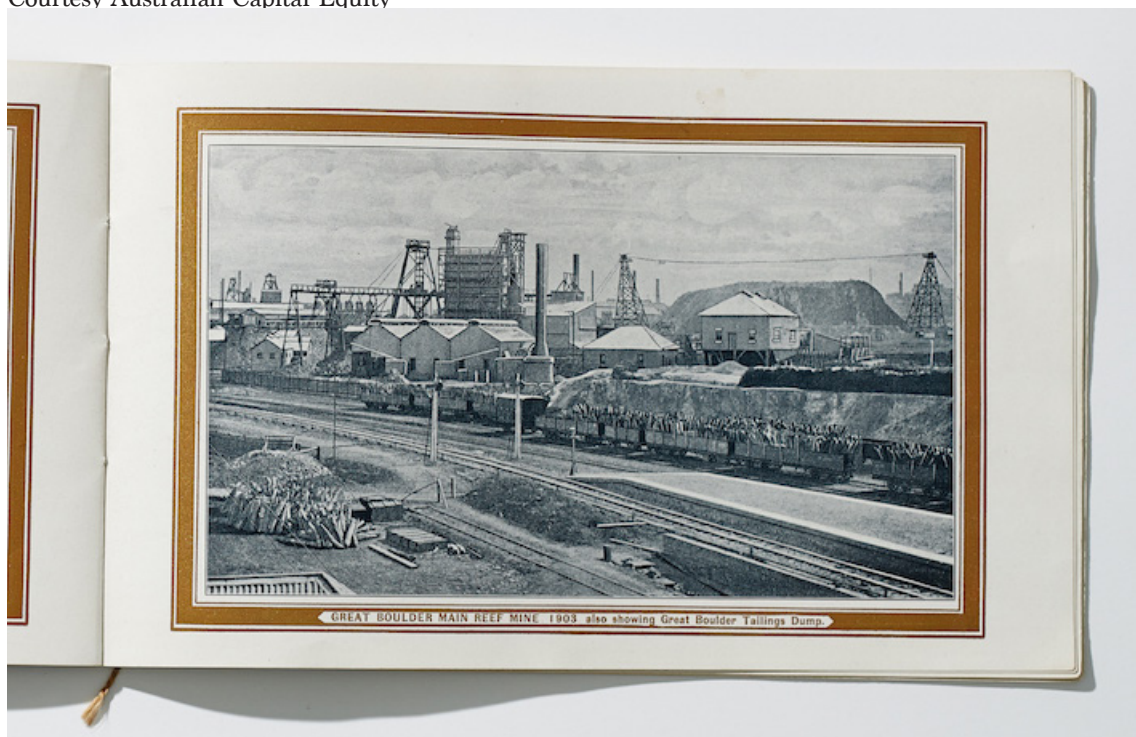


Figure 6.9: The contemporary view of the Great Boulder Main Reef Mine

'GREAT BOULDER MAIN REEF MINE 1903 also showing Great Boulder Tailings Dump'
The Souvenir, unpaginated, 1903, Courtesy Australian Capital Equity

structures of the mine are usually located. Many have an empty foreground, the result of the photographer having to cede control of the composition to take advantage of a high vantage point—either an industrial structure or the topography of the field. Beyond the empty foreground, most of the photographs are filled to the edge of each frame with the evidence of industry: buildings, mills, tumblers, roaster, tanks, headframes, chimneys, transport infrastructure, elevated railways, ancillary buildings, resources and waste. Sometimes worker's houses and camps can be seen between the industrial buildings. The different mines of the Golden Mile are only distinguishable from one another and recognisable through the varied composition of these industrial elements.²⁰ But despite this compositional legibility, of empty foreground and dense middle ground, the images are difficult to read without specialised knowledge of the engineering and industry of mining. The group portraits of the visitors to the mines, also offer the opportunity to consider these industrial spaces that occur as background to the portraits. Three different spatial conditions are illustrated by the repeated sequence of group portraits across the *Souvenir*. The locations of the managerial compound (*Souvenir* pp. 12, 36, 40, 48) the engineering structures found at the mine's surface (*Souvenir* pp. 16, 20, 24, 28, 32, 47) and the space of the underground (*Souvenir* p. 44) all form the background to the group portraits. While the images are primarily concerned with recording the visitors, they also reinforce the idea of the distribution of managerial expertise within the setting and the scale of the industrial architecture. To a lesser degree, the accessibility of the underground is also shown, as in the image of the Kalgurli Mine. The repeated sequence of these images suggests that these situations (and the expertise represented by the buildings depicted) are not isolated or singular but recurring and distributed across the industrialised goldfields.

As noted earlier, the right-hand page of the double-spread of mine site images, and as directed by the captions, presents an image of the present condition of the Golden Mile's industrial activity in 1903. However, this straightforward reading of the image is complicated when the other temporal modes, such as those that Sir

²⁰ As discuss earlier, In regard to Banham's view of the Bechers' documentation of industrial buildings rather than a reductivism similarity between engineering buildings, there is a richness to their forms. Rayner Banham, 'The Becher Vision', 8.

John Forrest urges the visitor to bear witness to in his speech, are considered. This subsection looks at the traces of these various temporal states. The industrial past and future is contained within these landscape views and can be seen in a number of the photographs.

The industrial landscape generated by mining and captured by the images holds clues to this temporal complexity. The nature of goldmining means that the material that is being sought is a very small part of the material removed from the ground, which creates a residual landscape of waste left behind. These waste by-products of mining were reorganised into new forms, such as tailing dumps and slime dams, which were the two forms that crushed waste rock took if it remained on the surface rather than being pumped underground as fill in the void of the mines, and are a common occurrence within the 1903 images. These industrial wastes constitute the physical traces of the mine's previous developments and are the past that the Souvenir urged the viewer to look for within the images. The extent of dumps and dams might be one of the ways in which the visitors understood and measured the industrial past when they visited the mines.

These residual landscape elements, consisting of the material left over from the processing of the ore to remove gold, reached such a size, that they are accorded the nomenclature of elements of the natural landscape and rivalled the scale of the industrial structures of the field.²¹ One such object was the tailing dump at the Great Boulder Mine which in the labelling of the Souvenir's 1903 contemporary photograph it was necessary to note and name this object with its own capitalised

²¹ Rarely is the productivity of the goldfield understood by the depiction of its productive output. Nowhere in the Souvenir (and, in fact, in any of the images studied in this thesis) are there any photographs of gold. Little gold remained in Kalgoorlie; after being processed, it was transported to Perth and then shipped further afield. Gold is almost entirely absent from the visual record of Kalgoorlie; instead, the 'effects' of goldmining dominate the town's visual archive. We might describe this as the 'alchemic' transformation performed by gold. This transformation is not the production of gold from base metals as attempted by the pre-Enlightenment alchemist, but rather that 'financial alchemy' where the abstract wealth generated by gold eventually found material form—new buildings, streets and mining equipment. This is an extension of idea argued by Steven Shapin in his review of Harold Cook's *Matters of Exchange: Commerce, Medicine and Science in the Dutch Golden Age*: 'From the seventh century, the spice trade was dominated by the Arabs, eventually in concert with the Venetian Republic. The palazzos on the Grand Canal are the enduring artifacts of financial alchemy, Oriental pepper transmuted in to orientalisised marble'. *Floating Medicine Chests* (Book Review, *Matters of Exchange: Commerce, Medicine and Science in the Dutch Golden Age*, Harold Cook, Yale University Press, 2007); Steven Shapin, *London Review of Books*, 30, no. 3 (7 February 2008): 30.



Figure 6.10: The contemporary view of the Great Boulder

'Great Boulder Mine, 1903.' The Souvenir, unpaginated, 1903, Courtesy Australian Capital Equity

title so that under the image it read 'GREAT BOULDER MAIN REEF MINE 1903 also showing Great Boulder Tailings Dump' (Figure 6.9). The tailings dumps, more so than the slime dams, became significant elements in the industrial landscape, sitting somewhere between an inconvenience to be accommodated and, later, a resource to be potentially exploited. These forms are obstacles to be negotiated when building new infrastructure (as one might negotiate the natural landscape) as we can see in the 1903 Great Boulder Main Reef image where the Lidgerwood cable car is constructed after the capacity of the elevator method of dumping is exceeded by the height of the tailing (Figure 6.9). Tailing dumps spill over and through buildings and structures so that there is not a clear distinction between sites of production and sites of waste. At the Great Boulder Mine, the elevated infrastructure straddles smaller mounds of waste (Figure 6.10).

As well as the capturing a landscape of waste as evidence of the industrial past, the photograph also records and acts an evidentiary agent of the future in the *Souvenir*. Here, in a mining landscape, the photograph records a trace that will contribute to the future forms of the industrial site. The camera records the material precursors to the mechanics of mining, firstly as the energy and secondly as the expertise required to advance the progress of the mine. The camera records subjects that can be considered to have embodied the immaterial qualities of energy. This can primarily be found in the pictorial evidence of the consumables of the mines—labour, water, timber and electricity—and is present in nearly all the images of the mines in the *Souvenir*. Structural and fuel timber is stored or being transported by rail. Condensers for the processing of brackish water occupy the foreground of several images. Men walking to and from the mines are captured by the camera, their camps are huddled around the mines, with space set aside for housing animals who might labour in this landscape. The indexical potential of photography is brought to the fore (where the photographable external structure of mining buildings represents abstract notions, that would otherwise have difficulty finding photographic representation). To guarantee the future of the mine, these material manifestations of energy were combined with the technical expertise directed at the running of the mine.

Again, the camera, in photographing the buildings that housed the companies' expertise in chemistry and engineering as well as management, records the physical manifestation of these abstract notions. The accommodation for the assaying laboratory, houses for the chief engineer and the mine manager all point to the requirement for and housing of specialised knowledge that could be used to guide the energy of men, animals and machines. The recording of these pictorial elements—men, machines, buildings, fuel—in the *Souvenir* would have satisfied the remote viewer of the immediate and perhaps even medium-term prospects of the mines visited after the opening of the Water Scheme. Further, the scale of machinery depicted gives an indication of the capital already expended, while the repeated, modular elements of machinery and factory buildings suggest the capacity for industrial expansion. The empty ground photographed around the mines shows the potential for the surface expansion of mine's machinery and processing. Even when the ground around the mine is filled with fuel and waste, new infrastructure finds a way to negotiate this terrain regardless, as shown in the images of the Great Boulder Mine, the Associated Goldmine or Associated Northern Blocks where at each mine site, the elevated railway straddles the tailings dumps.

The analysis of the *Souvenir's* images of the mine's past and present illustrates the photograph's ability to capture a moment of the present, as well as recording a landscape that contains the result of the past and the potential of the future. The next subsection of the case study discusses how these sequential images are brought together into a series that allows comparisons to be made and broader conclusion to be drawn about boom of Kalgoorlie, Boulder and the Goldfields.

The Souvenir's Representation of Change in Industrial Photographs

The most repeated aspect of the *Souvenir* is the sequence of four pages (two double-spreads) with images of each mine, statistical text and the group portrait of the mine's visitors (Figure 6.11). As set out in Chapter 2, this sequence of photo-textual elements satisfies the definition of a serial, as they can be considered a sequence of both conceptual and temporal order. In the instance of the *Souvenir*, and repeated for nine of the 11 mines, the temporal order is considered to constitute the images and text represent different times in the stages of the mine's

SEQUENCE OF IMAGES & TEXT

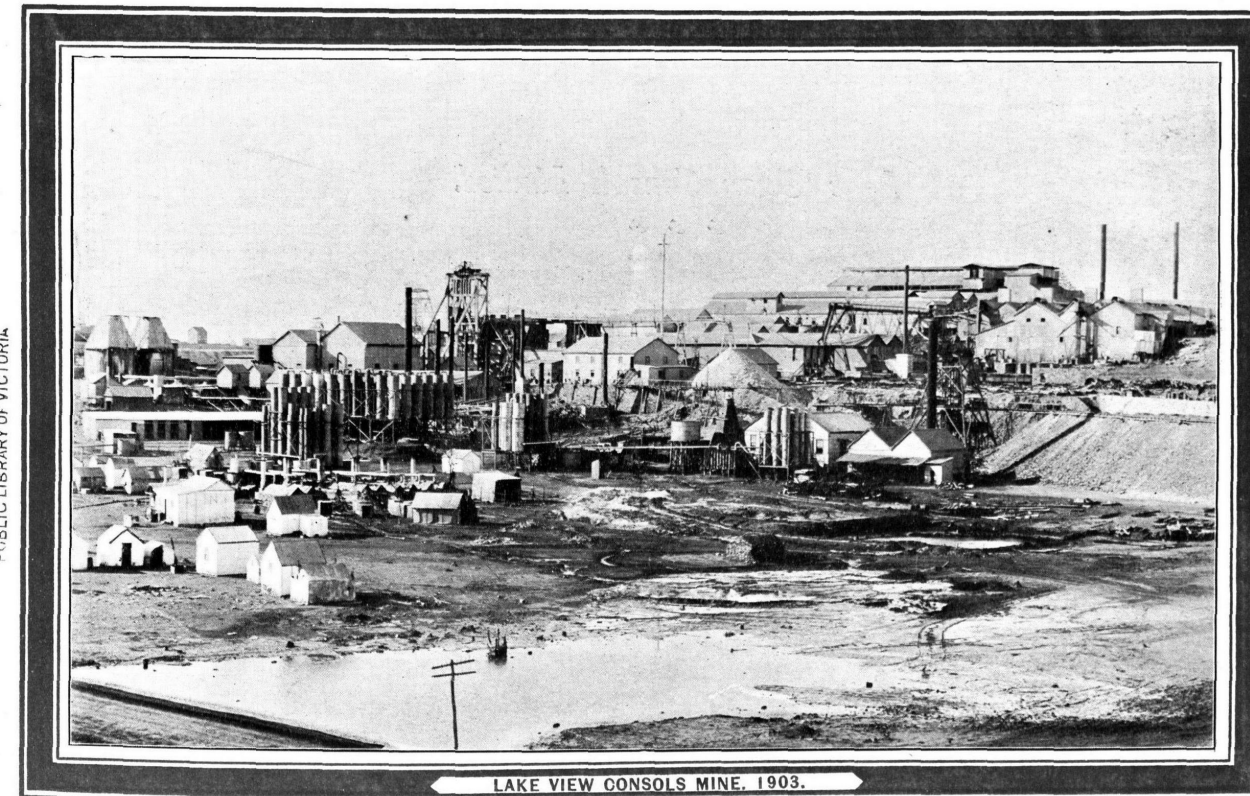
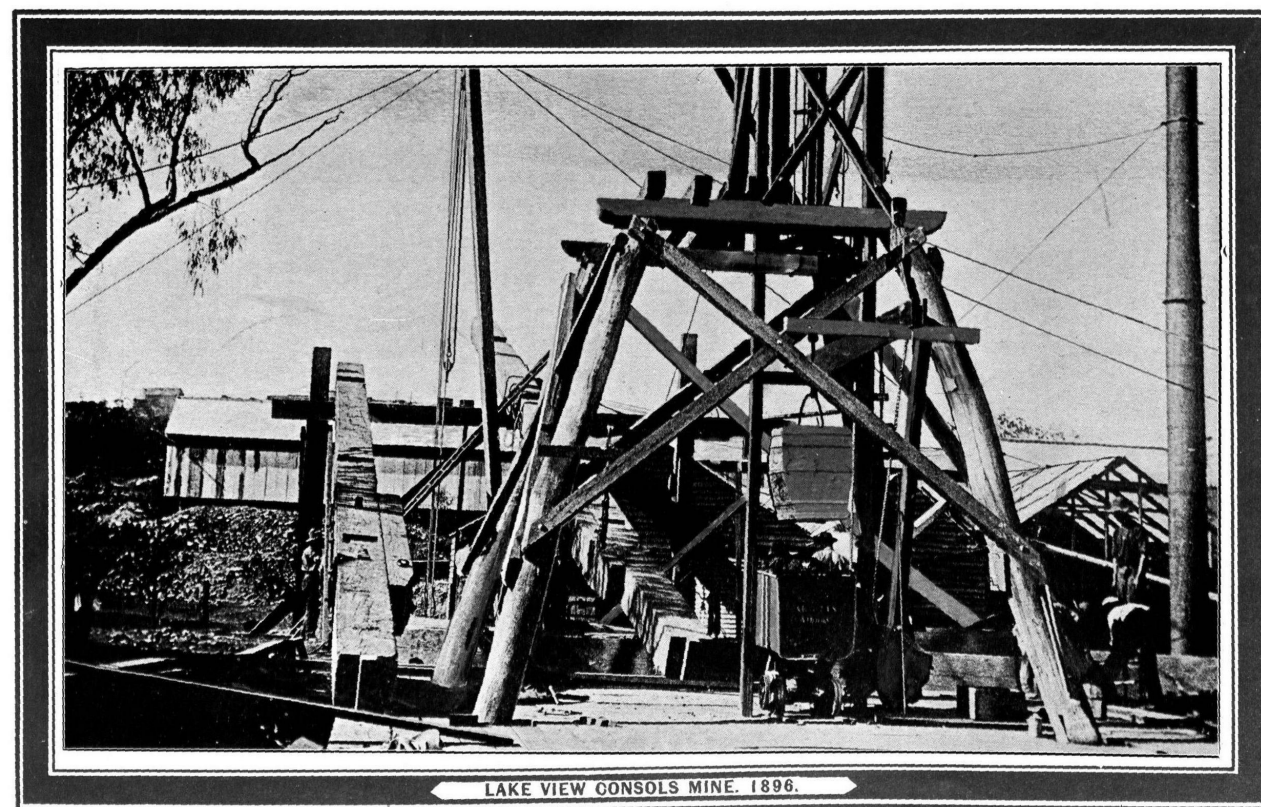


MINE SERIES 2

FIGURE 6.11a

The sequences of pages that make a 'series for each mine:

- An image of the mine from an earlier phase of its development,
- An image of the mine's present working condition
- A set of textual and statistical descriptors
- An image of the visitors who toured the mine after the opening of the Goldfields' Water Scheme.



Lake View Consols Limited.

General Managers—Messrs. BEWICK, MORRING & CO.

Mine Superintendent at date of visit—Mr. W. A. PRICHARD.

Present Superintendent—Mr. D. E. BIGELOW.

Capital issued—250,000 shares of £1 each, fully paid	...	£250,000
100,000 shares of £1 each, paid up to 5/-	...	25,000
		<u>£275,000</u>

Area of gold mining leases held—48 acres.

Number of mine employees—520.

Total quantity of ore raised to 31st December, 1902—390,097 tons.

Total gold bullion produced to 31st December, 1902—762,689 ozs.

Total amount of dividends paid to 31st December, 1902—£1,317,500.



Figure 6.11: Top, L-R, The Past (the photograph of the mine's 'early days'), The Present (the mine's contemporary 1903 image), Bottom, L-R: The Past (the table of figures that describe the production statistics) and finally The Present and The Future combined in the image of the visiting party.

development and that the conceptual order is change and difference registered across and between these images.

The organisation of the sequential images into a series offers the opportunity to investigate, not only the content and nature of the individual image and its relationship to the next image in the sequence but to the other images that occupy the same position in the sequence in other series. This categorisation of the *Souvenir* into a set of sequential and serial images forces a closer reading of the images.

In this sequence, the image and text represent the past (the photograph of the mine's early days), the present (the mine's contemporary 1903 image), the past (the table of figures that describe the production statistics) and finally the past, present and the future combined in the image of the visiting party. The visiting party view the established mines, not only as part of the industrial spectacle of the present but also as witnesses, whom through their inspection (and the type of looking that the term 'inspection' entails and implies), anticipate the possibilities of the future. This is made explicit by the introductory text of the *Souvenir*, which suggests that the visitors 'might form an idea of the potentialities in the future'.²² The organisation of the early and contemporary images of the mine together in a double-page provides the most straightforward example of the *Souvenir*'s attempt to illustrate the nature of change across the industrial field. The change of the industrial space between the 1893–1898 and 1903 photographs, is the industrialisation and expansion of the field. Despite the neatness of the contrast that the *Souvenir* tries to establish between the past and the present, this section examines how this change (and the varying degrees of changes) might have been represented in the photographs.

The first reading of change promoted by the *Souvenir* is that of the industrial progress in the *Souvenir*'s depiction of the mines of the Golden Mile. The most obvious and likely reading intended by its publisher, this reading frames the industrial field in the manner of a conventional booster publication that

²² *The Souvenir*, unpaginated (4).

documents the ‘astonishing’ progress of the town’s mining industry.²³ This can be seen, for instance, the first pair of images in the *Souvenir of the Great Boulder Mine* (Figure 6.12) illustrates the most dramatic contrast between the two industrial states of the mine. If the viewer reads together the two images on the double-page spread, we can see that the compilers of the *Souvenir* intended these to be read as a depiction of dramatic industrial progress, in an almost wholly transformed landscape. The compositional similarities of the images help convey the extent of transformation by establishing a constant or fixed pictorial frame in which the viewer can easily contrast the difference in industrial and landscape elements (Figure 6.13) From a lone headframe, with a handful of flues and a couple of industrial sheds in the early image, industrial activity now fills the frame of the 1903 photograph. The domestic, represented by the workers’ hut, however, has been displaced, with the removal of the canvas structure. More substantial brick structures have replaced the steel flues. The rutted foreground is replaced by the transport infrastructure of the mining railway, showing the organised material requirements of the mine as well as its waste. The tree stumps present in the early image have been replaced by industrialised harvesting of the surrounding woodland forests, resulting in the rough piles of timber to be used as fuel or structural material for the underground drives and shafts of the mine. The devices of mechanised production and transport, such as the railway line and the water condenser, now occupy the foreground of the image. The single tailings dump has expanded to a row of half a dozen mullock heaps. Among the newly introduced mechanical technologies on the goldfields are reminders of the manual labour that had hitherto been the main source of productive labour on the field. One image has a worker pushing a barrow as he unloads timber from the ‘woodline’ railway truck while in the left mid-ground a horse and buggy stand idle, waiting to be used for human transportation, rather than material haulage.²⁴ The new railway line that

²³ Ibid., unpaginated (2).

²⁴ Belich uses Mumford’s threefold classification of technologies as a useful starting point to think about the how the Industrial Revolution and what he calls the Non-Industrial Revolution occurred in settler colonies. Mumford, according to Belich, classifies technologies in the following manner: ‘eighteenth century “eo-technic” (water, wind, wood and animals); nineteenth century “paleo-technic” (steam, coal, iron, and rail); and twentieth century “neo-technic” (petroleum, steel, electricity, and automobiles)’. Belich argues that these technologies coexist rather than displacing one another. Belich, *Replenishing the Earth*, 109.

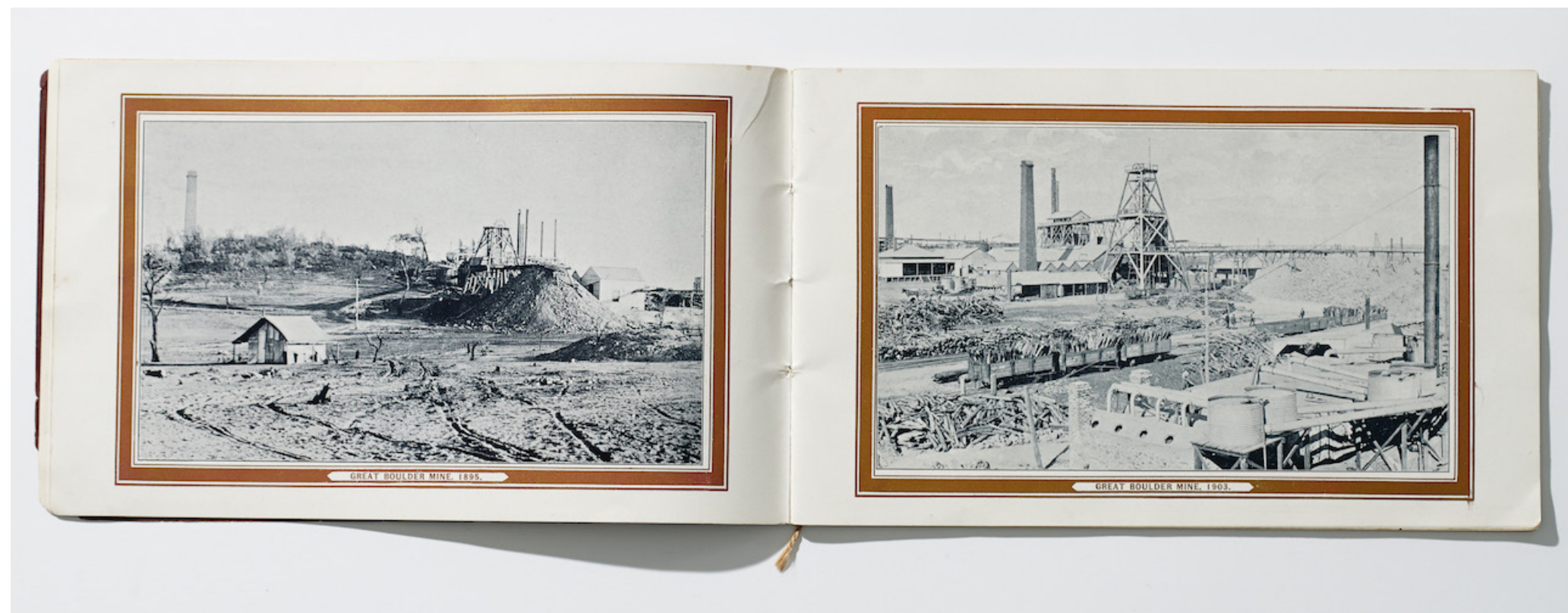


Figure 6.12: Double page spread of 'Great Boulder Mine, 1895' and 'Great Boulder Mine, 1903'

The Souvenir, unpaginated, 1903, Courtesy Australian Capital Equity

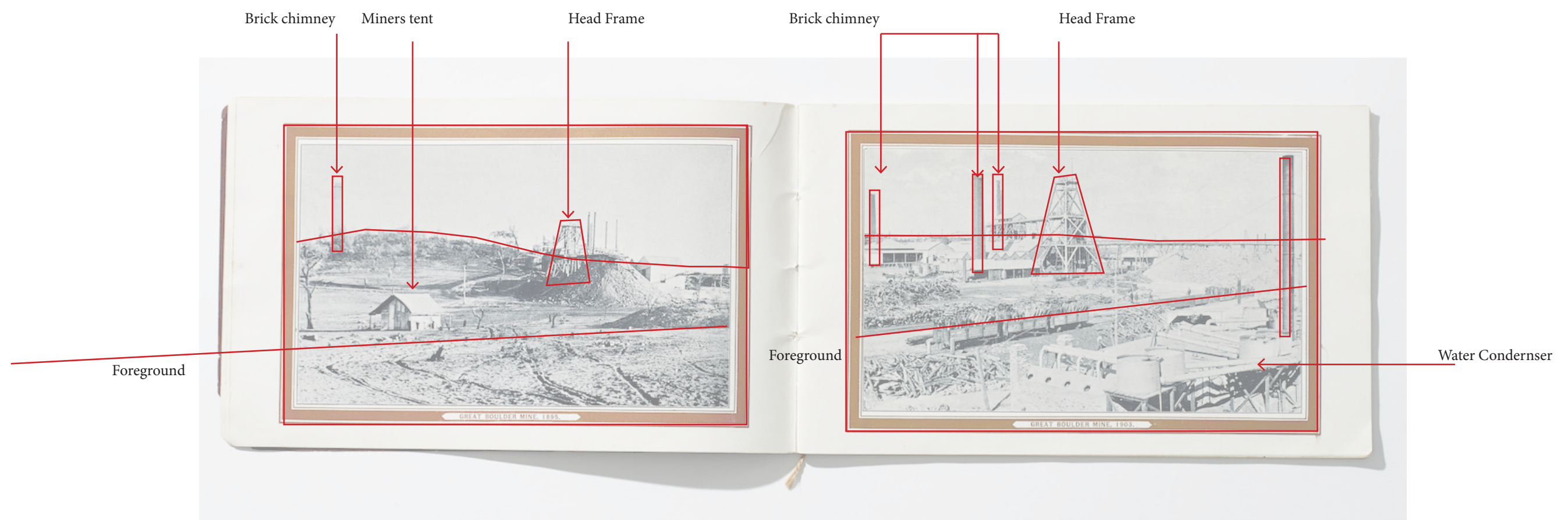


Figure 6.13: Annotated Overlay

Double-page spread 'Great Boulder Mine, 1895' and 'Great Boulder Mine 1903' The Souvenir, unpaginated, 1903, Courtesy Australian Capital Equity

bisects the image carries trucks full of timber which, given its size, appears destined for the water condensers which had the job of transforming brackish saltwater into a useable, if not drinkable, liquid. As four workers walk along the railway track, it reminds the viewer that the provision of this efficient industrial mode of transport also offers a clear path for miners to travel through the complex ground of the goldfields.

A suggestion of continuity within this dynamic process of industrialisation is made by the consistent location of certain pictorial elements in both compositions. The headframe and the brick chimney appear in almost corresponding positions in both images (Figure 6.13). These are objects of visual fixity among booming industrial activity, but closer inspection reveals that the similarity between the images is a compositional conceit, as the images, despite these visual similarities, are actually views of different headframes from different vantage points on the lease.²⁵ Beyond this reading of industrial progress, there are also unintended consequences that can be seen from the images. As the requirements and the production of the mine expanded, there were profound spatial and environmental implications. While the resource requirements of surface alluvial and shallow underground mining were more meagre, the 1903 image illustrates the extent of resources required to fuel the contemporary mine. The despoilment of the environment described in the first image has been expanded into the neighbouring woodlands. Using a system of temporary railways, logging companies harvested timber from the salmon and gimlet gum forests that surrounded the town. The piles of timber illustrate mining's inversion of the natural world, where a woodland is felled and transported underground to become the structural support for the 'artificial' environment of the mine.²⁶ Between the two images, the camera, literally and metaphorically, turns away from what little remains of the natural environment and focuses its attention on what is now the manufactured environment of mining. This reading of environmental change and degradation is

²⁵ See Quartermaine & Jones, *Technological Survey*, unpaginated.

²⁶ Lewis Mumford argued that the underground mine was the first truly 'artificial' environment where the inhabitants had no means of sustaining themselves without the external supply of water, light and air. By 1903, the Great Boulder main shaft had reached 1,800 ft underground, with installed equipment allowing it to go to 3,000 ft. Mumford, *Technics and Civilization* (Routledge & Kegan Paul, London, 1934), 70.

complicated by the contemporary responses to what we would now consider a despoiled landscape. For example, a Dwyer image captioned in his own spidery handwriting as 'Deserted alluvial diggings', shows the pockmarked ground outside the town that has been emptied of miners and the relatively easy picking of alluvial gold (Figure 6.14). When published in *The Argus*, as part of its supplement to celebrate the tenth anniversary of Hannan's discovery, this title is cropped away and instead, the caption 'A busy day at the foot of Maritana Hill in the early days' is added beneath the image.²⁷ While ostensibly the same image (and acknowledging the role that captions play in directing our understanding of the photograph), the original Dwyer-titled image points to a fatigued landscape that has been abandoned as its gold deposits have been exhausted, while the published image speaks to a scene of industrial productivity and endeavour.

The sequential images of the Great Boulder Mine illustrate the change in the domestic occupation of the goldfields. Starting with the photograph of the Great Boulder Mine in 1895, it depicts in its left mid-ground a lone miner's double roof framed canvas home (perhaps occupying their alluvial lease as was their right under their miner's license). By turning the page to the next double-spread containing the mine statistics and the image of the visitors, this kind of rudimentary structure, by 1903, has been replaced by the substantial mine manager's house as seen in the background of the group portrait. The mine manager's house is an ornate building, with turned posts, barge boards, and brackets to the verandah posts and stands in comparison to the more utilitarian, unadorned (but non-industrial) buildings of the mine. The visiting party to the Great Boulder is pictured against the verandah with established creepers framing the entrance to the house. On the left of the image, canvas and timber duckboards protect the verandah space from dust, while behind the men on the far right, the elaborate roof of what appears to be a birdhouse, whose finials stand taller than the men in front of it, can be glimpsed. The sequential presentation of the mine images also allows us to see the introduction of new building types and spaces into the industrial landscape. The sequence of images reveals the introduction of new

²⁷ *The Kalgoorlie Western Argus*, 16 June 1903, 51.



State Library of Western Australia

Figure 6.14: Dwyer's view of alluvial diggings

'Deserted alluvial diggings', John Joseph Dwyer, ca.1900, (Call number: 019033PD), Series: J. J. Dwyer collection 5816B, The State Library of Western Australia, Perth

kinds of spaces and building into the mine that combine the recreational with the scientific.²⁸

The nature of the ‘astonishing’ change can also be seen in other sequences of mine photographs. The first image of the Oroya-Brown Hill mine in 1897, is focused on the main shaft with its inclined headframe and crusher box. However, between the 1897 and 1903 images of the Oroya-Brown Hill, the position of the camera moves further away from the main shaft to show the expansion of the mine and reveals the introduction of a series of new spaces and buildings in the mining compound (Figure 6.15). While the extension of the overhead tramway and the nearly complete large battery house is presumably the photographer’s focus, a number of ancillary buildings and spaces are included in this framing of the image. On the left can be seen a neatly enclosed staff housing compound, as well as a fenced tennis court with shaded pavilions for spectators.²⁹ An exotic circular gazebo (perhaps roofed in tree boughs) sits between the tennis court, and a horse enclosure is occupied by an animal that is clearly not a workhorse. The mine manager’s house, the engineer’s residences and the assay office start to form a scientific and managerial compound of ancillary buildings around the main industrial buildings of the mine. The workers now come from Boulder instead of living on the industrial ground. The mine residences are more substantial buildings than the tents they replaced, as a number of the group portraits that used these buildings as backdrops in the *Souvenir*, can attest.

The Souvenir’s Depiction of Industrial Space

This chapter has already explored the paratext’s role in establishing the relationship between Forrest’s speech and the spatial and the temporal complexity of the goldfield as depicted in the *Souvenir*’s photographs that follow it. Additionally, within the text of the *Souvenir*, there is a further relationship between the photographs and the statistical text that accompanied each mine that

²⁸ R. G. Hartely, ‘Kalgoorlie as the Global Centre for Gold Metallurgical Innovation 1902–1907’, *Prometheus* 19, no. 2 (2001), 147–60; William Taylor, Introduction to Australian Places, Place-making and the Politics of Displacement in a Transient Society’, *Out of Place (Gwalia): Occasional Essays on Australian Regional Communities and Built Environments in Transition*, eds. Philip Goldswain, N. Sully and W. M. Taylor (Crawley, WA: UWA Publishing, 2014), 1–13.

²⁹ Quartermaine & Jones, *Technological Survey*, Plate 10.13.15, unpaginated.

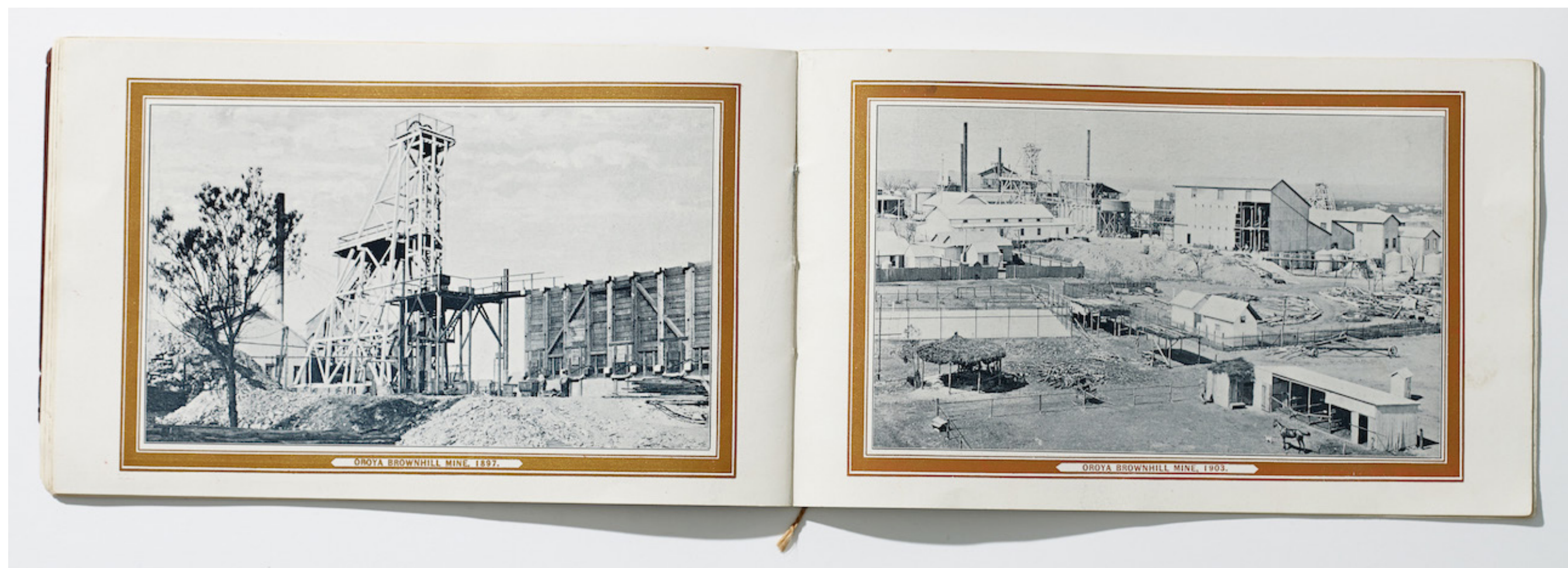


Figure 6.15: The double page spread for the Oroya Brownhill Mine

'Oroya-Brownhill Mine, 1897' and 'Oroya-Brownhill Mine, 1903'
The Souvenir, unpaginated, 1903, Courtesy Australian Capital Equity

is reinforced by their sequential organisation together. What the viewer can understand from the spatial transformation that has occurred between the two images of the mine is the generation of a different landscape and the requirement of a new photographic genre to depict it. Filled to the edges with the tools for and by-products of mining, the 1903 image of the Great Boulder is one of organised industrial space, a vernacular landscape of storage, transportation and waste.³⁰ In this sense, the image becomes a statistical photograph—a visual approximation of the mining information contained a page later. Importantly, this mode of viewing is confirmed by the position of the photograph of the Great Boulder (and indeed all the mines in the *Souvenir*) in an image and textual sequence that combines the statistical information of the mine's production with the visiting party. The list of investment of capital, the output of ore, the number of workers and the amount of dividends paid, now finds a visual and spatial equivalent as the elevated eye of the camera records the working activity of the mine.

Summary

This case study investigation of the *Souvenir* and its combination of text and image allows several conclusions to be drawn about the research's methodology and the nature of the industrial and urban development of Kalgoorlie, Boulder and the Goldfields.

Firstly, in regard to methodology, categorising the *Souvenir* into a paratext and a following text allows for the re-examination of the introductory text and image and the manner in which their emphasis shapes an understanding of the following sequences of image and text. Considering the introductory sequence as a paratextual vestibule helps to direct the following analysis of photographs and textual information. This categorisation of the *Souvenir* allows the connection between image and text to be explored more emphatically and also draws attention to what is left unimagined.

Secondly, using a primary methodology of image analysis, and the consideration of the sequential organisation of images and texts into temporal and conceptual

³⁰ John Brinckerhoff Jackson, *Discovering the Vernacular Landscape* (Yale University Press, 1984), 8.

series, the case study allows for a fine-grained reading of these photographs and the dense information they contain. In reading these sequenced and serialised images, in which change itself becomes the focus, another narrative of the industrial field and its adjacent towns emerges. While individual images display variations on established pictorial representations of mining towns and their industries, considering the sequential presentation of two images side by side, offer the opportunity to interrogate the pair of photographs together to see the demonstrable, visually quantifiable difference between the images. Rather than rely on evidence of a single image, the juxtaposition of distinctive urban conditions or stages of industrial development allows a close reading of both images and the difference between them. The inclusion of textual information and other modes of visual depiction, like the group portrait, further extended possible readings of these types of image and representation.

With regard to understanding the urbanisation, industrialisation and inhabitation of the goldfields, several conclusions can be drawn from the case study. Firstly, the case study analysis offers an insight into the visual acuity of the visitor to goldfields and how the contemporary reader of the *Souvenir* might have understood how the document framed a reading of the place it depicted. The case study analysis reveals the depiction of the boom town and its industrial landscape's spatial and temporal complexity that recorded its previous state, its present condition and as well as being anticipatory of the future of the field. It is this long-term viability of the field that the *Souvenir* hoped the visitors 'will remember long after the impressions of the more ephemeral part of time celebrations have faded away',³¹ locate the *Souvenir* as self-consciously and actively taking part in the process of remembering the events of the opening of the Scheme.

Secondly, the imagining of Kalgoorlie and Boulder not only points to the relationship between the urban centres but also their differential development. Despite both starting as prospectors' camps, by the time they were photographed and organised together in the *Souvenir*, each town has established its own urban

³¹ *The Souvenir*, unpaginated (4).

characteristic and manner of being depicted. Perhaps reflecting a shift in the productive centre of the goldfield away from Hannan's initial find in the north of the belt to the rich lodes of its south, one town emerges as a place for workers while the other emphasis is on its mercantile and commercial enterprises.

Finally, the case study points to the intense nature of change wrought in the industrial landscape over the short space of time between the initial and contemporary depiction of the mines. The reading of the photographs and text illustrates the shift away from the individual miner and their labour to the endeavour of the mining company. The arrival of new architectural and industrial elements can be understood from the images. New spaces of recreation can now be seen in the field. These sit in an extended landscape of waste and resources that bear witness to the development of the underground spaces beneath them and their potential growth.

The case study analysis points to change from the inconsistent industrial development of the field in its early stages to its consistent industrialisation, which now constitutes a continuous landscape of mining activity.

The analysis of the Souvenir, by investigating images in sequence and across series, further develops aspects of the research methodology as well as making discoveries about the nature of the boom urbanism and the industrialisation of the goldfields.

CHAPTER 7: Case Study 3—Series 2168 Maps at the State Record Office of Western Australia

This case study and its accompanying illustrations ‘map the maps’ of Kalgoorlie and Boulder to discover whether, from a cartographic perspective, the development of the towns can be considered ‘normal’, ‘accelerated’ or ‘aberrant’ development, due to the ‘rushed’ nature of the boom town. This chapter will explore the role of cartography in recording the processes of urbanisation, the creation of spaces and the documenting of events in the boom town. The chapter looks to explain the nature of the interaction between the developing urban form of Kalgoorlie and Boulder and the mining leases of the Golden Mile. In this section, the research examines how cartography recorded the process of boom urbanisation by understanding how maps document the urban growth, change and interaction with the landscape of mining (Figure 7.1).

Introducing the Case Study Object

This case study draws on eight Series 2168 maps of Kalgoorlie and six Series 2168 maps of Boulder issued by the Department of Lands and Surveys corresponding to the thesis study period, between 1893 and 1905 (Figures 7.2a and 7.2b) and now



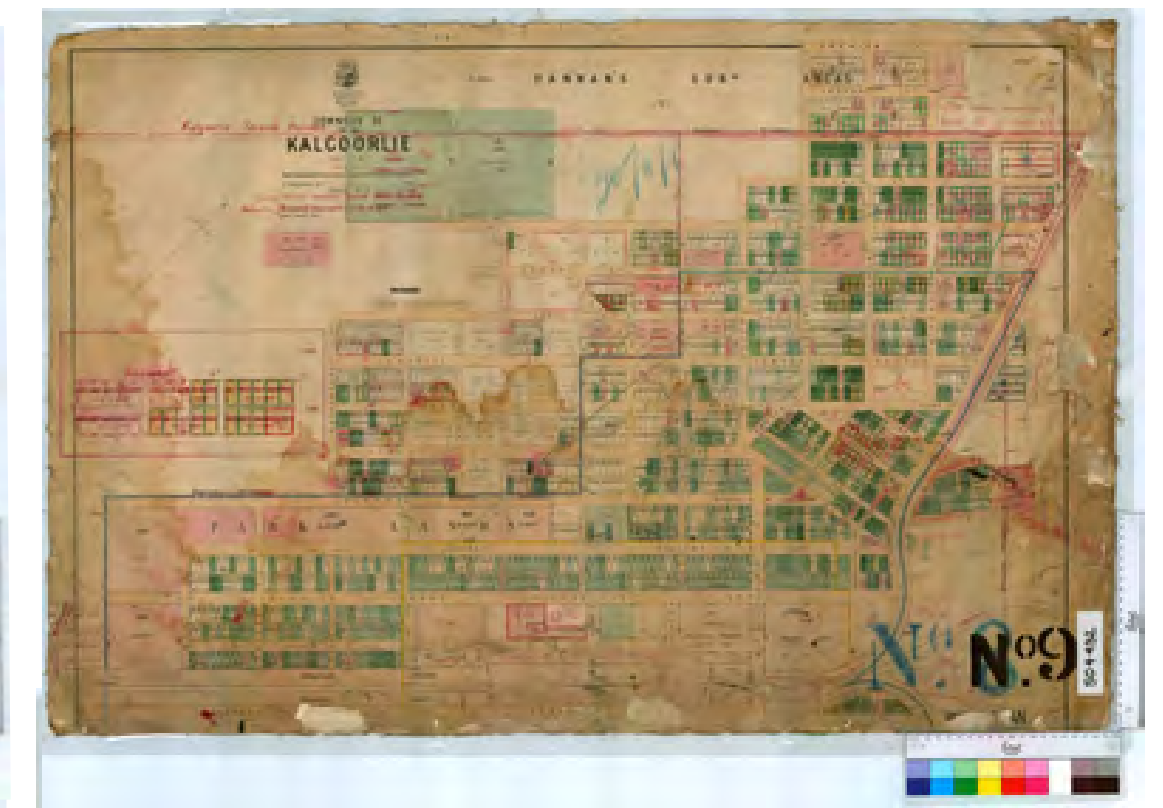
Figure 7.1:
The interaction between mining and urban development in Kalgoorlie and Boulder

'Map Shewing Gold Mining Leases at Kalgoorlie, Eastern Coolgardie GF',
Department of Mines, 1898–1901 (Call number: 24/7/15 RARE), The State Library
of Western Australia, Perth



Boulder

Figure 7.2a: Series 2168 maps of Boulder issued by the Department of Lands and Surveys, 1896-1905



Kalgoorlie

Figure 7.2b: Series 2168 maps of Kalgoorlie issued by the Department of Lands and Surveys, 1894-1901. Organised at a common scale and orientation.

held by the State Records Office of Western Australia (SRO).¹ The maps were issued at irregular but close intervals across the period of the research. As the townsite maps were issued by one government department, they share a consistent cartographic language that at a scale of between 2 and 8 chains to the inch reveal the detail of the development. Each map, identified individually as a 'Sheet' in their archival record, provides detailed cartographic documentation of the development of each town² (Figure 7.3). The maps, titled with variations on 'Boulder Townsite' and 'Townsite of Kalgoorlie', depict the public, commercial and residential areas of the town and are dense with information about the places they depict.³ The printed information on the maps includes urban block boundaries, individual lots, street names, municipal boundaries, parkland reserves and public uses such as hospitals, schools and infrastructure such as railway and tram lines. Most of these functions are dimensioned and numbered in accordance with their townsite or residential status. Through ink and pencil handwritten additions, the Series 2168 maps also record adjustments to the size of urban blocks, the sale, leasing and reserving of individual lots within these townsites, granting and

¹ As the issuing of maps by the Department of Lands and Surveys does not exactly fit within the 1893–1903 research timeframe, this investigation of maps has been extended to coincide with the dates of maps issued.

² Kalgoorlie townsite plans, Department of Lands and Surveys, 1896–1903 (Reference code: AU WA S2168- cons5698 827-835); Boulder townsite plans, Department of Lands and Surveys, Reference code: AU WA S2168- cons5698 0175-0183), The State Records Office of Western Australia, Perth. The State Records Office of Western Australia has these maps in a series of maps that 'comprises cadastral plans of proclaimed townsites or parts thereof, including suburban lots. The plans are drawn to imperial scales (between 2 to 8 chains to the inch)'. State Records Office of Western Australia, Record Series Detail, Series 2168, http://aeon.sro.wa.gov.au/Investigator/Details/Series_Detail.asp?Sort=Series%20number&Order=ASC&Page=1&Series%20number=2168&Series%20title=&Descriptive%20note=&selFunction=&selActivity=&Start%20date=&End%20date=&Id=2168&SearchPage=Series (accessed 29 December 2014).

³ The title of the maps indicate the expansion of the town from the core of commercial and government building to the expanding suburban areas to the south, west and north:

- Map 1: Boulder Townsite and Residence Areas
- Map 2: No Title
- Map 3: Boulder Townsite
- Map 4: Boulder Townsite
- Map 6b: Residential Lots in Ivanhoe Suburban Area near Boulder
- Map 8: Townsite of Boulder
- Map 9: Ivanhoe Suburban Area and Townsite of Boulder.

Despite the shifting nomenclature for Kalgoorlie in its early years (Hannan's Find, Hannan's Camp, Hannan's, Colgoola, Kalgurli and double names such as 'Colgoola/Hannan's Find', by the time the map series began the name of the town was settled:

- Map 1: Townsite of Kalgoorlie (Hannan's Find)
- Map 2–8: Townsite of Kalgoorlie.

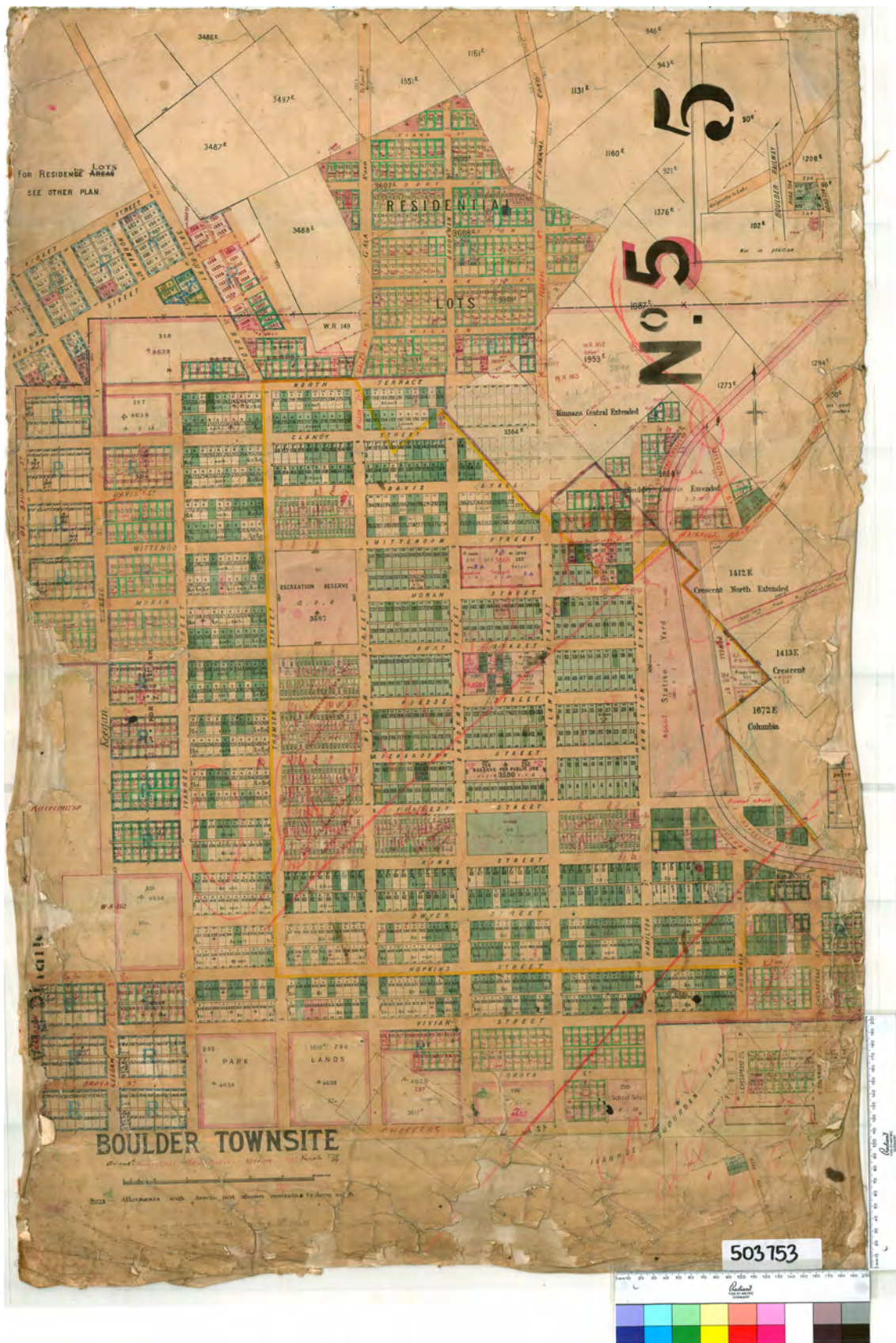


Figure 7.3: Each map provides a detailed cartographic record of the development of the towns

'Boulder Townsite, Sheet 5', Department of Lands and Surveys, 1899?–1901 (Reference code: AU WA S2168- cons5698 0180) The State Records Office of Western Australia, Perth

cancellation of reserve lots, shifting civic functions, ownership of individual lots, their dimensions and orientation, the nature of public reserves, and the location of townsite boundaries. The only topographical feature on any of the Kalgoorlie and Boulder maps is Mount Gledden, which acts as one of the set-out points for Kalgoorlie's urban grid. The inclusion of the price (usually below or next to the date of issue) indicated that the map was available for sale presumably for citizens wishing to purchase townsite business or a suburban residential lot. In addition to the expected information about urban development, and what makes these maps significant for the research project, is that they record neighbouring mining leases, their names, numbers and boundary dimensions on these otherwise urban-focused maps. This cartographic information about the adjacent goldfield is included from the first issue of maps of Boulder. It appears on the Kalgoorlie map from the third issue of the map in July 1897. Prior to 1893, this might not have been unusual, as the Department of Lands and Surveys dealt with all matters of Crown Land including mining and forestry. However, the creation of the Department of Mines in 1893 meant that responsibility for the documenting and recording of mining leases shifted to that Department. Again, as with the record of urban and suburban development, significant additional information is handwritten onto the surface of the map, which relates to the status of the mining leases and, more significantly, their interaction with the urban leases. The inclusion of the leases on the maps issued by the Department of Lands and Surveys indicate the importance, role and the influence of the adjoining industrial field and the necessity to negotiate the field as the town develops.

Further to the inclusion of this printed information about mining leases, what distinguishes the Series 2168 maps now held by SRO is the manner in which the maps were used by that department. For the period of the map's currency, the draftsmen, cartographers and surveyors of the Department of Lands and Surveys recorded the urban transformation of the townsites on the maps. As noted previously, the printed 'base' map accumulated a series of new notations and additions: colour-coded demarcations as well as ink, pencil and stamped annotations. In addition to the development of the town being made visible in the comparison between the issue of successive maps, this transformation is also

recorded on the individual map between its issue and cancellation. These additions indicate that the Series 2168 maps are essentially 'working drawings', which record additional information and changes to the townsite plan. The maps function as working drawings is further enforced by the current material qualities of the maps, which include water (and perhaps tea) damage, ink splats, torn edges and the pasting of new map inserts for revisions. The addition of these notes, and the obvious sign of the map's everyday use, transformed the generic printed maps available to the public into a set of unique records. The accretions to the maps help to explain not only the document's working lives but the extent of the changes to each townsite. Their location in the State Records Office also indicates that despite being intended as public documents, these specific set of maps, with their accumulated notation, were never made publicly available.⁴ As with many documents that have the status of a working drawing, at a certain point (when the addition of marginalia overwhelms the map, enough changes to warrant a fresh record, the expansion of the town exceeds the limits of the map, or when a new survey has been completed) the map is cancelled. Where appropriate, the handwritten notes are transposed, town extension legislation drafted, municipal boundaries changed. These changes are confirmed in law and etched and inked as hard lines or text onto a new edition of the map. The new map is published, and the process of recording the urban (and, to a lesser extent, industrial change) begins again.⁵

This difference between the two states of the same map is remarkable and can be clearly seen when comparing the public map of the Kalgoorlie townsite Sheet 3 and the version used by the Department of Lands and Surveys⁶ (Figure 7.4 and 7.5). The most striking visual change to the maps is the application of colour to demarcate different land-use areas and, importantly, the status of the blocks, lots and public reserves. The maps consistently follow a colour scheme of reserved lots

⁴ The distinction between the holdings of the State Records Office of Western Australia and the Battye Library of Western Australian history is that the SRO holds documents made by the various agencies of the government that have not been made publicly available, while the Battye holds material available to the general public.

⁵ The maps are issued at irregular intervals and, in some instances, a reissued map consists of the previous edition with a new section pasted on the map. The intervals between the issue of maps vary from three months to three years.

⁶ The map has an issue date 16.10.1897 and is now held by the Battye Library.

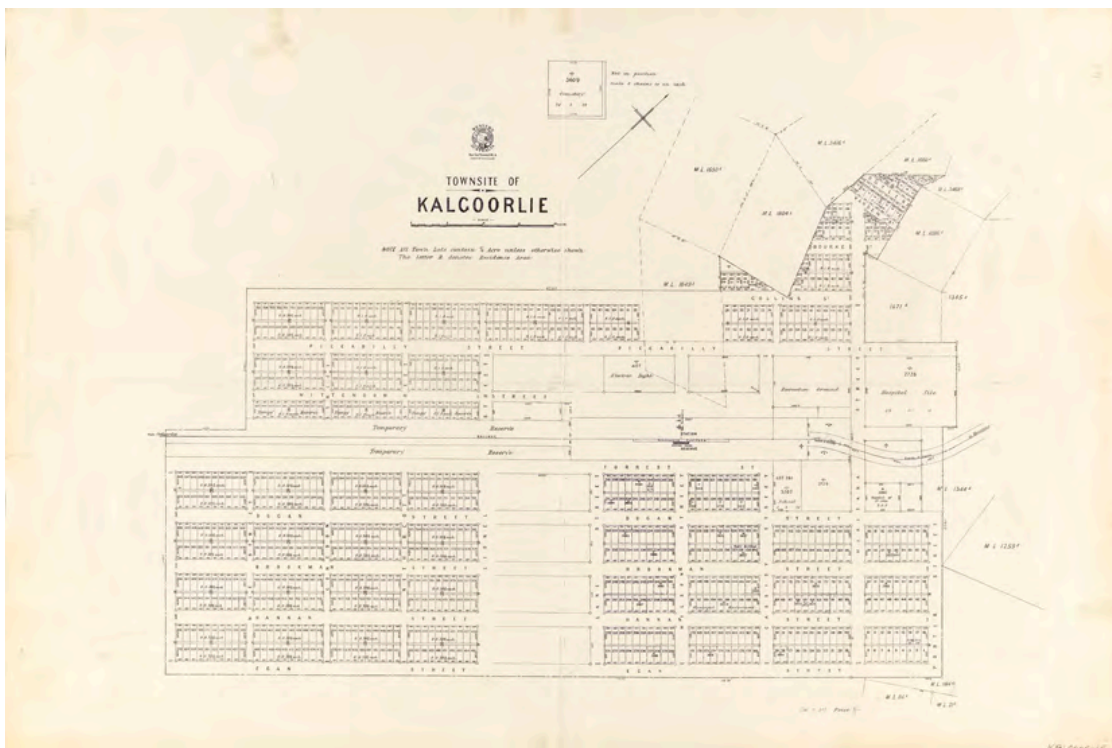


Figure 7.4a The difference between the public issued map (top) and the working drawing used by the Department of Lands and Survey (bottom)

'Townsite of Kalgoorlie', Department of Lands and Surveys, 1897 (Call number: 35/7/ KALG(1897) RARE), The State Library of Western Australia, Perth

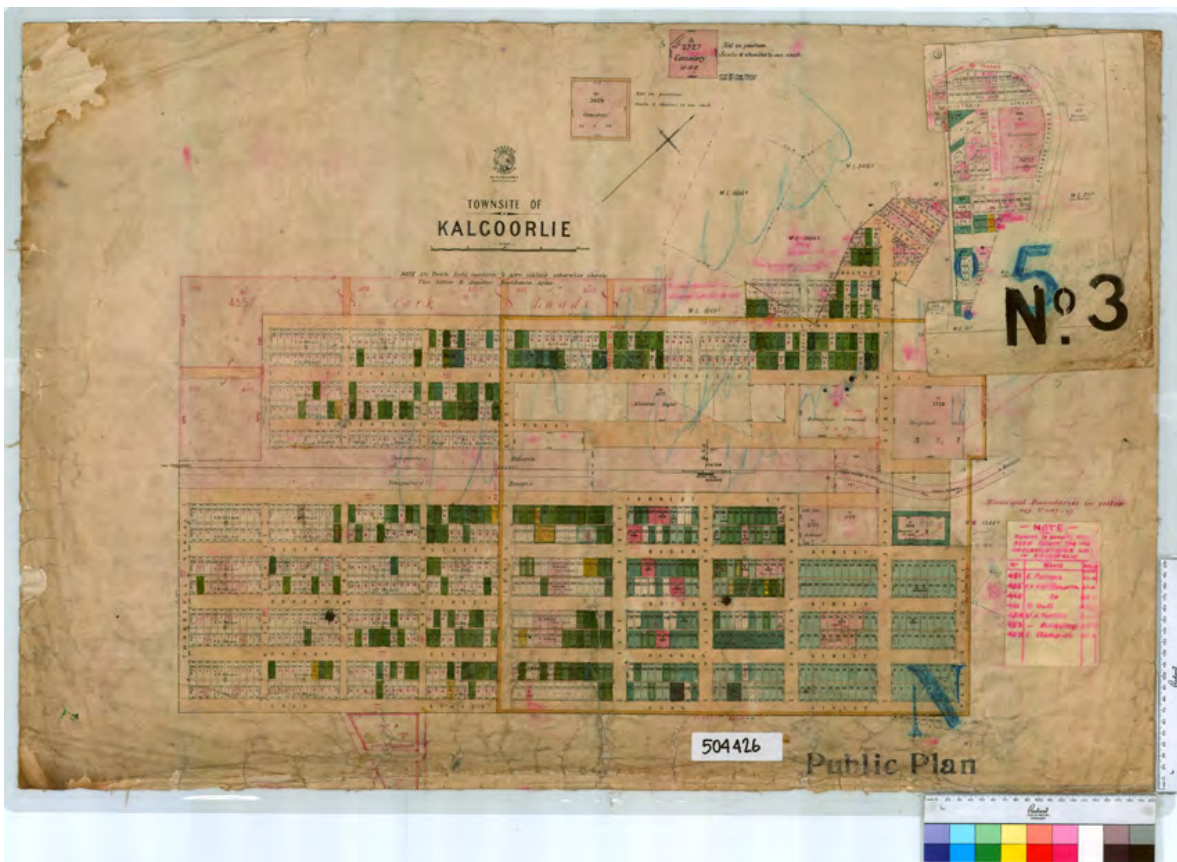


Figure 7.4b The difference between the public issued map (top) and the working drawing used by the Department of Lands and Survey (bottom)

'Kalgoorlie Townsite, Sheet 3', Department of Lands and Surveys, 1897–1898 (Reference code: AU WA S2168- cons5698 0829) The State Records Office of Western Australia, Perth

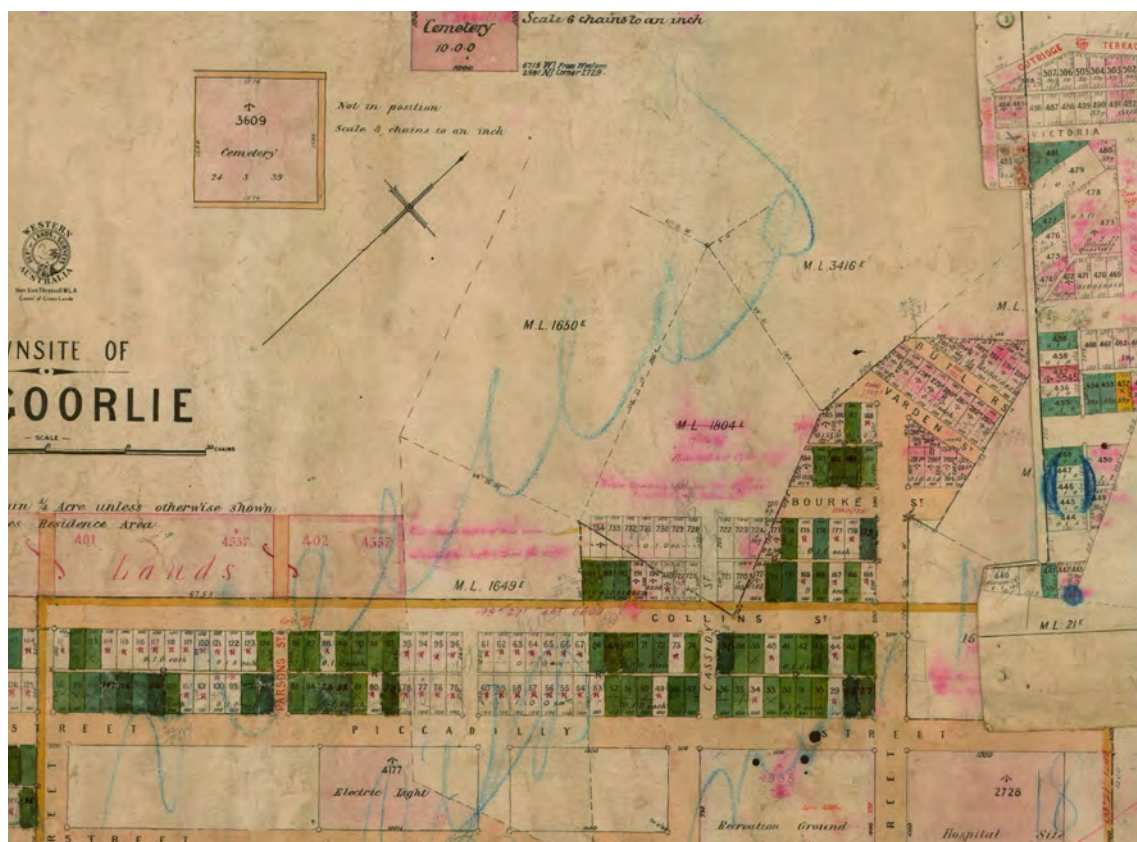
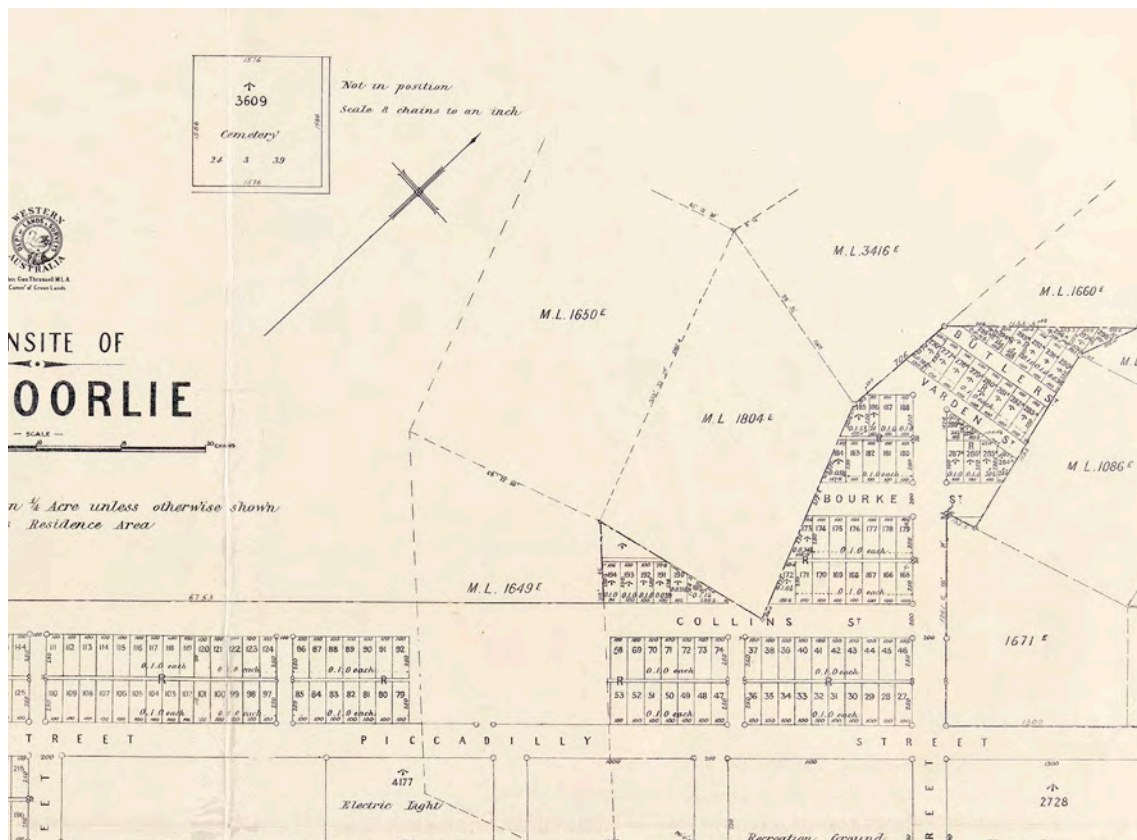


Figure 7.6a- b:
Detail of the difference between the public issued map (top) and the working drawing used by the Department of Lands and Survey (bottom)

(pink) lease lots (green) and freehold (yellow) (Figure 7.6). To provide a tonal figure/ground contrast between the streets and the urban blocks, the streets are painted orange. Within this standard use of colour, there are a number of minor variations such as where a lot is outlined with green or yellow. Lots with no status are left uncoloured. When the status of a block changes, from reserve to freehold, for example, the blocks are painted over (Figure 7.7). The notion of the 'status' of the lots, through the use of colour, also brings to attention the importance of the changes to the map across time.

Unlike the relationship between text and image in the *Souvenir* or in *The Argus* newspaper (and as discussed in Chapter 2), the text here is inherently interwoven as part of the cartographic medium. The text on the Series 2168 maps can be divided into two categories: the standard printed text and keys of the map and the additional text added by cartographers that help to designate the map as a 'working drawing'. The unique handwritten notation, or marginalia, adds another layer of information to the surface of the map. Among the items that are recorded in this manner is the change in location of public functions, new dimensions for infrastructure, coordinates of latitude and longitude, new map and diagram numbers for lots whose function and size had changed, instructions to cartographers, calculations, new road layouts and names, lessee and purchaser's names and organisations, the status of a lease, instructions for surveyors in the field and, finally, the cancellation date.

Across the individual maps in the Series 2168, there is a hierarchy of handwritten text, using a number of different media and by many different hands (as indicated by the different letter and numeral formations). Red ink is almost exclusively used for annotations associated with 'reserved lots' and the organisations or individuals associated with those reservations. Red ink is also used to mark significant dates such as the issuing of the map, the gazetting of the town, date of application for the mining leases, the nature of public use and the cancellation of the map. The use of red ink indicates the addition of a note to the map that is more or less permanent, signalling that information has literally been red-inked onto the map (Figure 7.9) and transferred to the printed text for the next issue of the map. There are exceptions when the red ink is crossed out, and a new title or date added. Less

Bible Xthians

100 100 100 100 100 100 100 100 100 100

1200 2230

DUGAN

100	100	100	100	100	100	100	100	100	100
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42	42		300	3626			3627		
4695	4695		96	Sisters of the People			Pub Buildings		

250

131	132	133	134	135	136	137	138	139	140
100	100	100	100	100	100	100	100	100	100

8039/96

Each

3627

PBld

BROOKMAN

100 100 100 100 100 100 100

148 147 146 145 144

Kalgoorlie Townsite, Map 2 (19.08.1896), Department of Lands and Surveys (Detail)

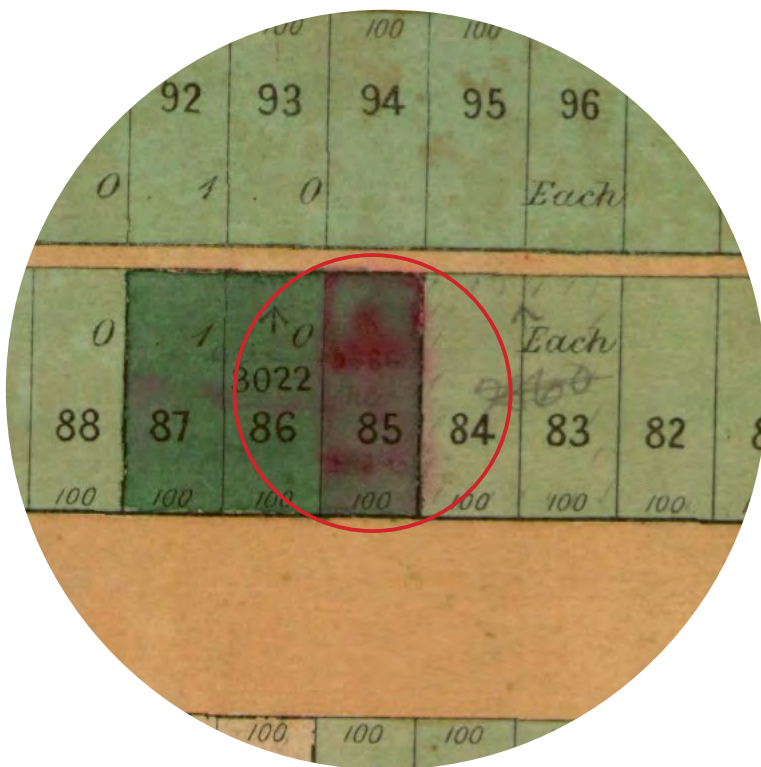
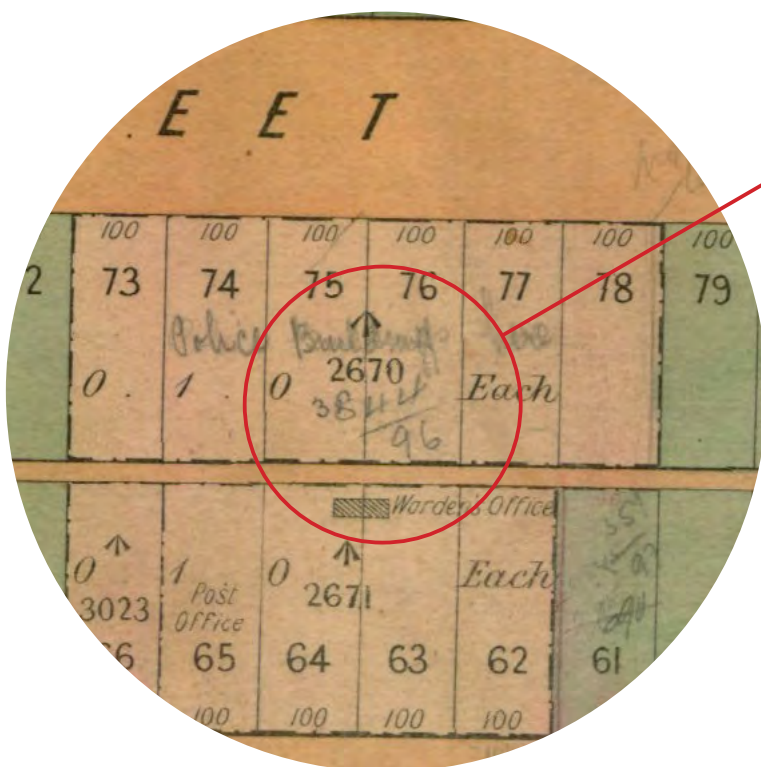


Figure 7.7b:
Painting over of Reserve Status with Freehold Status
Kalgoorlie Townsite, Map 2 (19.08.1896), Department of Lands and Surveys.



The notation
3844
96
indicates that this is
note was note 3844 in
the year 1896.

Figure 7.8: Detail of pencil notation and reference)
Kalgoorlie Townsite, Map 2 (19.08.1896), Department of Lands and Surveys

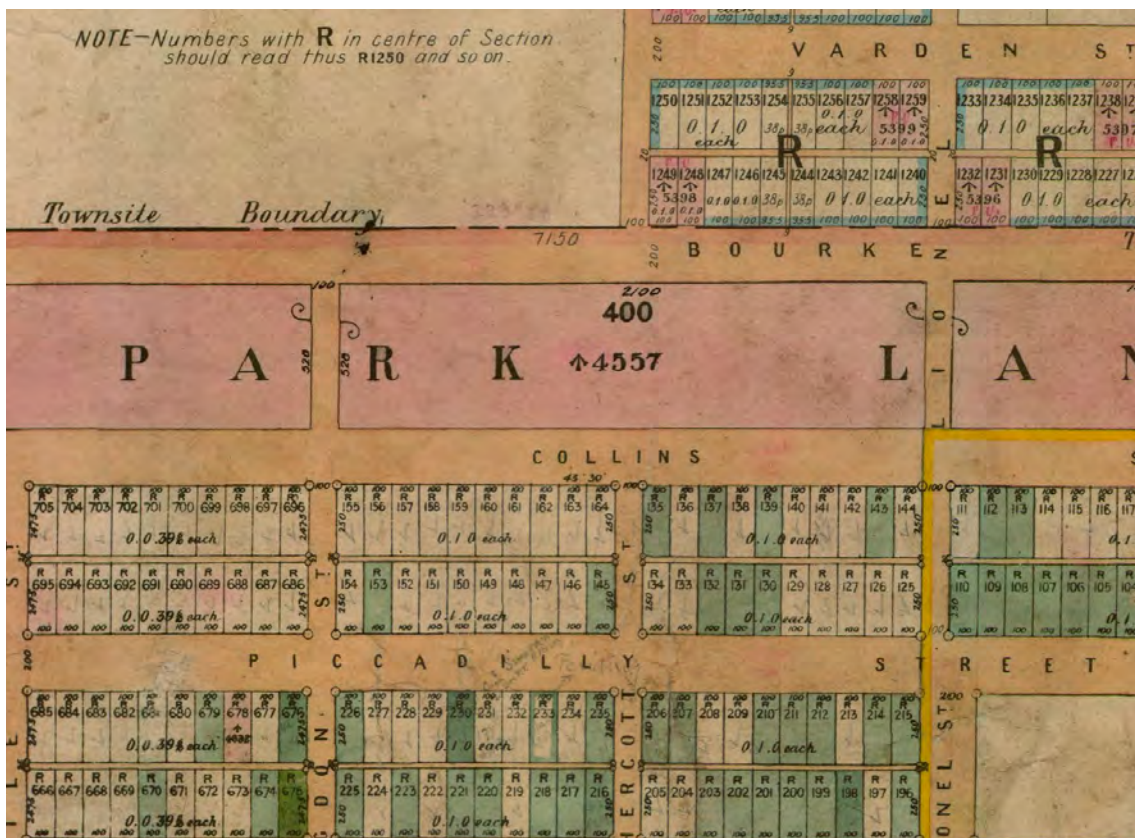


Figure 7.9a

Figure 7.9b

Note the change from 'Park Lands' handwritten in red ink on Map 3 to the printed PARK LANDS on Map 4

Detail of 'Kalgoorlie Townsite, Sheet 3', Department of Lands and Surveys, 1897–1898 (Reference code: AU WA S2168- cons5698 0829) The State Records Office of Western Australia, Perth

Detail of 'Kalgoorlie Townsite, Sheet 4', Department of Lands and Surveys, 1898–1899 (Reference code: AU WA S2168- cons5698 0830) The State Records Office of Western Australia, Perth

formal marginalia are made by a pencil, and these markings are used to indicate the temporary reservation, ticks and crosses on the lots to note sales, notation for Land and Survey Department files or correspondence, adjustment to lot dimension, new roads and notes about the cancelling of a title. Notation on some of the lots indicates the identity of the owner, leasee or group reserving the lot.

Importantly, many of these handwritten notes are coded with reference numbers (such as 3844/96) and that point the reader of the map to further detailed sources of information that sit outside of the maps (Figure 7.8). For example, this notation 3844/96 referred to Note Number/Year, of Department of Lands and Survey's files, many of which are now held by the State Records Office of Western Australia. The content of these files include correspondences, memorandums, telegraphs between field surveyors in the goldfields and the departmental bureaucrats located in Perth, requests for surveyor's field books, and detailed maps and tracings sent between Kalgoorlie, Boulder and Perth.⁷ There are additional handwritten notes in pencil on the Series 2168 maps that refer to other documents held by other government departments such as the Department of Mines and Department of Forestry. With the addition of these notes, drawings and references, the Series 2168 maps now have inscribed upon their surface the connection to other archives, both textual and visual, acknowledging the map's importance and centrality in this matrix of contemporaneous (and historical) archival information. When the records to which this notation refers exist, these further records allow the viewer to understand the nature of the changes that have been made to the town and the role that the maps play in depicting these changes.⁸ These textual notations and additions to the maps locate the threshold of the map to hold or organised certain types of extra-textual and pictorial information and as such represent a limit of the representational capabilities of the map.

⁷ Department of Lands and Surveys archives, now held at the State Records Office of Western Australia, were consulted between May and June 2014.

⁸ In addition to the information held directly by the SRO on the Department of Lands and Survey, other information such as public notices published by the Warden's Court and printed in local newspapers such as *The Kalgoorlie Miner* provide further detail on specific mining and urban leases.

That Series 2168 records the change between issues of the maps means that they are significant, if not unique, in understanding the process and gauging the progress of Kalgoorlie and Boulder's urban expansion and interaction with the development of the adjacent Goldfields. While maps are conventionally thought of as a record of space, because of the nature of these particular maps, how they were used and the notation that was added to them, they also serve as a record of time and of the urban processes that occurred within the period of their use.

Reading and Redrawing the Case Study Object

For this case study and to further explore the map's ability to record these processes of urban change over time, the maps issued in the study period have been serialised. As the starting point of a working methodology for this case study, this serialisation allows for systematic analysis across the set of maps rather than restricting the investigation of boom urbanism to a singular map. The serialisation of maps and the close reading between these now serialised objects provides the opportunity for identification and analysis of moments of change that begin to define the processes and outcomes of boom urbanisation.

As in the first two case studies, the reorganisation of the material under investigation in a different format from its original production is an integral part of the close reading technique. In this case study, this reorganisation of the original material was through a process of serialisation of the Series 2168 maps into a chronological timeline. Undertaken using the software program Adobe Illustrator, a vector-based drawing and layout program, the program's organisation structure means that information imported into and created within each file can be organised into a separate layer, each with various controls of visibility, transparency and manipulability of the information contained in the layer. The case study utilised the State Records Office's free digital download of Series 2168 maps at a resolution of 72 dpi and a size of approximately 6500 x 4500 pixels. A separate Illustrator document was created for both Kalgoorlie and Boulder into which all of the Series 2168 maps were imported, arranged chronologically, with the same scale and orientation on a single base layer (Figure 7.11). The maps were aligned in the Illustrator file so that they shared an initial cartographic set-out



Map 1	Map 2	Map 3
10.08.1894	19.08.1896	16.07.1897
-03.09.1896	-20.07.1897	-xx.xx.xx

Figure 7.10 The first three issues of the Kalgoorlie Townsite map from 1894-1897 show-ing change in map scale and media size

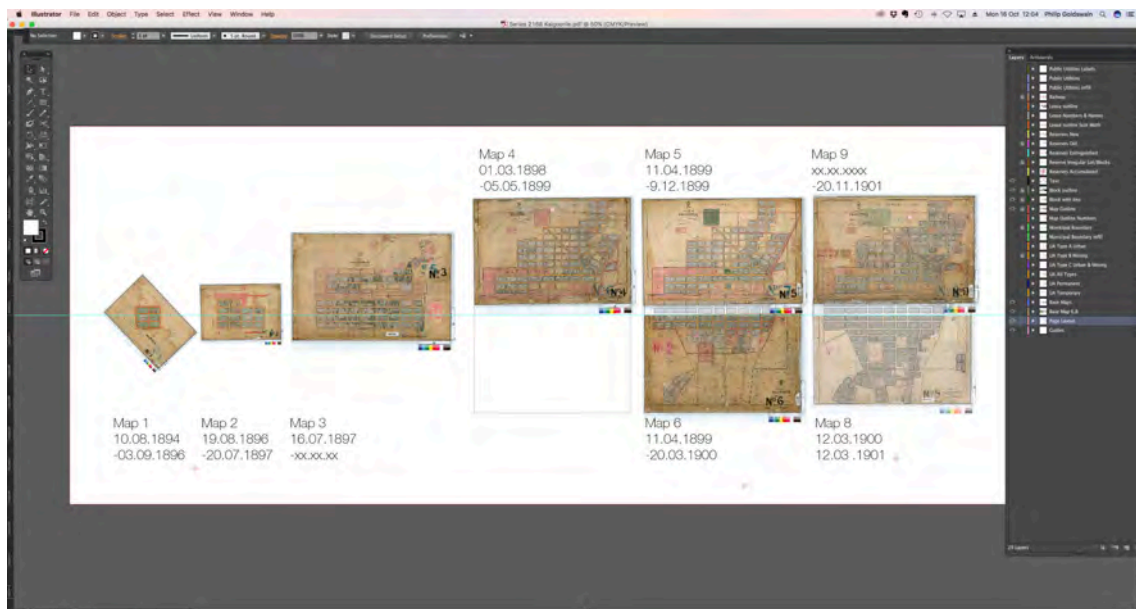


Figure 7.11 The Kalgoorlie Townsite digital map files imported and arranged chronologically, at the same scale and orientation in Adobe Illustrator

point. Once organised chronologically at the common scale and orientation, selected elements from within the map such as blocks, lots, mining leases and municipal boundaries were ‘traced’. The original digital map was always maintained as a base layer in the Illustrator file as a reference point from which information could be drawn and referred to for clarification. The tracings were initially not drawn at scale as the emphasis was on the change between maps rather than the exact dimension of the change. Tracing as a drawing technique was utilised here as part of a process of understanding the original map.

As stated early in the chapter, the maps are dense with information about the places they depict. Much of this information is textually and graphically overlapping. Tracing common cartographic elements across the serially organised maps offers the opportunity to draw out and isolate elements (and various combinations of information) from within these information-rich maps for analysis, and to gauge how those elements changed across the process of the boom between 1894 and 1905. For example, urban elements (such as blocks) and mining elements (like as leases) were traced and placed onto separate layers within the Illustrator drawing file, which could be turned on and off within the drawing program according to which information was to be isolated or combined.

Three different types of graphic information were isolated through the tracing processes:

1. Lines: tracing existing elements on Series 2168—the outline of blocks, railways, parklands, reserves and leases (Figure 7.12a–b). These lines largely corresponded to printed material drawn from the Series 2168 base map.
2. Infill Blocks: blocks of colour highlight areas on the maps such as the uses, the ‘status’ of a lot as well as graphic shorthand for detailed information (Figure 7.13a–b).
 - a. Usage: differentiated residential, public and townsite usage that shifted across the serially organised maps.
 - b. Status: reserved lots in force, extinguished or newly established on a map sheet.



Figure 7.12a: Lines: existing line elements on all the Kalgoorlie Townsite maps.



Figure 7.12b: Lines: existing line elements on all the Kalgoorlie Townsite maps.
(Detail, Map 4)

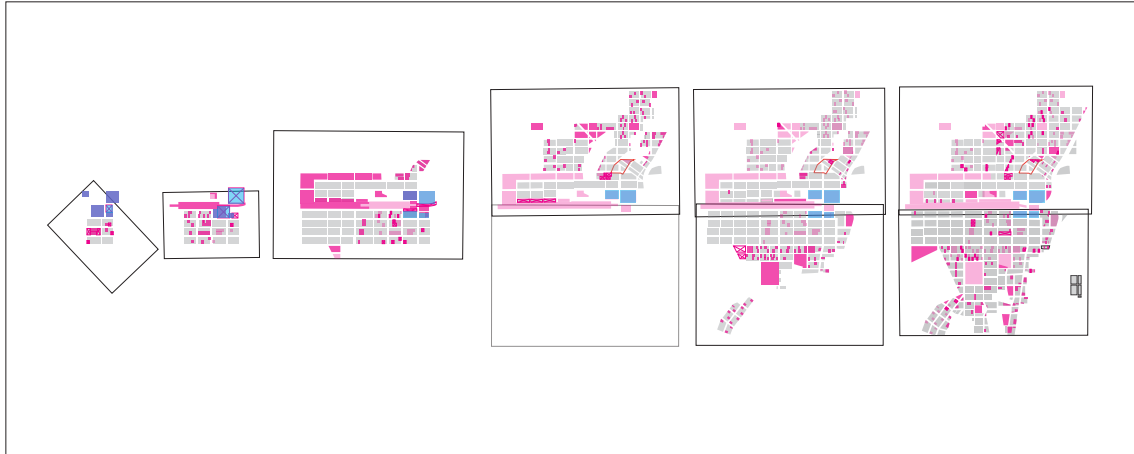


Figure 7.13a: Infill: colour highlighted areas on the Kalgoorlie Townsite maps.

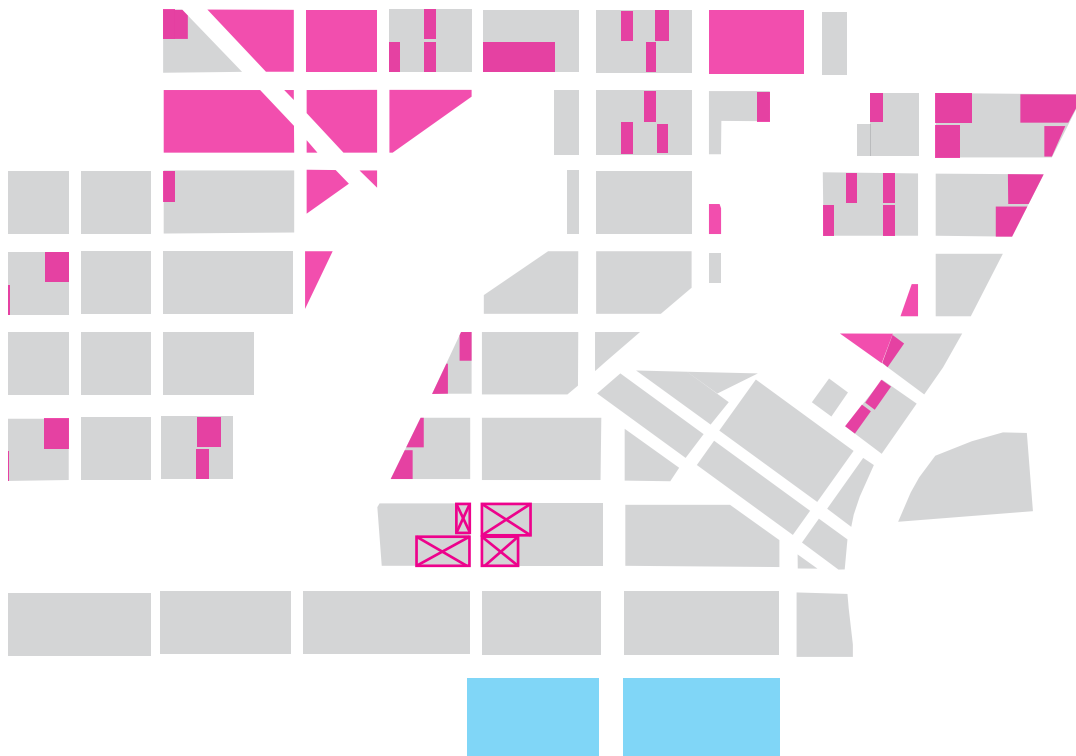


Figure 7.13b: Infill: colour highlighted areas on the Kalgoorlie Townsite maps.
(Detail, Map 4)

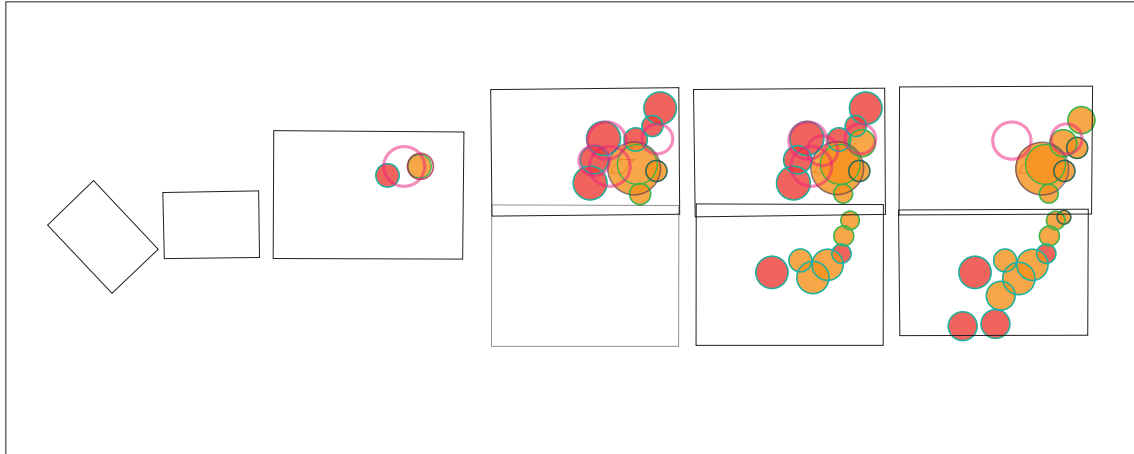


Figure 7.14a: Signifiers: notation that points to Urban Anomalies on the Kalgoorlie Townsite maps

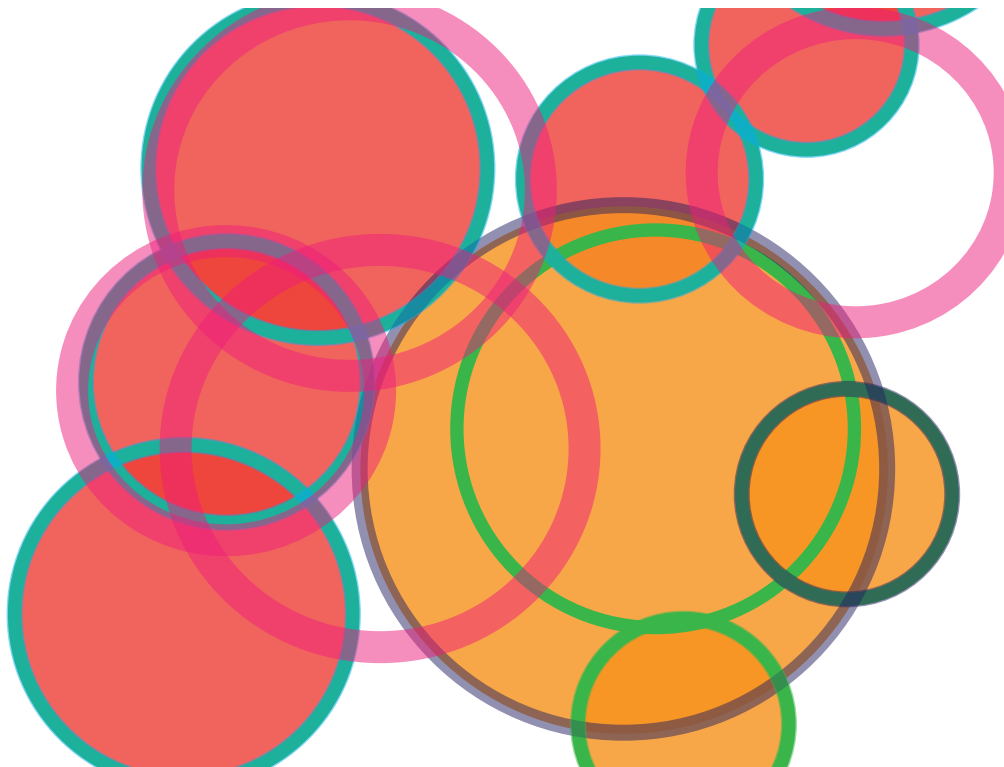


Figure 7.14b: (Detail, Map 4)

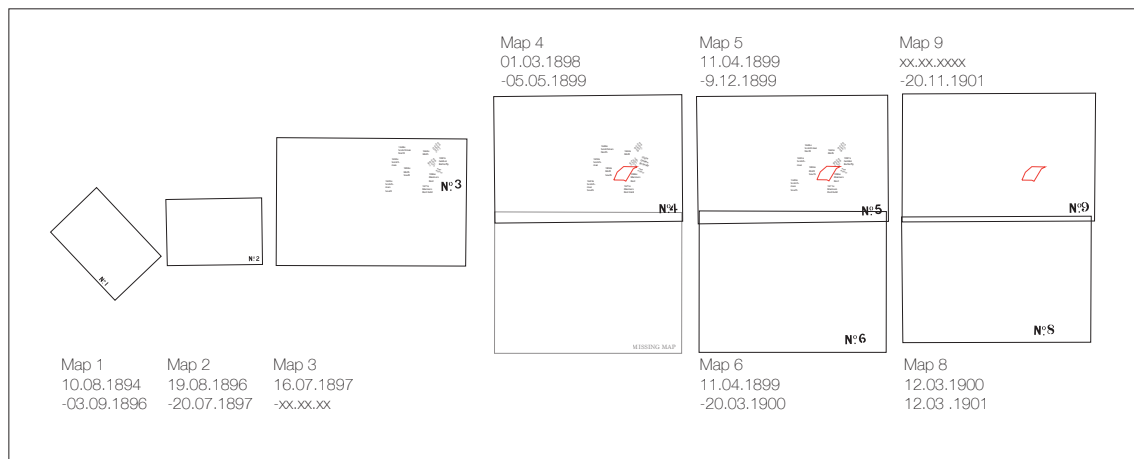


Figure 7.15a Text: Notation found on base Series 2168 maps plus serial layout text.

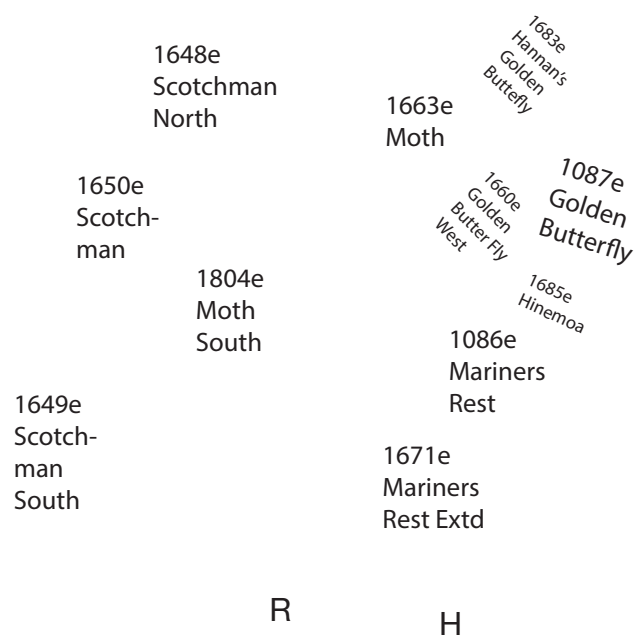


Figure 7.15b Text: Notation found on base Series 2168 maps plus serial layout text. .(Detail, Map 4)

- c. Coded: blocks of colour were used to indicate the qualities of the block that might have been too detailed to draw, but that indicates a change in status. Here, light grey infill represented urban blocks that had been divided into individual lots, an important step in the process of change from a mining lease to a residential block with lots ready for sale.

3. Drawing Layout: Text, site information and other graphics found on the original map (Figure 7.15a–b).

Several other layers were added to the file once the initial tracing had been completed. These layers located pointed to information that had been discovered in the tracing process. Principally this notation pointed to the location of interactions between urban and mining leases that resulted in ‘urban anomalies’. Colour coding identified these anomalies’ status as either temporary or permanent and the cause of their occurrence (Figure 7.14a–b).

The tracing process worked chronologically on each iteration of the map from Sheet 1 for each townsite. For example, once the tracing of the lines, infill and urban blocks for one map sheet were completed, these drawing elements were then digitally copied and laid over the next issue of the map. While the copying and pasting this traced material allowed for an effecting drawing, more importantly, it allowed for gauging the growth and change between, and within, each issue of the map, as part of the drawing process. This copying process highlighted changes to lots or blocks within the previous urban boundary as they were copied to a new map, as well as serving as the starting point for the process of tracing the next ‘ring’ of urban development. Tracing, like the detailed analysis of photographs in the first two case studies was another form of close reading which allowed for the comprehensive investigation of the map as part of the drawing process. This brought to attention degrees of changes at a variety of scales that would have otherwise gone undetected without the close looking involved in the process of tracing.

Preliminary Outcome of Serialisation

The process of serialisation and tracing pointed to a number of initial findings about the urban morphology of Kalgoorlie and Boulder. Firstly, the change in scale, orientation and size of the individual of maps across time for both Kalgoorlie and Boulder itself tells a story about development and growth of the city (Figure 7.2a, Figure 7.2b, Figure 7.10). This was made evident as the digital maps were imported into Illustrator, orientated and scaled. The growth of the town can be seen most obviously in the early sequence of Kalgoorlie issued from 1894 to 1899. In this set of Series 2168 maps, Sheet 1 followed the cartographic convention of aligning/orientating the north point up the page, but by the second iteration of the map, the drawing was orientated so that the urban grid was parallel with the edge of the sheet of paper, to make the most efficient use of the orientation and format of the paper on which the map is printed. Between the second and third issue of the map, the scale was halved to accommodate the growth of the town on the same size sheet of paper. By the fourth issue of the map, a second sheet was required to map Kalgoorlie's growing suburbs. Boulder's growth required fewer changes in the formatting of the maps, and it is only at the 1901 issue of the townsite map that an additional leaf was required to depict the southern suburbs of Boulder. In contrast to the changes made to the orientation of the Kalgoorlie maps, it is only the expansion of Boulder between 1901 and 1905 that requires the orientation of sheets to change. The growth of Boulder's south-east suburbs appears to follow the trajectory of the gold seam's northwest-southeast alignment.

Serialising the Series 2168 maps reveals several additional factors that helped to define Kalgoorlie and Boulder's urban morphology as the town developed. For the purposes of this research, the normal factors that affected Kalgoorlie and Boulder's urban change and that could equally apply to non-mining towns (such as the provision of infrastructure like as railways, reserving of parkland, the shifting location of public service and public buildings) are excluded. The serialisation of the Series 2168 maps drew attention to a set of normal factors that include:

- 1894–1897—Large lots (between 10 and 20 acres) for large public functions such as hospitals and schools, cemeteries and recreational

reserves are flexible in their peripheral positions in Kalgoorlie from gazetting until 1899.

- 1897–1899—The railway reserve appears to limit the northern expansion of the mercantile centre and instead pushes its growth westward (between Sheet 2 and Sheet 3).
- 1897–1899—Parkland reserve contains the westward growth of suburban areas like Piccadilly and other suburbs which results in the suburbs growing northward and southward increasing the interactions with the mining leases.
- 1899—The direction of this suburb is suburban growth is limited by the extension of the railway line north and south at the end of the eastern edge of the urban grid restricts the growth of the city eastwards.
- 1899–1905—Suburban growth is north and south. Southern suburbs of Kalgoorlie eventually join with Boulder.

Unlike the development of Kalgoorlie, mining leases had an immediate impact on the urban form of Boulder from the time of its gazetting. However, it is worth noting other, more minor, influences on Boulder's urban form and development:

- 1898—Placement of the railway line and reserve adjacent to the townsite's eastern boundary. The railway line is also influential in shaping the suburban growth the south from 1899 to 1905.
- 1899–1905—The reserve of a band of parkland to the towns: north, south and east.
- 1905—The addition of parklands, cemetery and explosive's depot to the south of the townsite.

However, what distinguishes the development of Kalgoorlie and Boulder's urban grid form is the towns' proximity and interaction with the adjacent goldfields.

Despite the provision in the planning of the Kalgoorlie and Boulder that the goldfield and the town might grow away from one another, they are so close to one another that both 'orders'—urban and mining—contest the same ground.

Unsurprisingly then, the relationship between the urban lots and the mining leases is characterised by conflict, and this is evident in the wording of the Goldfields Act,

1895, that governed goldfields and its leases across Western Australia. The language of the Act describes this contested ground where mining leases are 'in force' before being 'surrendered', 'forfeited', 'abandoned' or made 'voidable'. The Warden can 'refuse, void or grant' leases which are 'liable to seizure'.⁹ If the state government's legislative framework current at the time, was strictly applied when a goldmining lease was 'in force', it precluded the existence of municipal land. However, despite these legislative requirements, the relationship between the mining and urban lease is not a binary relationship of one extinguishing or preventing the other. There are several instances where mining and urban leases appear to coexist, sometimes with institutional recognition and others on an ad hoc basis, which produces a hybrid form that contains elements of both the urban and the industrial. The contestation of the ground is not simply between the mining and urban lease but also of a number of hybrid states between these two positions.

The Cartographic Representation of Urban Anomalies

The unique spaces, processes and urban events of the boom town might best be found at the interaction between the boom of the goldfields and the development of the town. The serialised Series 2168 maps indicate that there are three different kinds of interaction between mining leases, urban grid and infrastructure which result in deviations away from the grid laid out at the gazetting of both towns and its expected development. It is worth noting that from their gazetting, both Boulder and Kalgoorlie contain within their urban grids what might be considered anomalies. Instead of the 120 lots in Kalgoorlie being divided into evenly into six blocks of 20 lots, the lots are in three groups of 22 and three groups of 18. Boulder is compromised by mining lease from its inception with the residential lot 1, 2 and 15 all truncated by the presence of the adjacent mining leases. The interactions between infrastructure, mining and the city-making that occur from the already compromised beginnings of the towns produce a series of different urban forms (and therefore spatial conditions) that have been termed 'urban anomalies'. Across

⁹ *The Goldfields Act 1895* (WA) Section 'force': Sections 14 and 15.

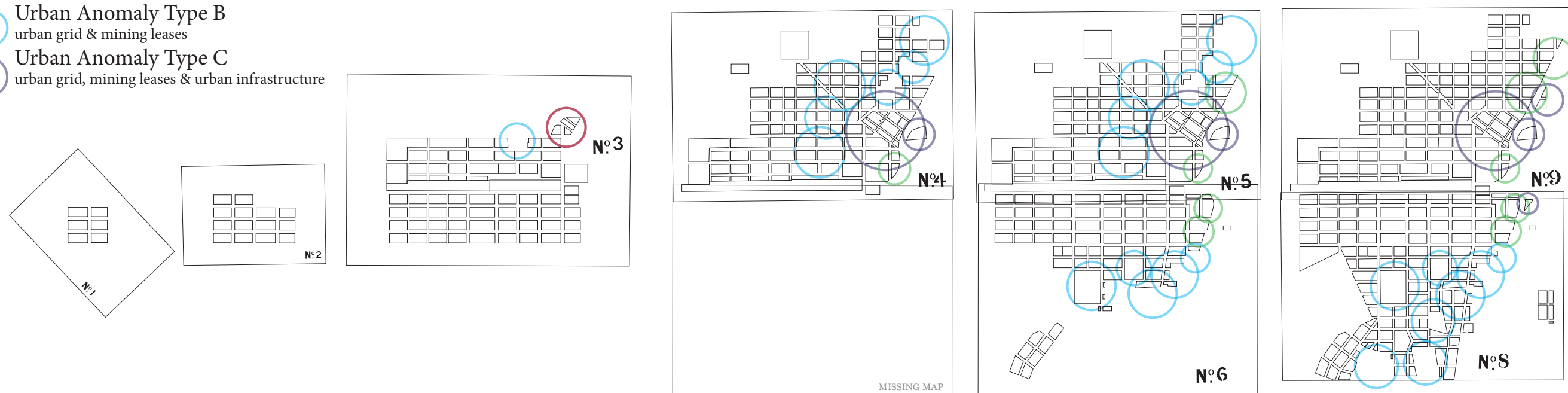
the ten years of the study period and both towns, there are three broad categories of urban anomalies that can be defined as:

1. Urban Anomaly Type A—the interaction between urban grid and the insertion of urban infrastructure (such as roads, railways, civic functions and parks)
2. Urban Anomaly Type B—the interaction between urban grid and mining leases
3. Urban Anomaly Type C—the interaction between three factors of the urban grid, mining leases and insertion of urban infrastructure.

As can be seen from the maps of Kalgoorlie (Figure 7.16a) and Boulder (Figure 7.16b) the study has identified a number of the Type A, B and C urban anomalies. Further, these three types of urban anomalies can be further categorised as either making temporary or permanent changes to the town's urban grid as their impact is traced across the serialised maps for the study period. There are surprisingly few urban anomalies where the interaction between mining leases and urban lease that have left a permanent change on the townsite's urban form (Figure 7.17a and 7.17b). By far the greatest number of anomalies only occur temporarily in development of the Boulder and Kalgoorlie urban grids. These temporary anomalies are generally caused by the interaction with a neighbouring or overlapping mining lease that is still in force. The serialised maps and the identification of these anomalies indicate that the process of the interaction between mining and the urban lease is not restricted to the earlier phase of development of the town. This would appear to be an ongoing process of negotiation between the two orders. In the final map of the serialised maps for Boulder, more of those anomalies can be seen to emerge as the urban grid of Boulder moves further north and south. While the development of these anomalies is outside of the scope of this study, it can be seen that almost a decade after its gazetting, the contested ground between Boulder and the Golden Mile continues to produce such anomalies of the urban grid form.

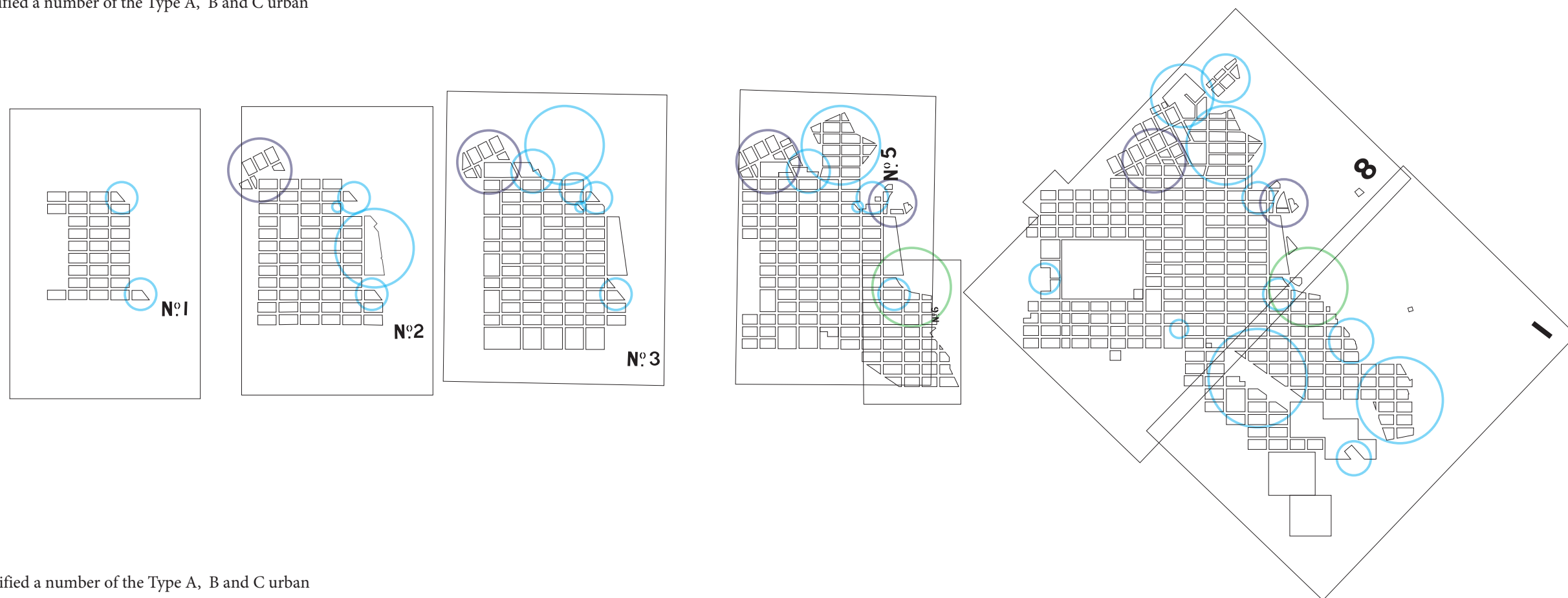
For this discussion Urban Anomaly Type A, where the factors that produce variations to the grid form could equally apply to a non-mining town, such the

-  Urban Anomaly Type A
urban grid & urban infrastructure
-  Urban Anomaly Type B
urban grid & mining leases
-  Urban Anomaly Type C
urban grid, mining leases & urban infrastructure



Kalgoorlie

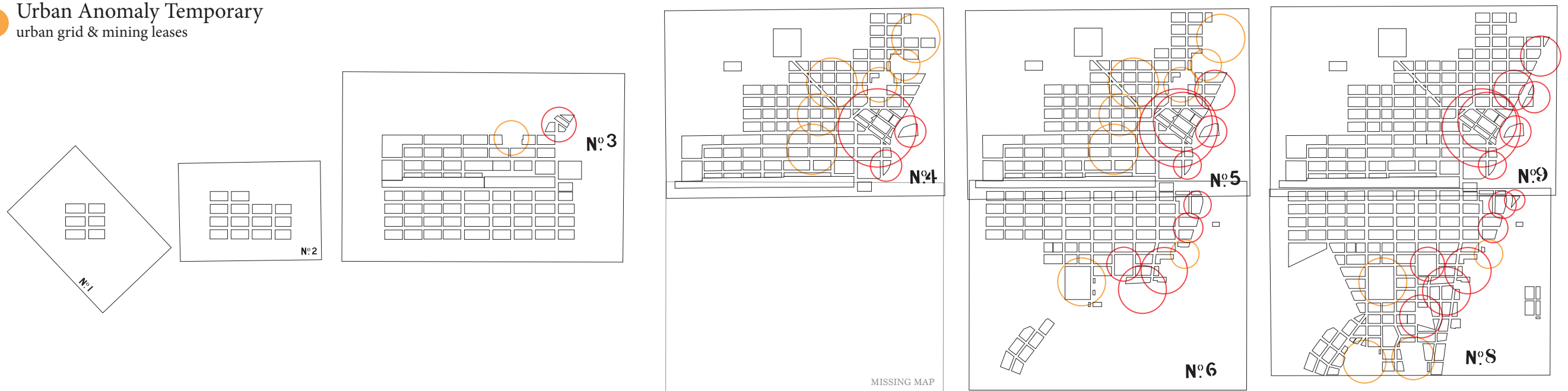
Figure 7.16a: Identified a number of the Type A, B and C urban anomalies



Boulder

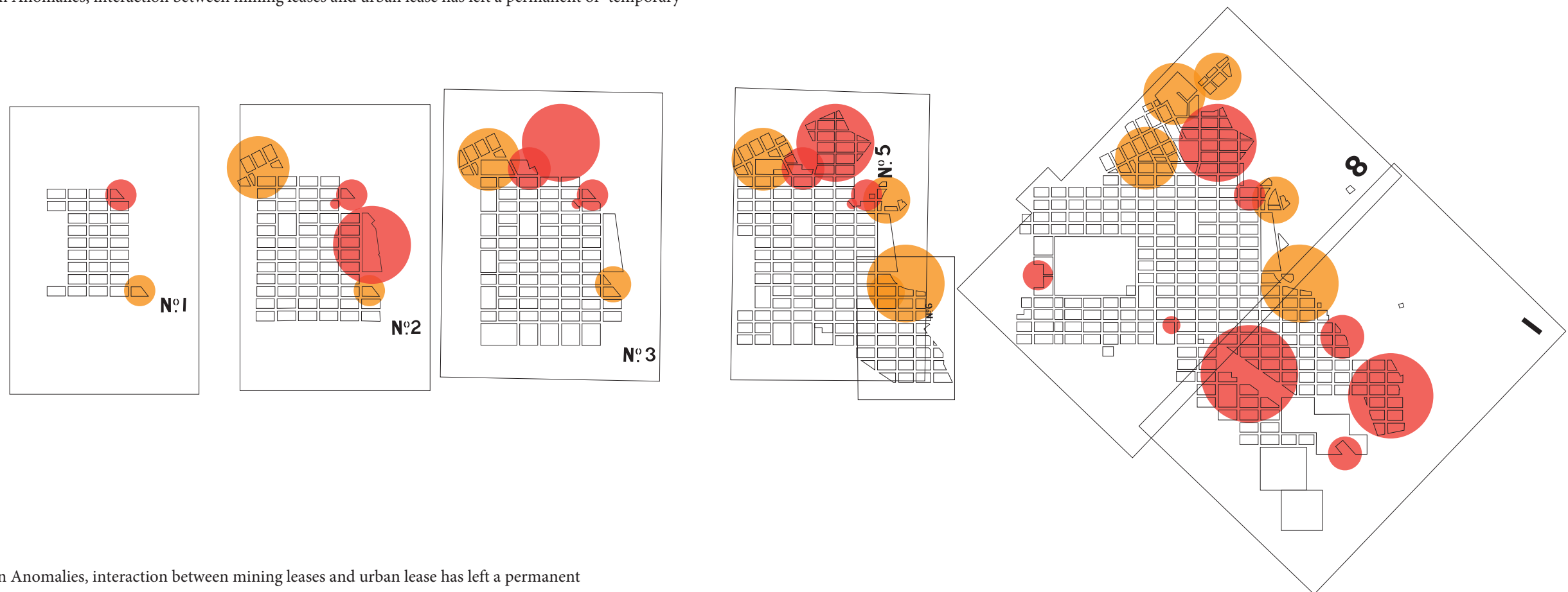
Figure 7.16b: Identified a number of the Type A, B and C urban anomalies

- Urban Anomaly Permanent
urban grid & urban infrastructure
- Urban Anomaly Temporary
urban grid & mining leases



Kalgoorlie

Figure 7.17a: Urban Anomalies, interaction between mining leases and urban lease has left a permanent or temporary change



Boulder

Figure 7.17b: Urban Anomalies, interaction between mining leases and urban lease has left a permanent or temporary change

interaction between the urban grid and the provision of expected urban infrastructure like railways, hospital, schools, parks and public buildings are outside of the scope of the thesis's investigation. Instead, the thesis focuses on Urban Anomaly Types B and C, where new urban and spatial forms which result from the interaction between urban leases and the combination of mining lease and urban infrastructure.

The next section of the chapter will look in detail at several urban phenomena that emerge from the serialisation and tracing process. Firstly, the research will investigate a number of both permanent and temporary urban anomalies and describe the process of their development and the impact on the urban form of Kalgoorlie and Boulder. The research examines in detail four permanent and temporary urban anomalies, two each from Kalgoorlie and Boulder, to understand how these urban events might reveal the nature of the interaction between the urban and mining leases. Secondly, the research investigates the development of Boulder's municipal boundary, which registers another type of interaction between mining and urban development that was revealed through the tracing process. Thirdly, the serialisation and tracing process pointed to the use of the changing status of the reserve lot as a way to manage the urban boom.

While these readings of the interaction between mining and urbanisation emerge from the serialised 'mapped maps' generated by the author, they also utilise a series of secondary sources of support information that are often noted by the handwritten additions to the maps. These references include the Department of Lands and Surveys archive held by the SRO, newspaper publication of the Warden's Court notices via the Trove digital archive of newspapers as well as more general contemporary newspaper accounts.

Urban Anomaly 1

Urban Anomaly Type C (Mining & Infrastructure), Permanent, Boulder

By the second issue of the Boulder townsite map in March 1897, a permanent urban anomaly can be found in the grid of the new town (Figure 7.18). This anomaly is categorised as Urban Anomaly Type C, where the interaction between



Figure 7.18: An Urban Anomaly appears in the second issue of the Boulder townsite map

Urban Anomaly highlighted on detail of 'Boulder Townsite Sheet 2', Department of Lands and Surveys, 1898, (Reference code: AU WA S2168- cons5698 0177) The State Records Office of Western Australia, Perth

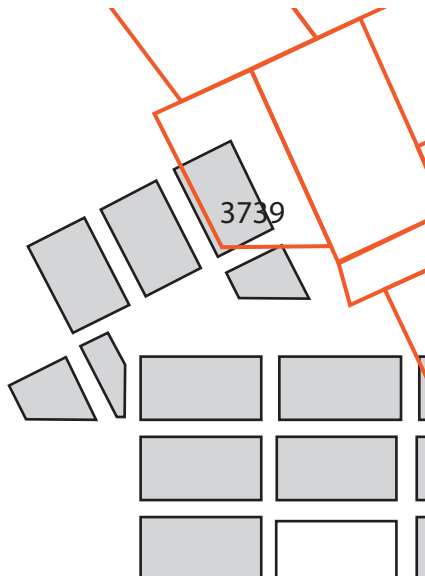


Figure 7.19a
Boulder Townsite Map 2 (1897)(Detail)
In Urban Anomolay 1, the six urban blocks seem to be roughly aligned with the orientation of the adjoining gold mining lease 3749e

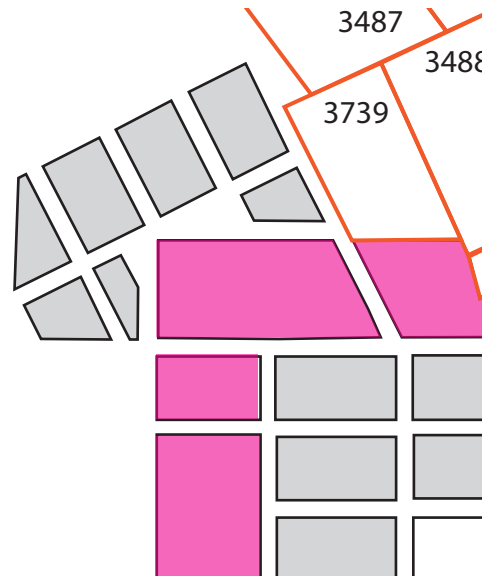


Figure 7.19b
Boulder Townsite Map 3 (1898)(Detail)
The insertion of parkland displaces the urban blocks to the northwest, another block is added and they are aligned a street width away from the edge of 3739e

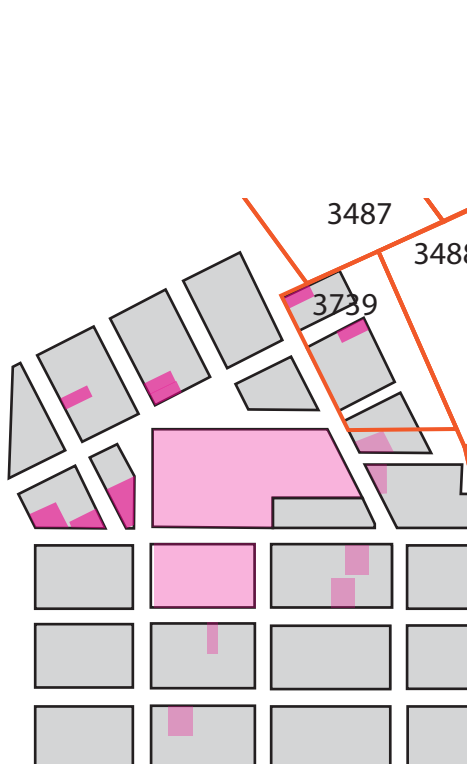


Figure 7.19c
Boulder Townsite Map 5 (1899) (Detail)
By 1889 mining lease 3739e has failed and three new non-standard urban blocks have been inscribed within the lease's former footprint.



Figure 7.19d
Boulder Townsite Map 8 (c1901)
By the 1901 issue of the the townsite map the 'influence' of the failed mining lease 3739e as spread with a further eight urban blocks conform to the orientation of the lease as the urban blocks spread north.

urban grid and combination of the mining leases and insertion of urban infrastructure produces a new urban block arrangement. This first urban anomaly is a group of seven urban blocks (residence lots 679–773) on the north-west corner of Boulder which appears as part of the first residence extension of the Boulder townsite. The creation of this urban anomaly appears to occur in a number of separate processes that involve the insertion of public infrastructure in combination with interaction with surrounding mining leases (Figure 7.19a–d).

Firstly, the group of blocks appears to align roughly with mining lease 3739e (Figure 7.19a). This is despite the date of application for this lease being in dispute. The State Records Office also holds a goldmining lease forwarding application dated 1896 for a lease of the same number, but an advertisement in *The Kalgoorlie Miner* noted that the lease was applied for on 1 January 1898 by Messrs Beenhardt and Grigo.¹⁰ However, by the issue of Sheet 3 in March 1898, it appears that the urban blocks were aligned with mining lease 3739e as the new urban lots begin a standard road width away from the edge of the lease. More significantly, the urban blocks were displaced further to the northwest to accommodate the insertion of a ring of parkland between the centre of the town and the residence areas (represented by the pink infill in Figure 7.19b). By Boulder Townsite Sheet 5 (1899) the mining lease had been forfeited, and three new urban blocks were drawn within the boundaries of the failed 3739e lease (Figure 7.19c). To the south, a small portion of the parkland has been subdivided into eight lots with a back lane, and the beginnings of a road dashed onto the surface of the map. The subdivision of the park continued in the next map (1901) wherein the whole parkland was subdivided with two roads bisecting in a continuation of the existing roads. The large triangular road intersection, caused by the intersection of the different orientation of the grids, was filled with a new urban block (Figure 7.19d). This map illustrates the surprising influence of the failed mining lease whose

¹⁰ 'Notice Of Application For Gold Mining Lease. No. 3739E. Notice is hereby given that we, the under signed, have made application this day for a Lease under the Goldfields Act 1895, and the regulations of ground known as 'Ivanhoe Venture Extended' containing 12 acres, commencing at N.W. corner of Lease 348Se,thence W: 7 chains, thence S.S.E. 15 chains, thence E. 1\ chains, thence N.N.W. 16 chains. *as witness our hands and seals Kalgoorlie this 31st day of December, 1897. Richard Beenhardt & Paul Grigo.' *The Kalgoorlie Miner*, Saturday 1 January 1898.

impact spreads beyond its initial lease boundaries in a group of eight blocks to the north-west.

Urban Anomaly 2

Urban Anomaly Type B (Mining), Permanent Boulder

That the Boulder residential areas should bear the traces of the neighbouring mining leases as demonstrated by Urban Anomaly 1 is unsurprising when from its gazetting the form of the townsite was compromised by its interaction with mining leases. As highlighted in Figure 7.20a–c and Figure 7.21, the eastern-most blocks of the Boulder residential areas were truncated by the current mining lease, which prevented the realisation of the full 20 lot urban block. The common truncation of these two residential blocks will be investigated as the site of Urban Anomaly 2. While Urban Anomaly 1 leaves a permanent and obvious mark still visible at the urban scale of Boulder grid, Urban Anomaly 2 requires closer observation of the interaction between the urban and mining leases at a much smaller scale.

As demonstrated by the extensive discussion in Chapter 4 of Object 5, from the initial set out of Boulder's very first residential lot, the urban form of the town was compromised by the adjoining mining lease. In the south-east corner of the townsite, Mining Lease 1805e (Ivanhoe Consols) prevented the full 20 residential lot block from being realised with the lease's chamfer form truncating the block to only 15 lots. The mining lease effectively 'bounded' the eastward development of the block and Boulder. At the same time on the north side of Boulder, another urban block was similarly 'bounded' by the status of 3354e (Hannans Central Extended) and 1614e (Boulder Consols Extended) still being in force. This residential block was also overlapped by mining lease 3420e (Figure 7.21). This lease, in turn, also overlapped Boulder's townsite blocks, the location for business, civic and public functions, which resulted in these lots being reserved from sale even before they had been released. This unusual circumstance was noted by the correspondence between officials from the Department of Lands and Surveys in Perth and Boulder. These two urban Boulder blocks appear to have had the same urban condition: a standard urban block compromised by an in-force mining lease but that returned to an expected urban form when the lease fails. This is best

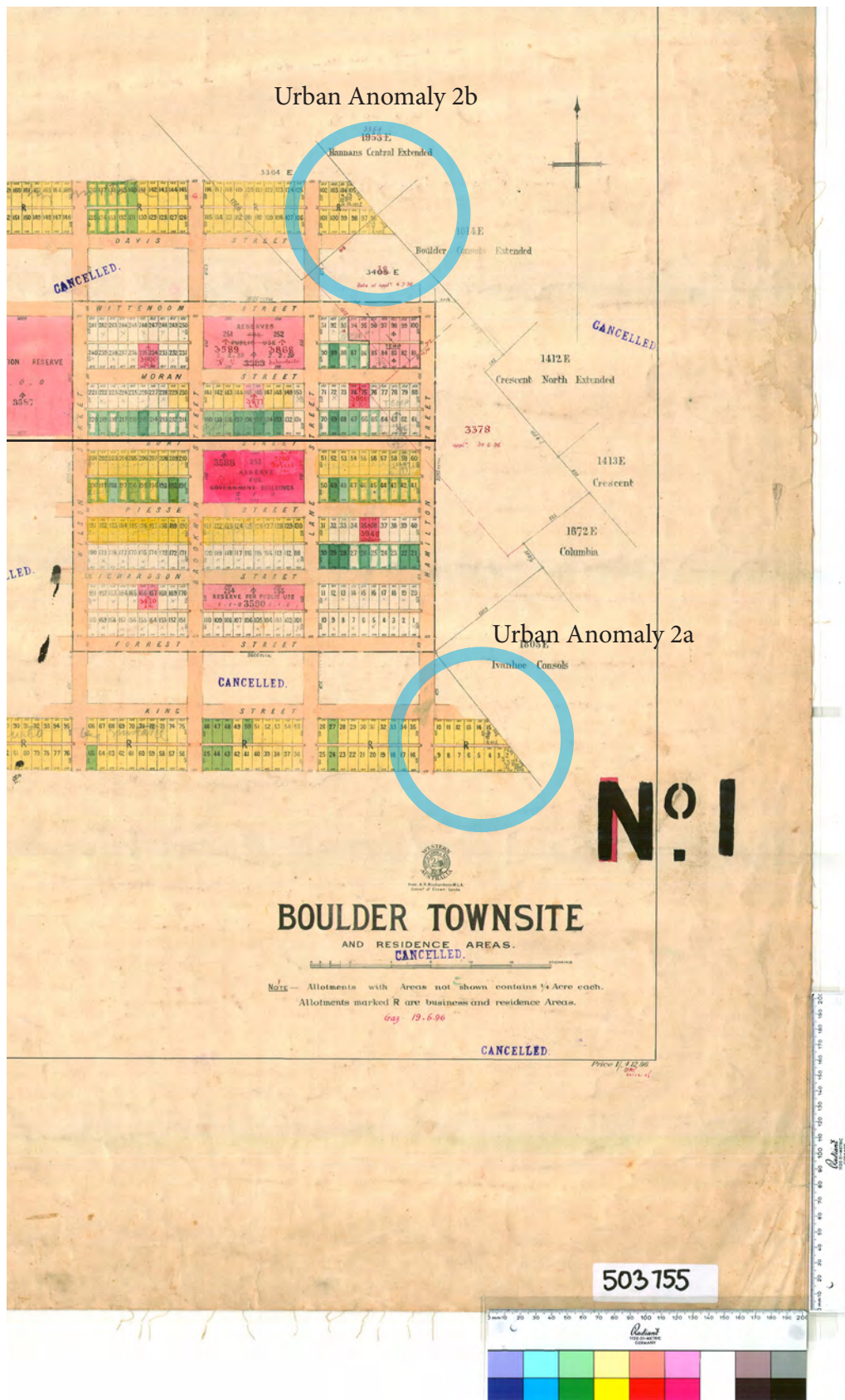


Figure 7.20a: Urban Anomalies circled on the Boulder Townsite Map Sheet 1

Urban Anomalies on detail of 'Boulder Townsite, Sheet 1' with author overlay,
Department of Lands and Surveys, 1896, (Reference code: AU WA S2168- cons5698
0175) The State Records Office of Western Australia, Perth

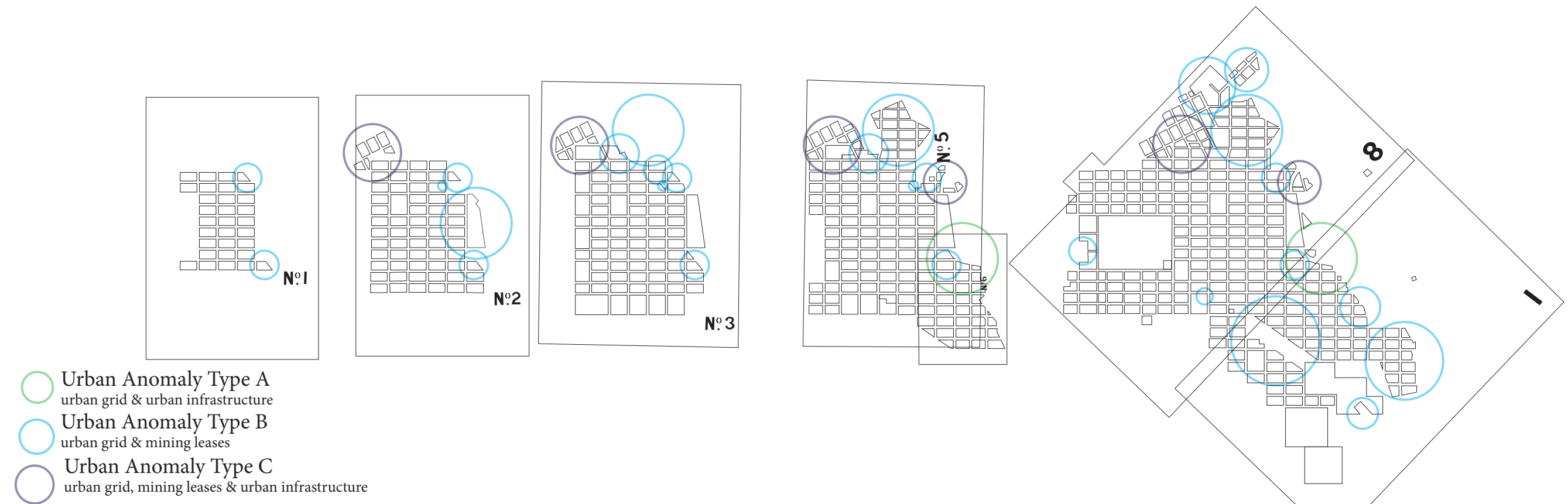
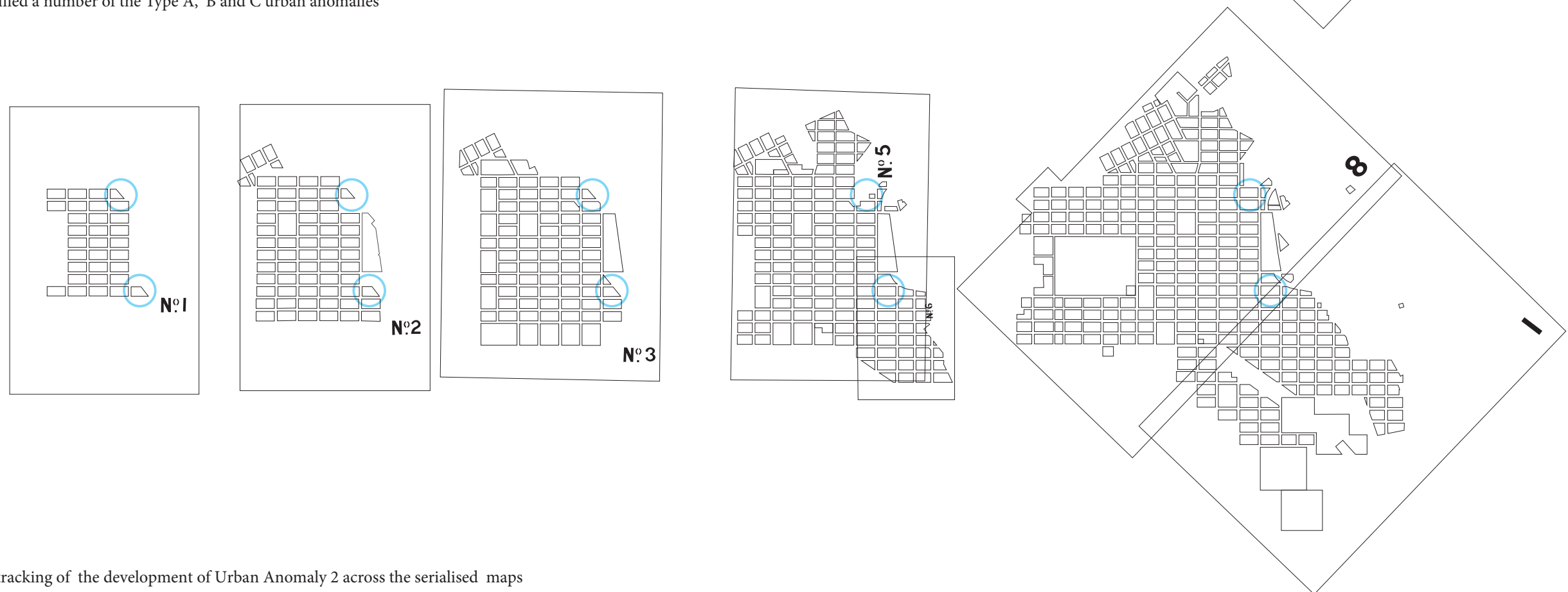


Figure 7.20b: Identified a number of the Type A, B and C urban anomalies



Boulder

Figure 7.20c : The tracking of the development of Urban Anomaly 2 across the serialised maps

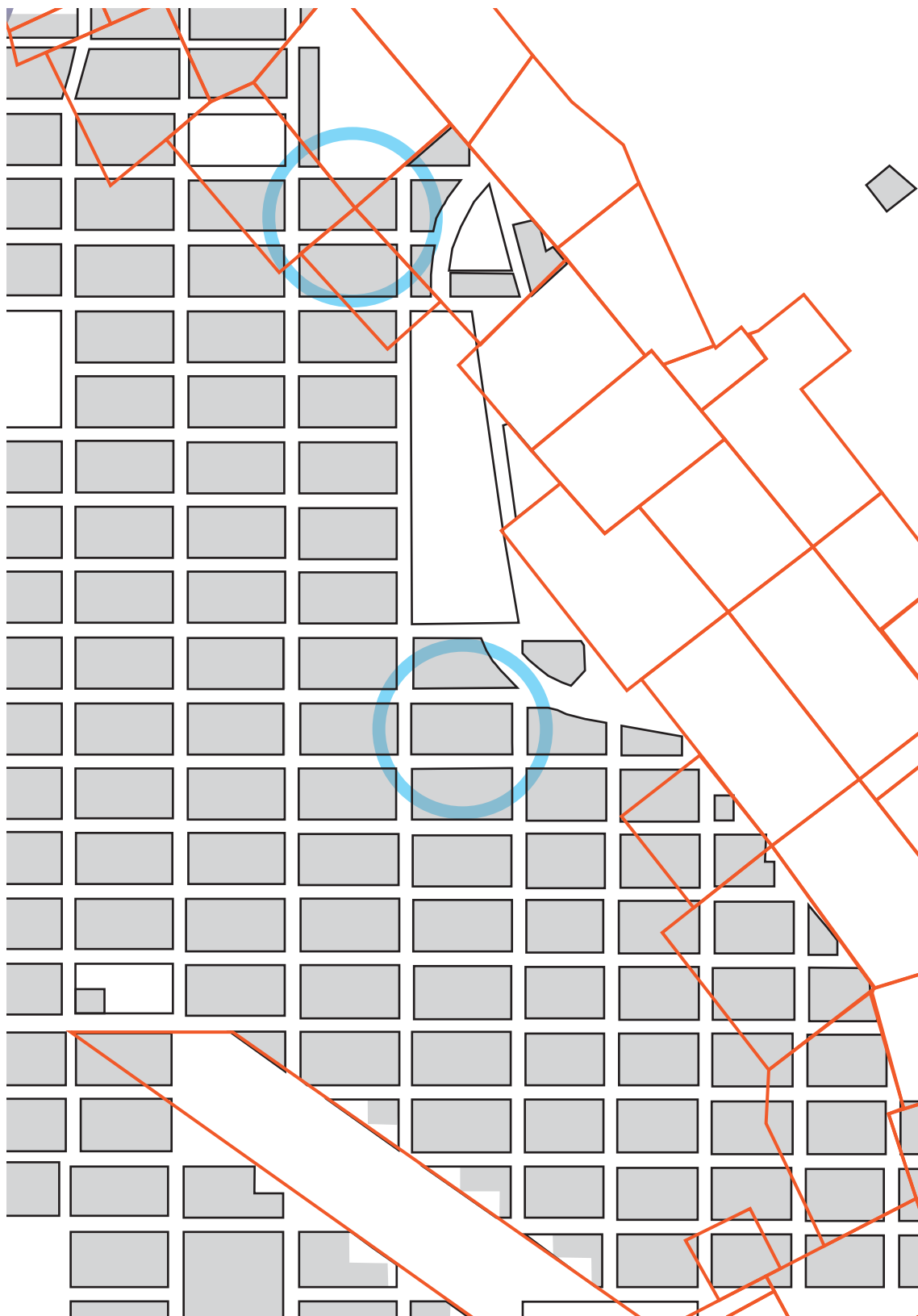


Figure 7.21 The same Urban Anomalies three years later

Author tracing of Boulder townsite plans, Sheets 9 & 1, Department of Lands and Surveys, 1896–1905 (Reference code: AU WA S2168- cons5698 0175-0183) The State Records Office of Western Australia, Perth

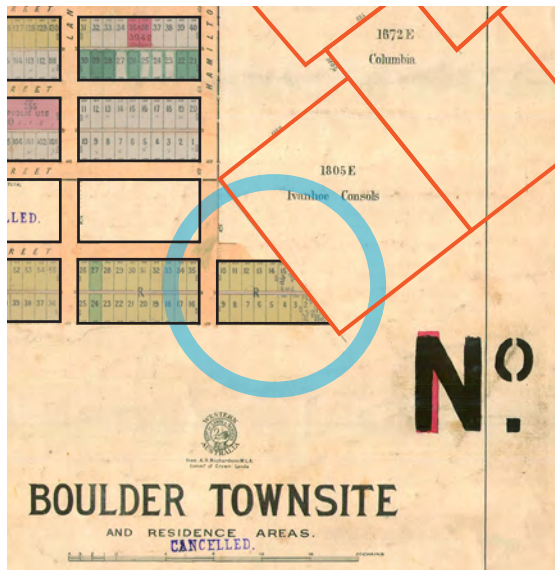


Figure 8.22a
Boulder Townsite Map 1 (1896)(Detail)
Urban Anomaly 2, Residential Block 1(lots
1- 15)
Mining Lease 1805e (Ivanhoe Consols) prevented
the full 20 residential lot block from being realised
with the lease's chamfer form truncating the block
to only 15 lots. The mining lease effectively 'bound-
ed' the eastward development of the block and
Boulder.

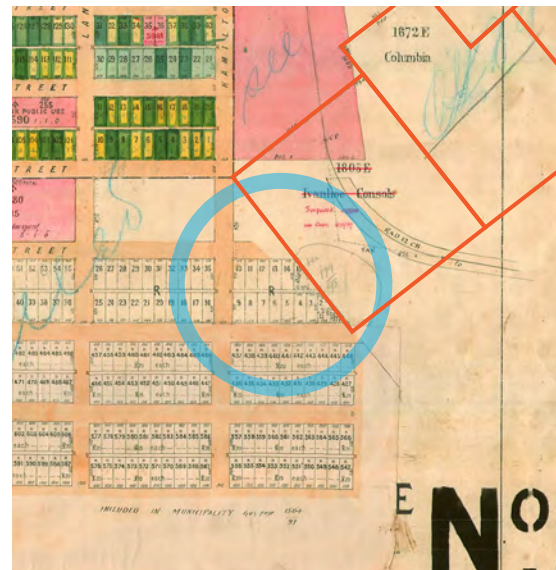


Figure 8.22b
Boulder Townsite Map 2 (1897)(Detail)

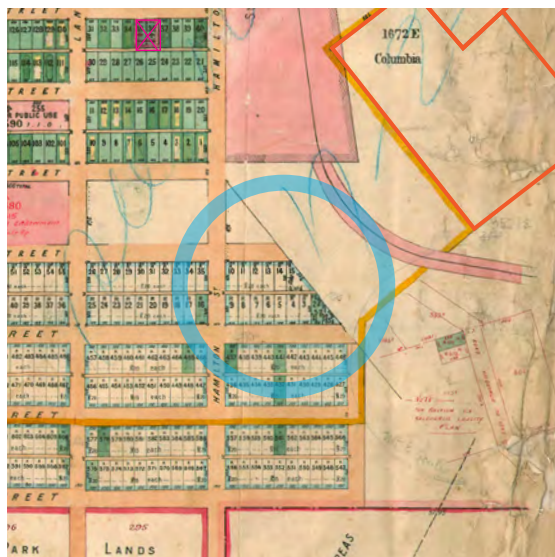


Figure 8.22c
Boulder Townsite Map 3 (1898) (Detail)
Both anomalies appear to be eventually 'corrected'
so that the chamfered form of the aberrant ur-
ban block (that consists of only 15 lots) reverts to
become a standard 20 lots rectangular form, the de-
sired outcome originally intended by the surveyor.

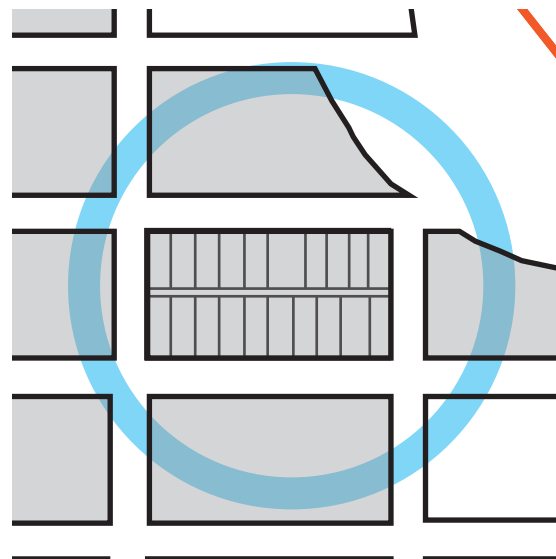


Figure 8.22d
Boulder Townsite Map 5 (1899) (Detail)
However, within the block the lots numbering and
dimensions suggest the urban block's previous com-
promised form. Even regularised, Lot 15 remains
the widest block at 152 feet, the new blocks that fill
in the 'chamfer' block measure only 87 feet wide
while the other regularised lots on the southern
part of the block were 111 and 87 feet width respec-
tively



Figure 8.22e
Boulder Townsite Map 8 (1899) (Detail)



Figure 8.22 f
Boulder Townsite Map 8 (c1901) (Detail)

illustrated by Figures 7.22c-f, which charts the process of the transformation of the urban block in southern Boulder from its compromised form to the regularised block. Both anomalies appear to be eventually 'corrected' so that the chamfered form of the aberrant urban block (that consists of only 15 lots) reverts to become a standard 20 lots rectangular form, the desired outcome initially intended by the surveyor. However, within the block, the lot numbering and dimensions suggest the urban block's previous compromised form. Even regularised, Lot 15 remains the widest block at 152 feet, the new blocks that fill in the 'chamfer' block measure only 87 feet wide while the other regularised lots on the southern part of the block were 111 and 87 feet width respectively. The lot numbers in the new regularised portion of the block continued from the most recent town lot number sequence and remained out of sequence from the rest of the lots in the block. These small details—lot size and lot number—point to the permanent and subtle changes that the interaction with mining had on the urban form. The internal structure of the block had changed despite the outer dimensions of the block complying to the typical dimensions of a standard block. While the lot numbers make no impact on the spatiality of the residential area, the incongruity of one block being 50% bigger than its neighbours is anomalous when considering the surveyor's desire for uniformity.

Urban Anomalies 1 and 2 illustrate the influence of the mining lease on the form of the urban grid and the lease's place in the process of urbanisation in Boulder. The lease's impact on the urban form was permanent (and at least at two very different scales), and the existence of the mining leases necessitated a negotiation between the two orders that regulated the spaces of the goldfield and the boom town.

Urban Anomaly 3

Temporary, Urban Anomaly Type B (Mining), Boulder

These temporary impacts, and the process of negotiation, can be seen at the site of the Urban Anomaly 3, a Type B (Mining), a temporary aberration that arose as a result of the interaction between the mining lease and the urban grid. Urban Anomaly 3 sets itself apart from the other urban anomalies discussed so far in the scale and rapidity of the change that occurred there.). This event occurred as one

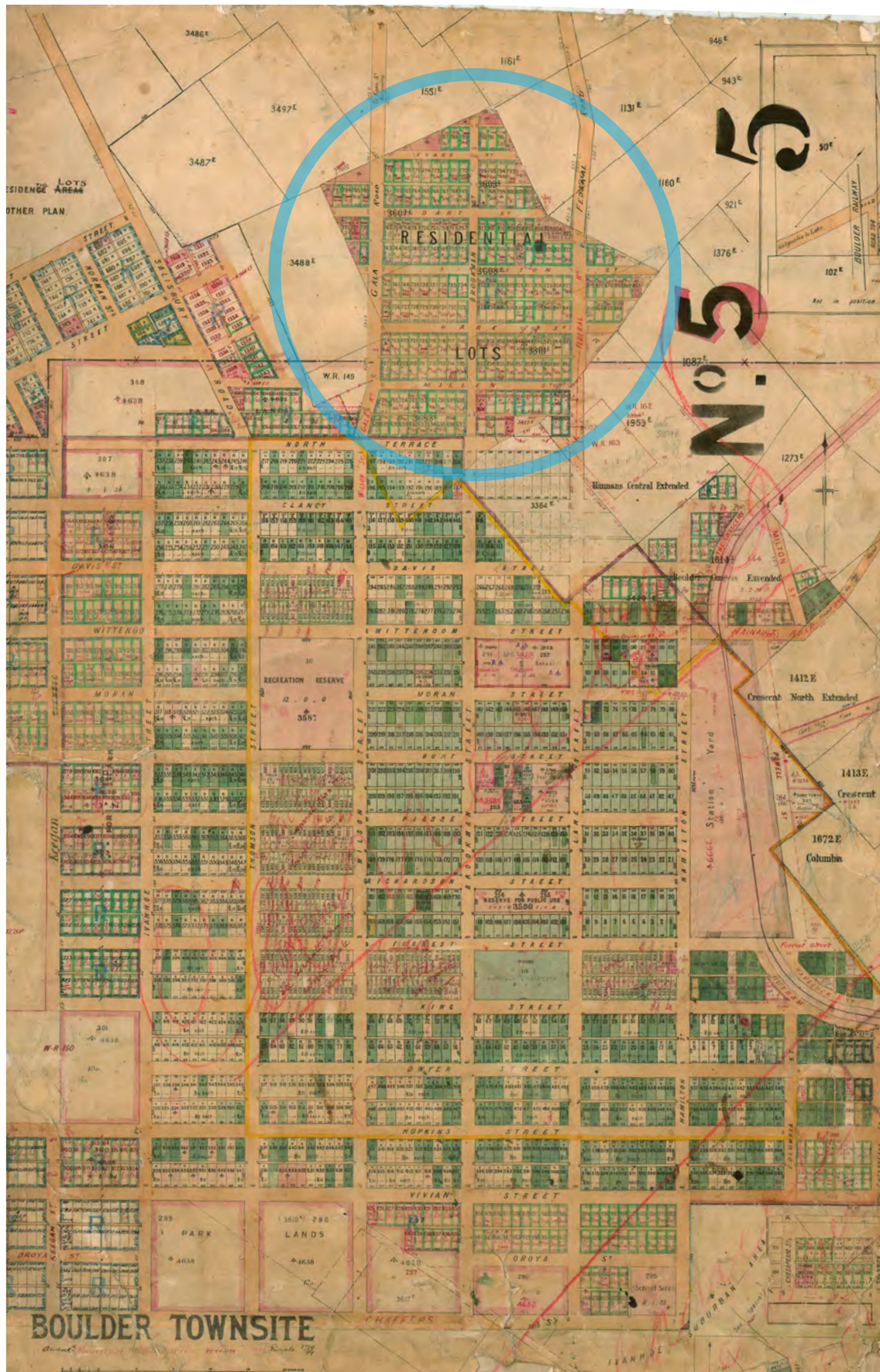


Figure 7.23: 'Boulder Townsite Sheet 5' with author overlay of Urban Anomaly 3, Department of Lands and Surveys, 1899, (Reference code: AU WA S2168- cons5698 0180) The State Records Office of Western Australia, Perth

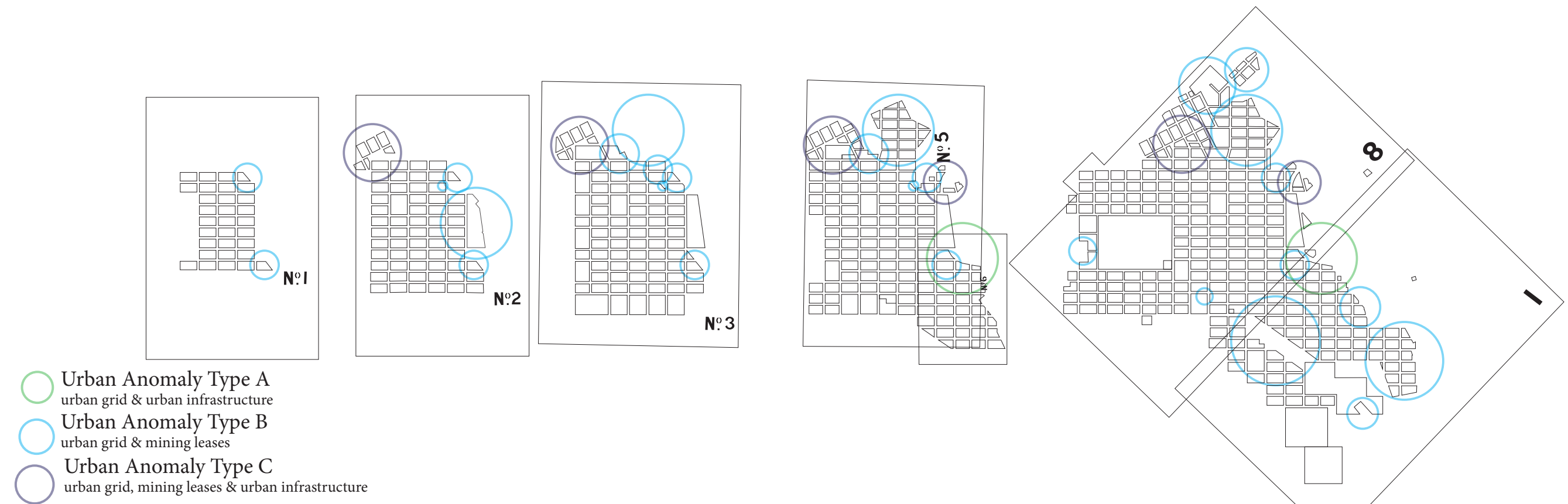
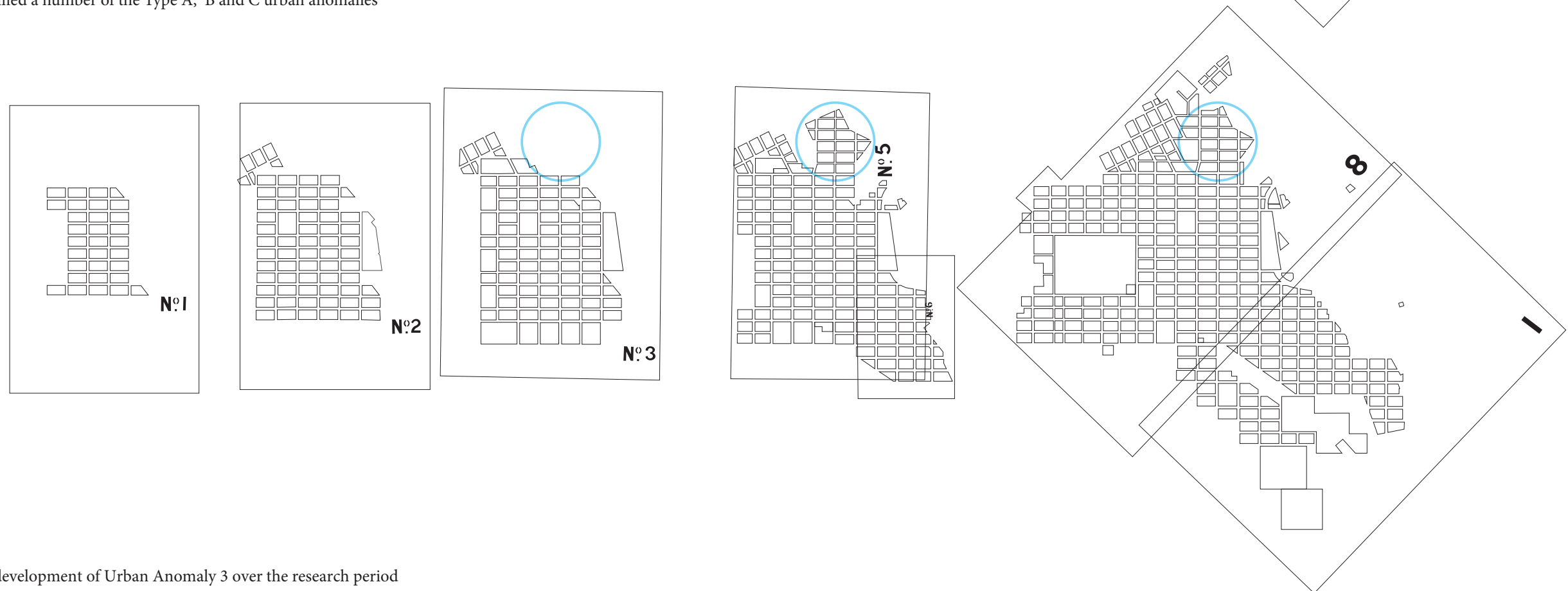


Figure 7.24a: Identified a number of the Type A, B and C urban anomalies



Boulder

Figure 7.24b: The development of Urban Anomaly 3 over the research period

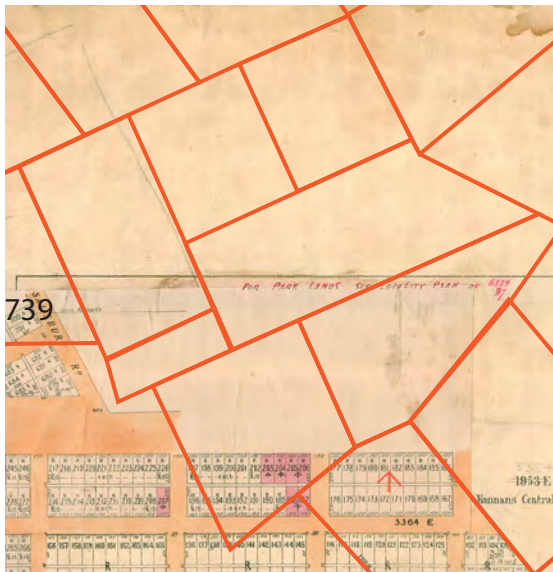


Figure 7.24a
Boulder Townsite Map 2 (1897)(Detail)

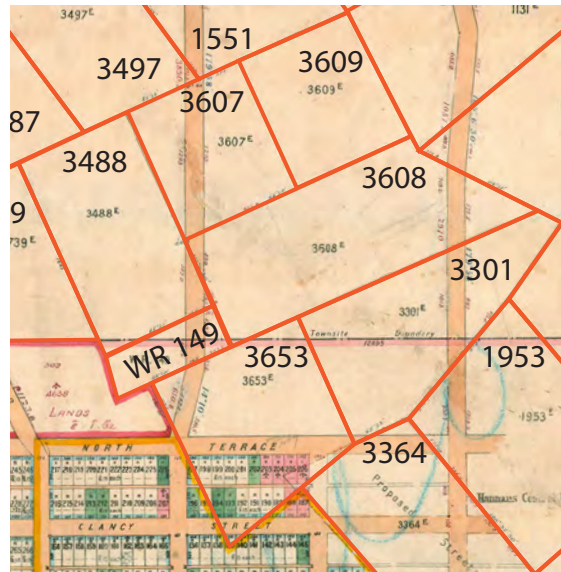


Figure 7.24b
Boulder Townsite Map 3 (1898)(Detail)

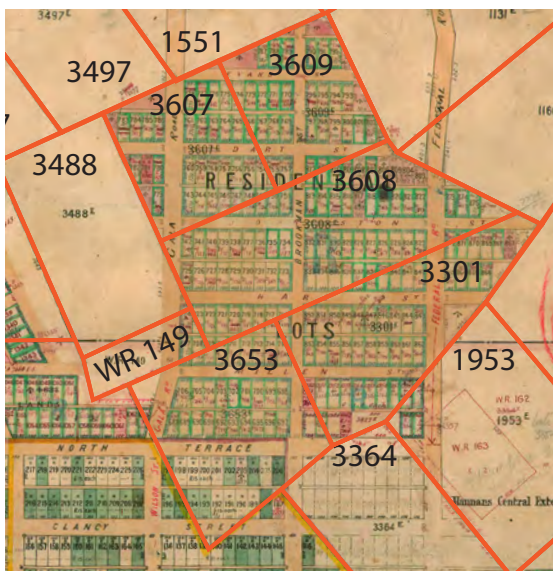


Figure 7.24c
Boulder Townsite Map 5 (1899) (Detail)

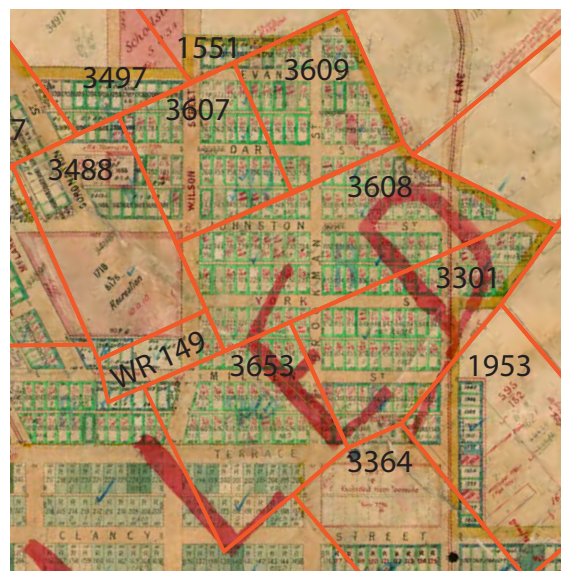
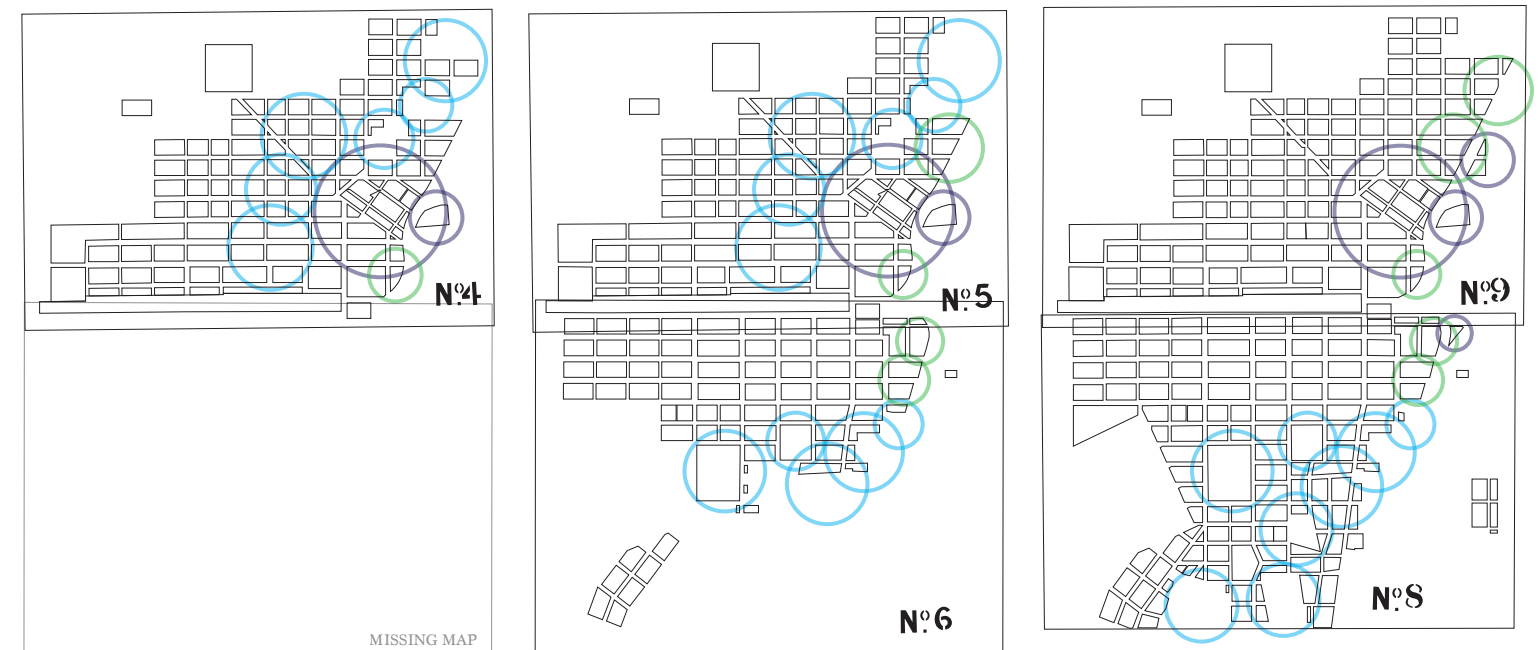
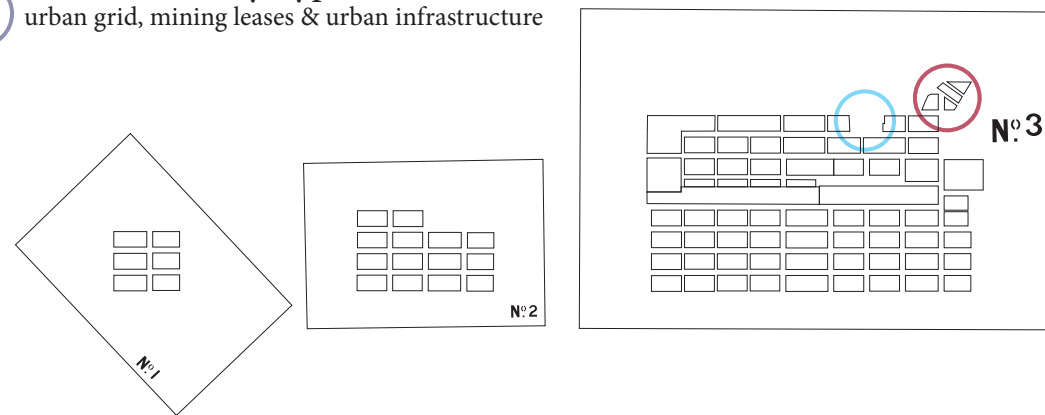


Figure 7.24d
Boulder Townsite Map 8 (c1901)

- Urban Anomaly Type A
urban grid & urban infrastructure
- Urban Anomaly Type B
urban grid & mining leases
- Urban Anomaly Type C
urban grid, mining leases & urban infrastructure



Kalgoorlie

Figure 7.25a: The Type A, B and C Urban Anomalies in Kalgoorlie

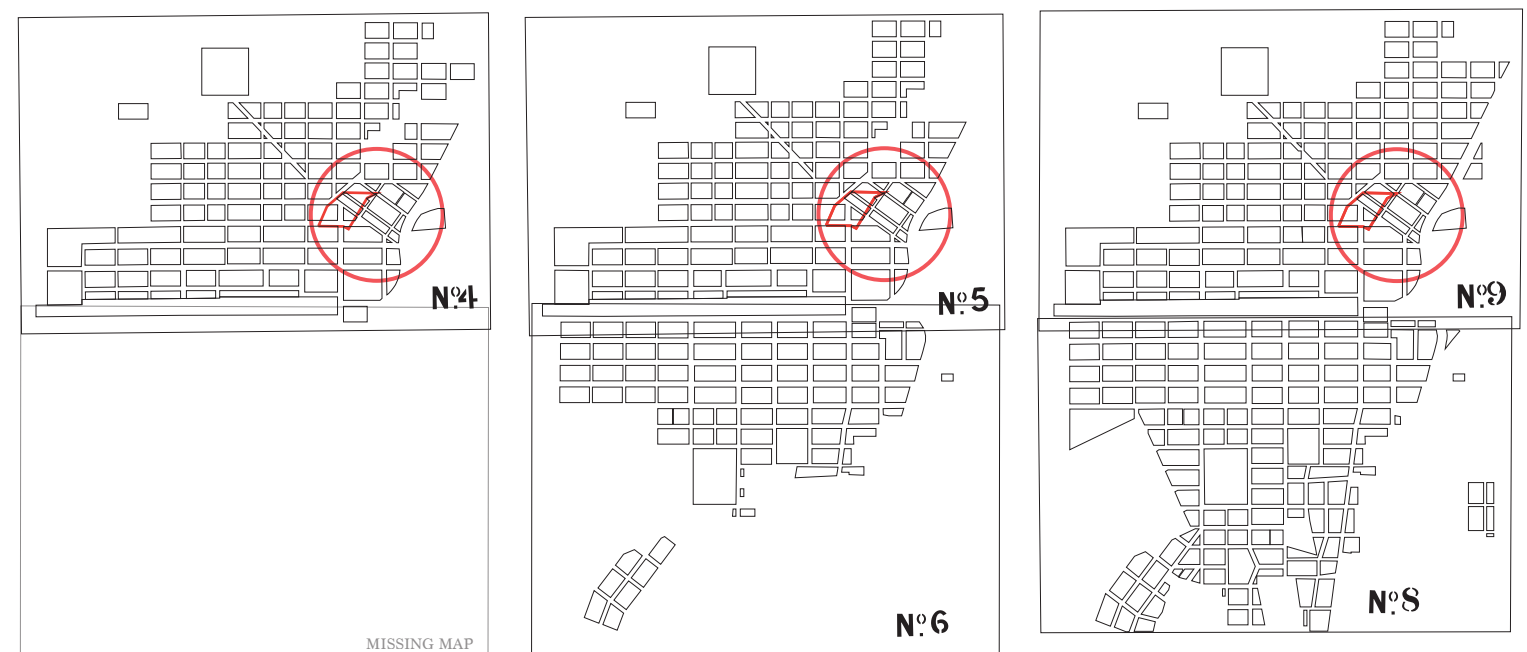
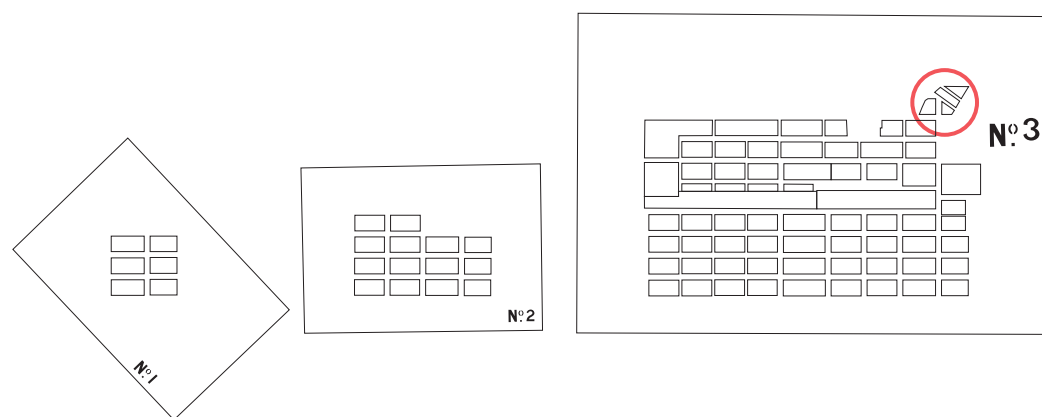


Figure 7.25b The development of Urban Anomaly 4 over the research period

of two spurs of urban growth that project out of the otherwise reasonably ordered Boulder grid. Figure 7.23 illustrates the growth between the issuing of Sheet 2 in March 1898 and the cancelling of the next issue of the map by May 1901. As well as the systematic growth eastwards (which saw the previously the reserved status of the parkland extinguished and converted into residential leases), these extensions of the residential grid were a result of the changing status of the surrounding mining leases (Figure 7.24a–b).

The north-east spur contains Urban Anomaly 3 whose distinctive shape resulted from the northern expansion of the Boulder urban grid occupying the particular footprint of the surrendered mining leases 3607e, 3609e, 3608e, 3653e and 3301e.¹¹ Newspaper publications of reports from the Warden’s Court outlined the contested history of a number of the leases in this group and recorded the granting and extension of these leases as well as hearing the cases for forfeiture.¹² In July 1897, it was argued that 3607e and 3608e had been ‘jumped’, or claimed by a neighbouring miner, who stated the leases were not being worked under the terms of the lease.¹³ The newspaper had reported that by November 1899, the leases had failed. While the details of the leases’ forfeiture were not recorded in the local newspaper or by files held by the SRO, on 11 December 1899, *The Kalgoorlie Miner* ran an advertisement that noted:

Notice is hereby given that 188 NEW LOTS have been SURVEYED at BOULDER TOWNSITE, and with the exception of those reserved, will be open for SELECTION as 'Free, Areas' on and after MONDAY, the 11th inst. These lots are situated on Forfeited Gold Mining Leases 3607E, 360SE, 3609E, 3301E, and 3653E.

B. CECIL CLIFTON

Under Secretary for Lands¹⁴

¹¹ There are records of the application for two of the five mining leases: ITEM-1895/8728, Record Item: Gold Mining Lease No 3607 Liverpool East forwarding application; ITEM-1896/04606, Record Item: Gold Mining Lease No 3301E Golden Key forwarding application.

¹² *The Kalgoorlie Miner*, Friday 3 November 1899, 7.

¹³ *The Kalgoorlie Western Argus*, 1 July 1897, 20.

¹⁴ *The Kalgoorlie Miner*, 11 December 1899, 4.

This notice was pre-empted by a visit to the goldfields in October 1899, by the Surveyor General Harry F. Johnston with the intention of reporting on the 'question of the residence areas on the goldfield'.¹⁵ As part of a report back to the Minister of Land, the Surveyor General noted:

Since my return [to Perth] you approved of late leases 3607E, 3608E, 3609E, 3301E, and 3653E, near the north boundary of Boulder, being subdivided into about 200 quarter-acre lots, instructions for the survey have been issued, the work will be shortly completed, and as soon as the plans of same are received, I consider the whole of the lots (except those required for reservation for future requirements) should be rendered available as 'residential lots'.¹⁶

The Surveyor General's visit was to inspect potential residential sites to be opened for the 'increasing population ... and especially for the miners and workers employed on the adjacent mines' and to determine which sites 'near some of the mines which have hitherto been held as leases, [would now] be ... available for subdivision'.¹⁷ Despite the rapid appearance of residential leases in the footprint of the forfeited mines, the process of transformation contains many of the same elements as those urban anomalies that transform more slowly over time. In-force mining leases prevent urban development until they are forfeited or surrendered. Even with the surveying of the former leases, as issued on the Boulder Townsite Sheet 5 (1899), the next ring of in-force leases—WR 149, 3487, 3488, 3497, 551, 1161, 1131, 1160, 1087, 1953—all bound and prevented urban development. The in-force leases (and the blocks designated as a 'water right'—WR148, 3488 and 3364) mean that urban development could only occupy the footprint of the forfeited mines. This results in the distinctive spur of residential lots that characterises this stage of development of the town. In trying to develop a vocabulary to describe these processes of boom urbanism, the relationship between the occupied leases and new development could be described as 'funnelling' the urban growth into a certain area. In the manner of the linguistic

¹⁵ *The Kalgoorlie Miner*, 3 November 1899, 7.

¹⁶ *Ibid.*

¹⁷ *Ibid.*

transfer of mining terminology to everyday usage,¹⁸ perhaps a more apt description of this process would be 'fluming', which was deployed to describe the use of wooden channelling, in conjunction with water races, to convey water to a claim.¹⁹ The formal distinctiveness of this area of residential blocks was eroded as the town grew northward. By Boulder Townsite Sheet 8 (c1910) (Figure 7.24a–d) these leases to the south and west of Urban Anomaly 3 also failed and were soon occupied by urban blocks and lots.

Urban Anomaly 4

Permanent, Urban Anomaly Type C (Mining & Infrastructure), Kalgoorlie

Kalgoorlie Townsite Map 3 illustrates the beginning of one of the few permanent urban anomalies in the Kalgoorlie urban grid (Figure 7.25a–c). Significant growth in the Kalgoorlie townsite occurred between the issuing of Sheet 2 (1896) and Sheet 3 (1897) a year later. The urban growth is best illustrated by the shift in the scale of the maps between the maps as well as the division of the townsite features into two separate maps (the lower map showing the town centre and suburbs south of Forrest Street and the Railway Reserve is missing from the SRO archives). Most of Kalgoorlie's urban growth was orderly, extending the suburbs north of the railway line and west following the pattern established by the first townsite expansion illustrated between Sheet 1 and Sheet 2. However, at the north-western boundary between Kalgoorlie's suburban areas and the encircling mining leases a vacant pocket of land between mining leases presented the opportunity for new residential land. The opportunistic configuration of the urban lots and blocks to fit in this void created Urban Anomaly 4. The occupation of vacant land between mining leases is perhaps not unexpected. It might be considered a variation on Urban Anomaly 3's 'funnelling/fluming', where in-force mining lease force urban development into land unclaimed by either mining or residential leases. Unlike Urban Anomaly 3, where the division of the land into blocks follows the pattern of the adjacent residential land, in Kalgoorlie, the angular orientation of these blocks to maximise the yield of the land establishes a new urban pattern whose formal

¹⁸ Francis Palmer, 'Gold Rush Language', *American Speech* 43, no. 2 (May 1968): 83–113.

¹⁹ Neville A. Ritchie and Ray Hooker, 'An Archaeologist's Guide to Mining Terminology', *Australasian Historical Archaeology* 15 (1997): 5.

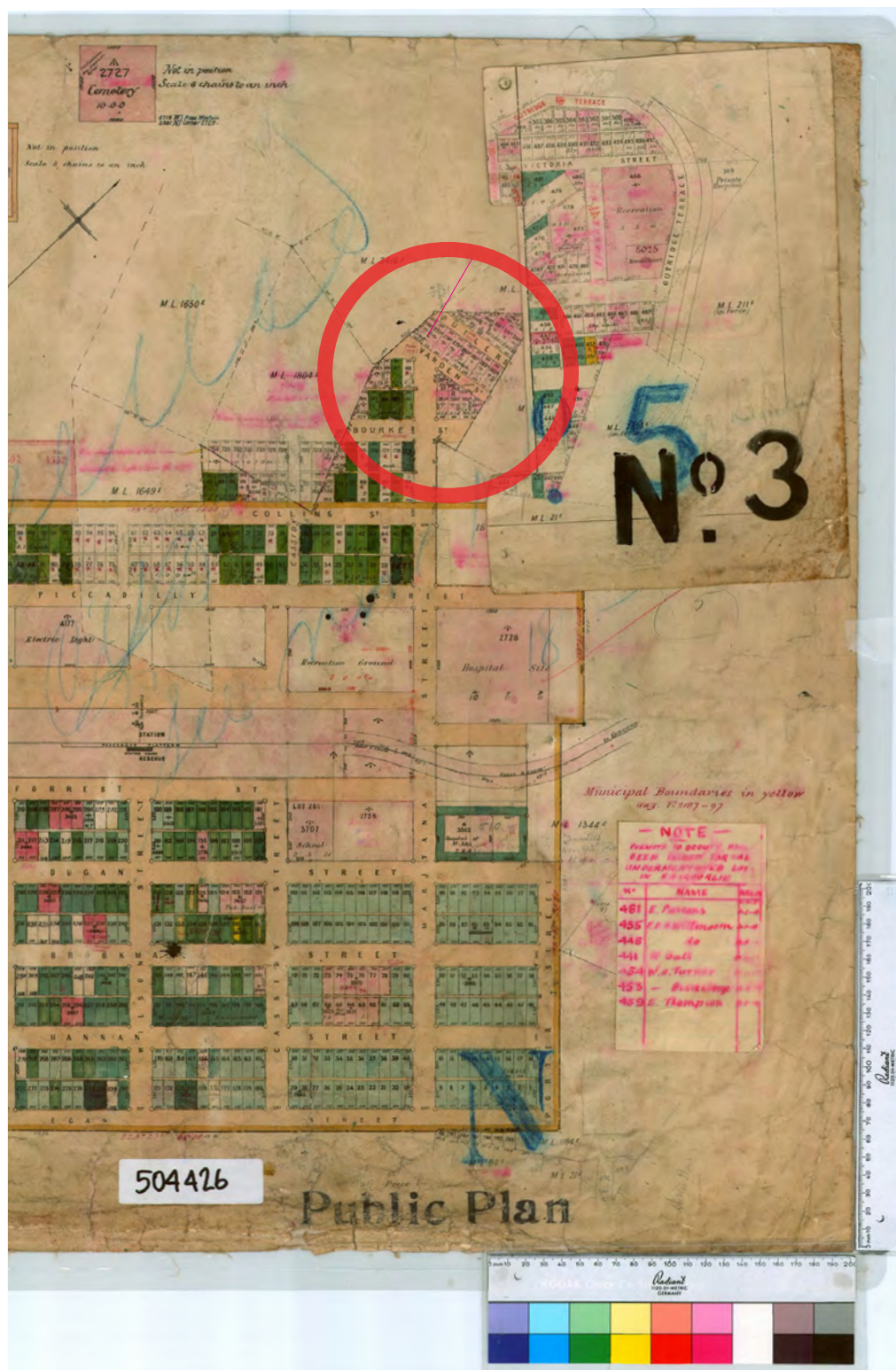


Figure 7.25c: Kalgoorlie Townsite Map 3 (1897) Urban Anomaly 4

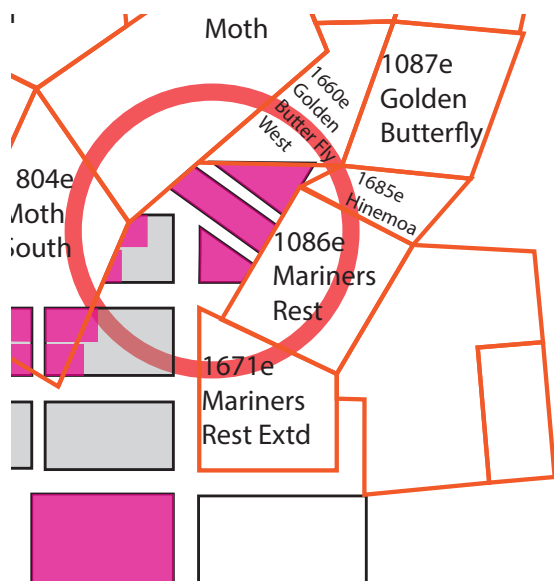


Figure 7.26a
Kalgoorlie Townsite Map 3 (1897)(Detail)

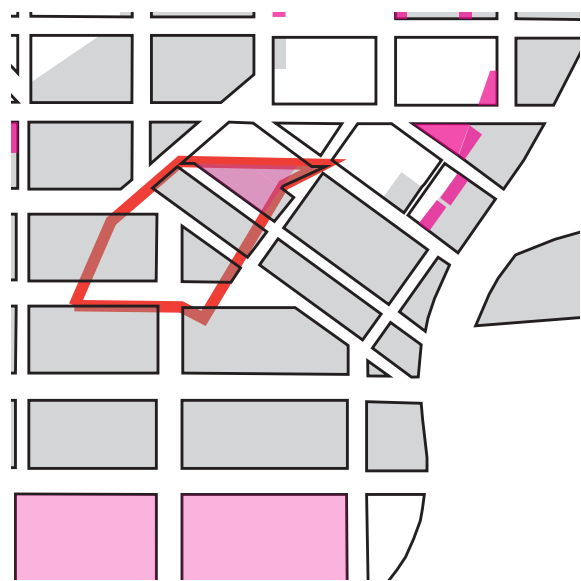


Figure 7.26b
Kalgoorlie Townsite Map 4 (1898)(Detail)

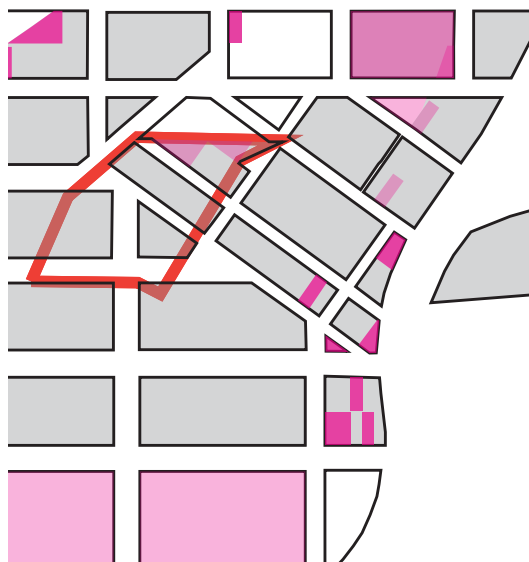


Figure 7.26c
Kalgoorlie Townsite Map 5 (1899) (Detail)

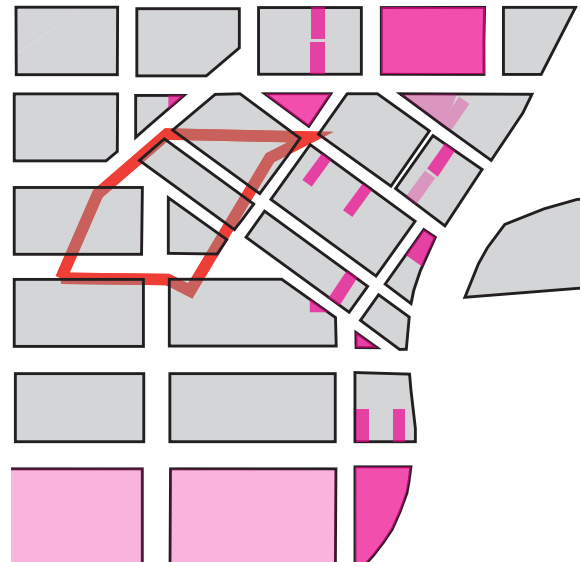


Figure 7.26d
Kalgoorlie Townsite Map 9 (c1900)(Detail)



Figure 7.27
Urban Anomaly 4 becomes its own census district in the 1901 census.

Detail of 'Kalgoorlie Boulder Census, Map 12',
Department of Lands and Surveys, Western Australia,
1901, Series: 'Census of Western Australia taken for
the night of 31st March 1901', Printed by Census
Office, Perth, W.A. 1901. (Call number: 3/2/12 (1901))
The State Library of Western Australia, Perth

influence spreads as the town develops. This can be seen in the subsequent maps of Kalgoorlie (Figure 7.26a–d) where the original vacant land is outlined (in orange) but like Urban Anomaly 1, the influence of the initial aberration spreads beyond its initial site. It is only the insertion of the infrastructure of the railway line that prevents the further spread of this form eastwards. So distinctive is the urban form that results from the initial opportunistic occupation of land, by 1901, the area has its own census district number 3 (Figure 7.27).

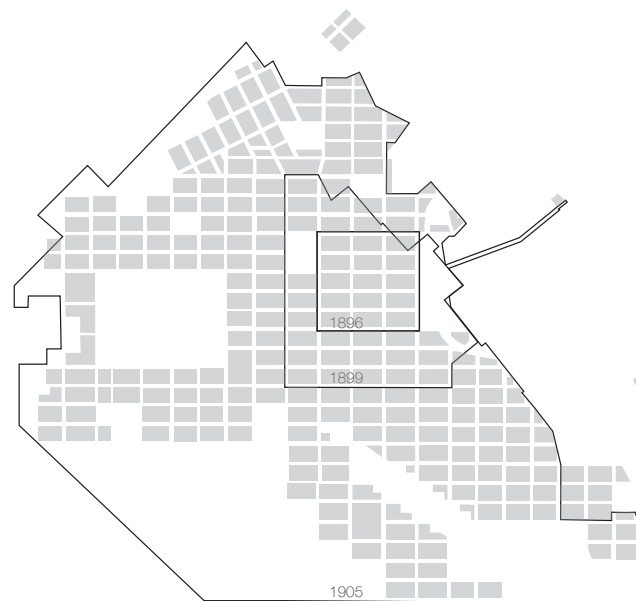
Mapping the Municipal Boundary

In addition to the urban anomalies outlined above, whose presence was registered on the urban grid of Kalgoorlie and Boulder, there are many other anomalies that are revealed by the serialisation of maps and the tracing process. This section of the chapter will investigate and analyse the nature of the municipal boundary as it developed in Boulder.

The intention to have the Boulder townsite develop westwards, framed by the mines to the east and parklands to the north and south, was described in correspondence between Crown Commissioner of Lands Richardson and the Under Secretary of Lands:

On looking at the tracing I find the scheme is rather different from what I arranged with Mr Beasley at Coolgardie which was for about 100 acres for business Lots & Govt reserve (only a portion of which would be offered) Then outside that on perhaps two sides we thought there might be a reserve left of Parkland, and then the resident areas, & as one would be bounded or confined by the Mining leases, the 4th side was to be left open for possible extension.

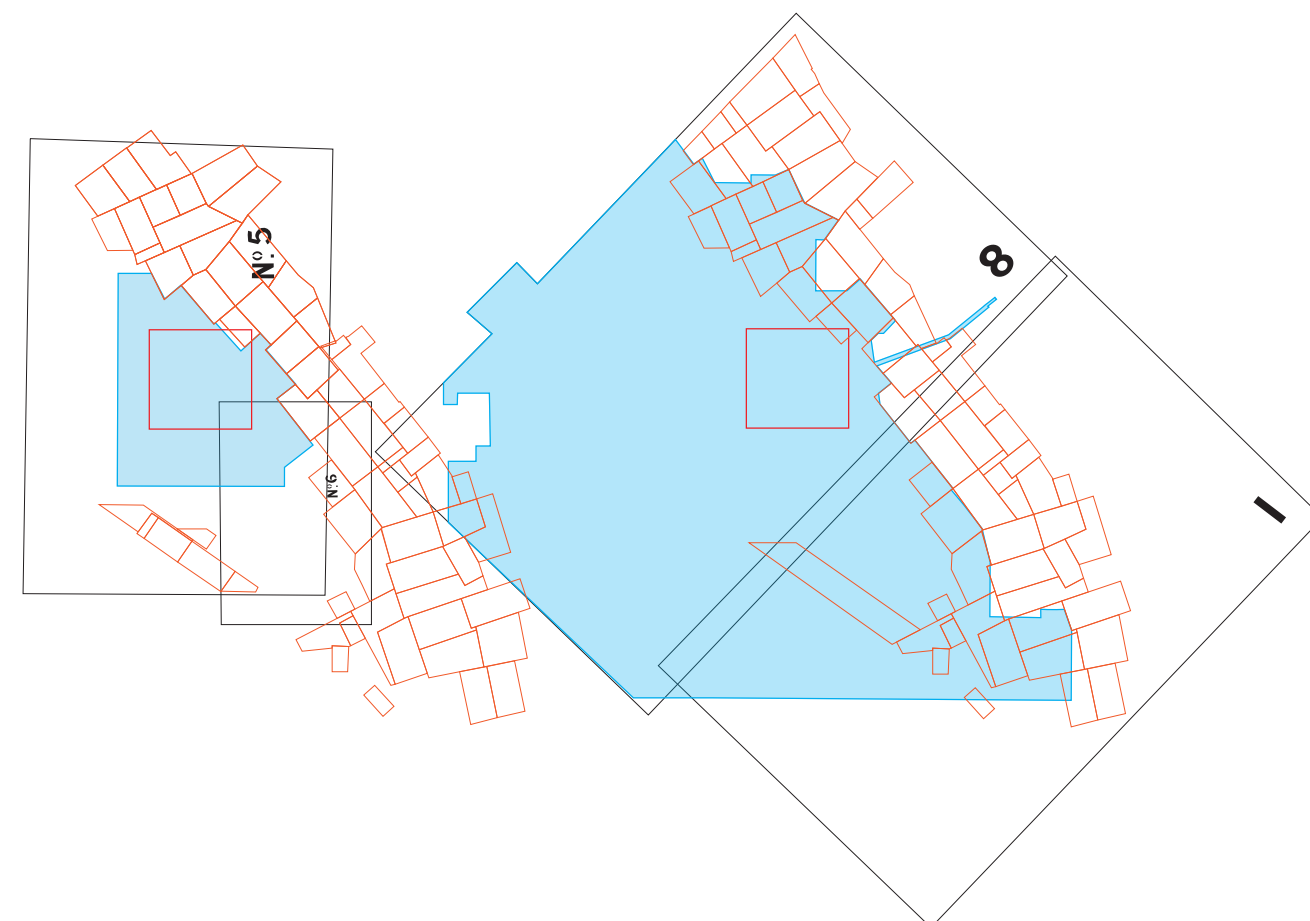
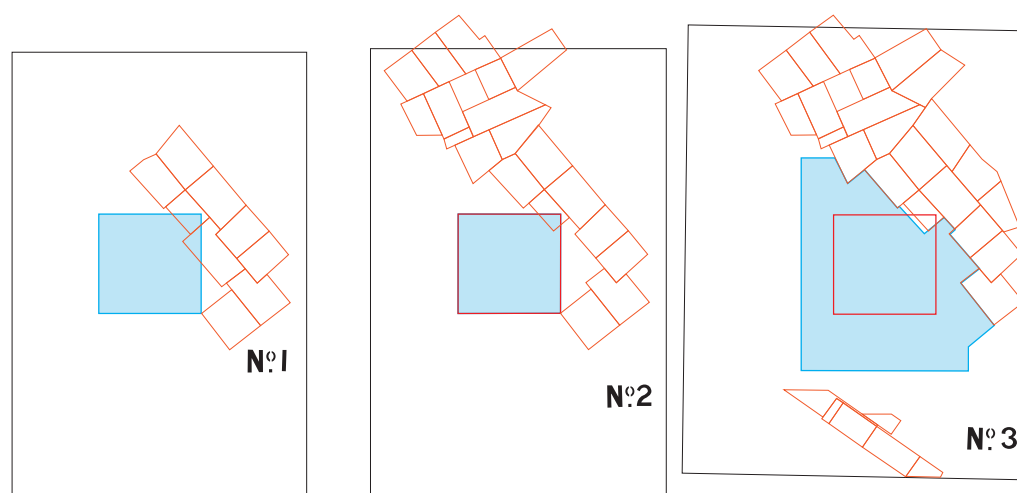
The mapping of the municipal boundaries between 1896 and 1905 shows, as well as the expected growth towards the west, the town also extended north-west and south-east (Figure 7.28a). This growth brought greater interaction between the mining leases and the urban grid. As well as the expansion of the east boundary of the townsite, the introduction of the railway provides the next example of a mining and urban infrastructure produced an anomaly.



Boulder

Figure 7.28a: 'Growth rings' of Municipal Boundary

Growth rings, Author tracing of Boulder municipal boundary from Boulder Townsite Sheets 1, 3, 8, 9, Department of Lands and Surveys, 1898–1905, (Reference code: AU WA S2168- cons5698 0175, 0178, 0183, 0184) The State Records Office of Western Australia, Perth



Boulder

Figure 7.28b: Municipal Boundary

Author tracing of Boulder municipal boundary and mining leases from Boulder Townsite Sheets 1–9 Department of Lands and Surveys, 1898–1905, (Reference code: AU WA S2168- cons5698 0175- 0184) The State Records Office of Western Australia, Perth

The municipal boundary was an important threshold that distinguished different areas within the towns. These differences impacted residents and business' voting rights in council elections and where residential rates were directed. The succession of diagrams taken from State Records Office 2168 map series showing Boulder's municipal boundary between gazetting in 1896 and cancelling of in July 1905, illustrate the shifting condition of the town's urban edge (Figure 7.28b). At Boulder's gazetting the municipal boundary included within it only the 15 townsite blocks anticipated for civic and commercial uses. This is despite the map showing 160 residential lots located outside the municipal boundary. In Sheet 1, the municipal boundary served as a perimeter to the urban elements of streets, lots and blocks. (The municipal boundary is shown as a blue line.) This is despite there being two in-force mining leases 3420 and 3378, which overlapped the north-eastern corner of the townsite.²⁰ Despite the growth of surveyed residential lots in the town illustrated in Sheet 2, there is no change in the municipal boundary in the period between gazetting and early 1898 when that Sheet was cancelled. Sheet 3 of the serialised maps of Boulder shows that with the expansion of the municipal area by early 1899 means that the municipal boundary took in a much more circuitous perimeter. Rather than acting as a boundary to those recognisable urban elements of street, block and lot, the municipal boundary now negotiates the edge of the industrial field in forming the new municipal boundary. This was reflected in the Governor's proclamation from the Government Gazette, which proscribed the convoluted perimeter that the boundary took. The new municipal boundary began with:

A distance of 1 chain 50 links from the North boundaries of Residence Areas 217 to 226, to the South-West boundary of forfeited mining lease 3589E; thence South-Easterly, along part of said boundary ... thence along part of the South-West boundary of ... Lease 3521E, to its intersection with the East side of a public street, parallel to and at a distance of 1 Chain, 50 links from the East boundaries of Residence Areas

²⁰ Although this occurrence should have been prevent by legislation, it does not prevent the mining leases being included within the municipal boundary.

446 and 427; thence South, along said side of street, to a point situate East from the North-East corner of Residence Area 566.²¹

The extension proclamation illustrates the complexity of the ground that the boundary traversed, taking in forfeited leases, those leases still active, the intersection of leases and public streets as well as residential lots. This illustrates that as the city developed, it shifted away from having solely urban parameters for designating its municipal edge and instead had its the boundary determined by 'permanent artificial object' as required by legislation, of the mining lease. The lease itself was determined and defined (through acts of legislation) by the geology of the underground ore-bearing lodes.

The anomaly of the municipal boundary points to the fact that at various stages in its development, Boulder was a town not just defined by urban elements as one would expect, but one in part determined by geological elements and the speculative manifestation of the mining lease. Further, embedded in the goldmining lease, due to the nature of its determination through government legislation, are a set of other values. These include late-nineteenth century industrial science, which helped to determine the width of the load and the value of the gold contained within it. These values, of governmentality, legislative interpretation, industrial science and empirical measurement were then transferred to city-making where leases formed part of a municipal boundary.

The Reserve Lot

Despite the primary emphasis of the Series 2168 maps on the codification of space of the townsites and the mining field, the maps also bring to the viewer's attention more temporal considerations. This section of the case study chapter looks at the recording of time in the Series 2168 maps in a two ways: the recording of time and change within the format of the individual maps and the use of the reserve lot to anticipate future urban form.

²¹ Government Gazetteer of Western Australia, No. 49.1 Perth: Friday 17 September 1897., No. 7354-C.S.0.

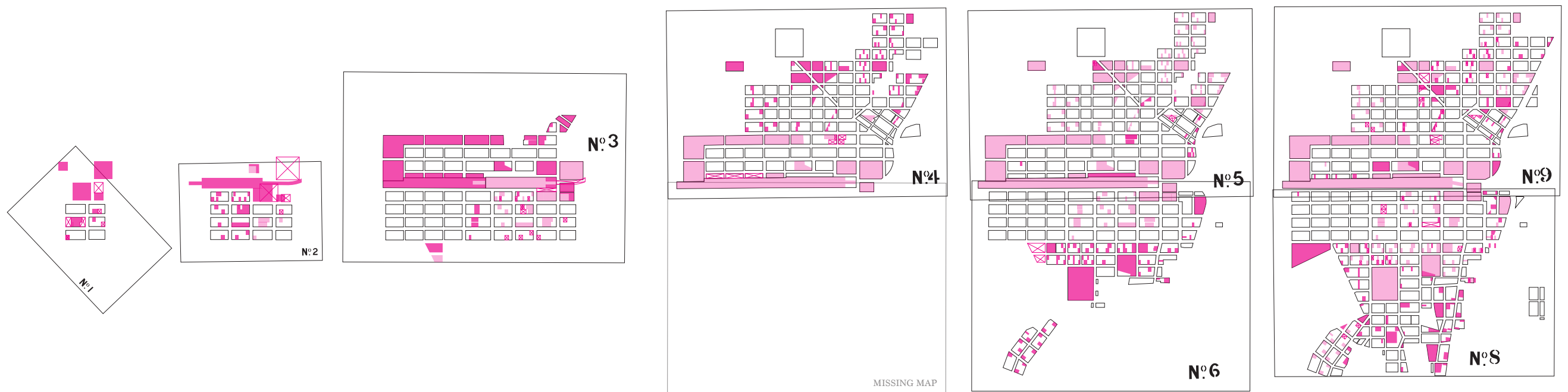
Firstly, the most explicit recording of time in the maps occurs as part of the Series 2168 map's status as working drawings, which recorded the urban activity for the time between the date of the map's issue and the date of its cancellation. Each map embodies the dual temporalities of the boom: a record of the past (the state of the town when the map was issued) and the immediate present (the accumulation of changes, the moment they are added to the map and finally the moment of cancellation) as additions were made across the working life of the map. Many of the pencil and ink additions and notations to the individual maps of Series 2168 allow the reader to locate these cartographic actions in time. For example, the granting of reserve status to Boulder townsite lots 145 and was recorded by the addition in red ink of the number '3877', the letters 'C.E.', the reserve symbol and pink watercolour wash across the two lots. A search of the SRO archive of Lot 3877 showed that the reserving of the lots took place early in 1897 as the record was only the third note for the year. Similar actions could be undertaken for all these notes on the map, building up a picture across time of the patterns and processes of urbanisation at a very fine scale—a scale outside the boundaries and scope of this thesis. This fine-grained accumulation of urban changes means that these maps were not fixed at the time of issuing but accumulated actions in time until the moment of the map's cancellation. If the boom town was a place that occupied two times simultaneously—the past from which the town 'boomed' and then its current—each of the Series 2168 maps is a unique record of the towns' urban transformation, which can be read through the accumulation of notes and their reference to specific urban actions and events that occurred with the timeframe of the working map. Each map recorded its own fragment of the boom as a thin archaeology of urban transformations, where the accumulated layers of activity were described by colour washes, the crossing out of ink notes and the addition of pencil marks.

To add further intricacy to the maps' ability to depict the temporal complexity of the boom town, the Series 2168 maps also show consideration of the 'future' form of the townsite. This depiction of an urban future took a number of different forms. Firstly, although the map would have been primarily used to record the status of residential and townsite (business) lots, the maps also indicated planning for an

anticipated civic future. The maps illustrate the consideration given to future locations of public uses, the scale of these functions, and reveal the anticipation of the ongoing nature of the town. These public uses, such as hospitals, schools, recreation grounds and cemeteries (all allocated 10 acres in area) as well as a private hospital and school (two and three acres respectively), were added in red ink to the first maps of Kalgoorlie, and indicate that these considerations were made for a population and a demographic that were not yet resident in the town. At this stage of the townsite's development, these uses were 'flexible'—the school, private hospital and recreation grounds location and size changed a number of times and were finally fixed in their locations in the July 1897 issue of the map.

Secondly, while the form of the townsite's urban grid was relatively fixed (apart from the urban anomalies discussed earlier in this chapter), there were a number of variables in its application in the goldfields. These included the speed and timing of its application, its spread and the status of the standard lot within the urban block. As described earlier, the status of a lot was delineated through the application of different shades of watercolour wash, either as freehold, leasehold or reserved. It is the last of these conditions, the reserved lot, which is the focus of this subsection of the case study.

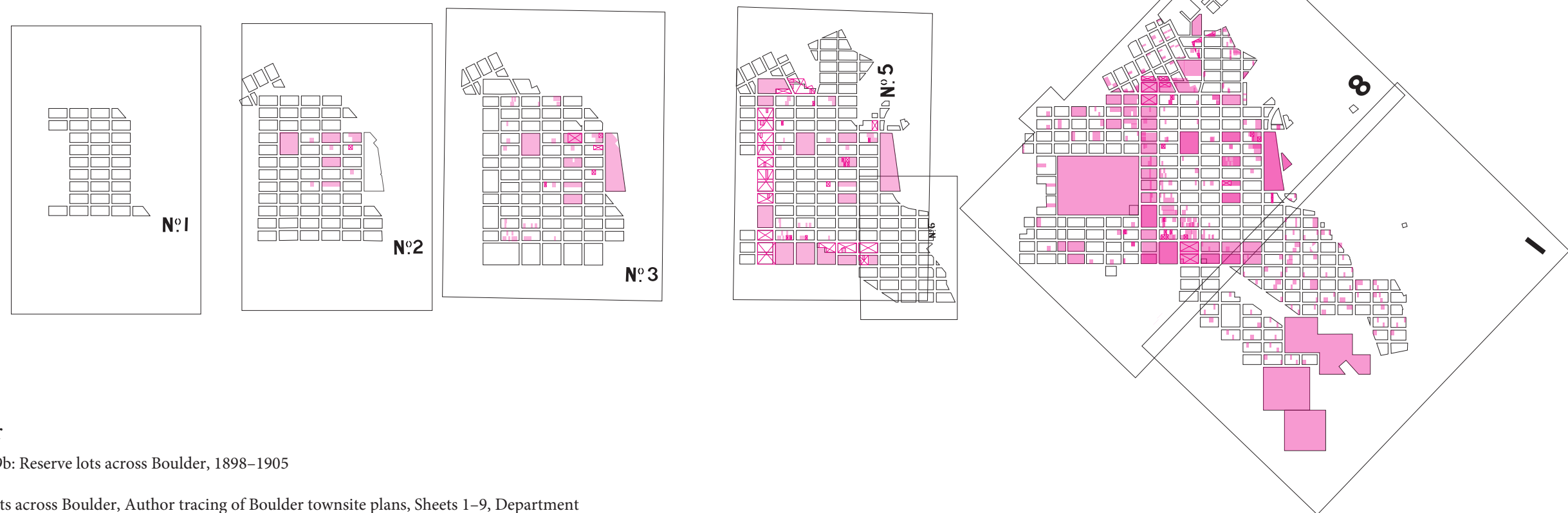
The first effect of the reserved status lot is the shift in our consideration of the medium of the map. These lots transform the presumed fixity of the townsite map into a document with a more transient and anticipatory status, which awaits the arrival of organisations, individual or government to take possession of the allocated land. If we were to differentiate between the graphic devices of the map and the plan (along the disciplinary lines of cartography and architecture), then 'the map' is concerned with recording what is extant (and hence the past) whereas 'the plan' is a drawing that documents a future building, urban configuration or landscape. In this light the Series 2168 maps can be considered hybrid documents, existing between these two states of documentation and anticipation. The anticipatory nature of the Series 2168 is revealed through the serial organisation of the individual maps, which allows us to test whether the opportunity conferred upon particular lots by designating them as reserve was realised. Instead of the map being considered to offer a single definitive iteration, it now anticipates its



Kalgoorlie

Figure 7.29a: Reserve lots across Kalgoorlie, 1896–1905

Reserve lots in Kalgoorlie, Author tracing of Kalgoorlie townsite plans, Sheets 1–9, Department of Lands and Surveys, 1896–1905 (Reference code: AU WA S2168- cons5698 0827-0835) The State Records Office of Western Australia, Perth



Boulder

Figure 7.29b: Reserve lots across Boulder, 1898–1905

Reserve lots across Boulder, Author tracing of Boulder townsite plans, Sheets 1–9, Department of Lands and Surveys, 1898–1905 (Reference code: AU WA S2168- cons5698 0175-0184) The State Records Office of Western Australia, Perth

own redundancy. When the documents are organised in a series, we can see how the reserved status lot is realised.

As part of the tracing process, the reserved lots were mapped in three temporal states (Figure 7.29a–b). New reserve lots (bright pink) were mapped on each new issue of the maps, so as to gauge the occurrence and distribution of newly reserved lots across the study period. Lots that continued to be held in reserve status across a number of issues of the Series 2168 maps were coloured in a light pink for each subsequent issue after their initial debut as a reserved lot. A pink 'X' illustrated the lots that had their reserved status extinguished. All new, old and extinguished reserved status were aggregated together on the final map of the study period to give an indication about the total numbers of lots across the study period that were still reserved or had been reserved.

From this tracing process, it became clear that there were three major ways in which the reserved status was utilised by the Department of Lands and Surveys. These were:

1. to allow for the provision and location of essential buildings—
 - a. a subset of this category would be the desire of civic institutions such as churches, education facilities and other bodies to have land in the burgeoning towns
2. to maintain proper 'orderly' development of the urban grid through the elimination of non-rectilinear urban lots and blocks
3. to allow the continuation of active mining leases where the mining and residential leases overlapped.

The first of these categories was the use of the reserve status to set aside lots that would provide for future 'public uses' (or 'PU' as it is abbreviated on the maps). The provision of space for these utilities implies that the planner, surveyors and cartographers of the Department of Lands and Surveys anticipated a future urban state for the townsite. This future form was one that was not possible to realise immediately, but whose development was anticipated by the provision of adequate space for the townsite's future urban infrastructure. This suggests that there was a sense of predictability to the development of Kalgoorlie and Boulder's townsites.

As with all predictions or guesses, the possibility of another outcome is always conceivable. The prospect of these other 'variant' outcomes was realised in Kalgoorlie within the first years of its development, as shown by the relocations of the school and recreation ground and by the revision in the size of the hospital site.

The examination of the first maps of each townsite indicated at what stage consideration was given to future civic realm. From the first issue of the Kalgoorlie Townsite Map (1894), provisions are made for the future delivery of public buildings and infrastructure. This can be seen in the urban block bounded by Hannan, Brookman, Cassidy and Maritana Streets printed with 'Temporary Reserve' along Hannan Street and the lots 59–80 indicated with the arrow 'Reserve' symbol. This block represents one-sixth of the total number of urban blocks of the townsite at the issue of the map. Printed onto the map, Lot 65 is designated as the Post Office. However, by the time of the map's cancellation in September 1896, additions to the map illustrate changes to the urban block's reserve status. Notations in pen, pencil and watercolour had halved the number of lots required for the reserve to 11 lots out of the block's initial reserve of 22 lots. The reserve shrunk to 11 lots, numbers 61–66, 73–78 with each group of six lots bounded by the pink line of the watercolour wash. Lots 73–78 were designated as a single reserve number 2670 (which appears on the next issue of the map with a written note designating the lots as the police barracks). Lots 61–66 appear to have been considered one reserve lot, indicated by the single pink line bounding them together. These later changes include the addition of the hatching dividing off lot 66 as Reserve 3023 and the colouring of lot 61, initially as a reserve lot 2690, but finally washed green as a leasehold lot. SRO papers indicate that the reserve for lots 62–65 to form a single reserve 2671 was made for 'government requirements' in June 1897.²² The addition of the footprint of the Warden's Court tent in red ink and straddling two lots points to the ad hoc manner in which existing structures, albeit as rudimentary as a tent, were integrated into the gazetted plans.

²² Item-1897-08192-01RO, Record Item, Reserves Government Requirements Reserve 2671 Kalgoorlie Lot 62 63 64 65 City Of Kalgoorlie Boulder, 12 Jun 1897 – 10 Jan 1997.

Other reserve status lots on this plan (and notation) include:

R2636 (lots 41,42 reserved for the Wesleyan Church²³)

R2644 (lots 28, 29 reserved for the Presbyterian Church²⁴)

R2727 (No lot number, outside printed townsite, reserved for a cemetery)

R2728 (No lot number, outside printed townsite, reserved for a hospital)

R2729 (No lot number, outside printed townsite, reserved for recreation)

R2860 (lots 83, 84, reserved and cancelled, converted to leasehold)

R2868 (No lot number, outside printed townsite, reserved for school but cancelled²⁵)

R2966 (Lots 52, 53, converted to leasehold)

R3022 (Municipal purposes²⁶).

R3362 (No lot number, outside printed townsite, 'Reserved for private hospital, St John of God')

R2690 (Lot 61, served for Mechanics Institute²⁷)

Secondly, the other significant use for the reserved status lot was to prevent the creation of irregular urban lots and blocks, which occur at the intersection of mining and urban leases. In these situations, the reserved status was achieved by 'excepting the lots from sale' rather than holding the lots for specific uses or organisation. This can be seen in many locations across the Series 2168 maps where interactions between mining lease and urban leases occurred where Figure 7.30a and Figure 7.30b illustrates this situation. This subsection will describe two

²³ State Records Office ITEM-1894-03242-02RO.

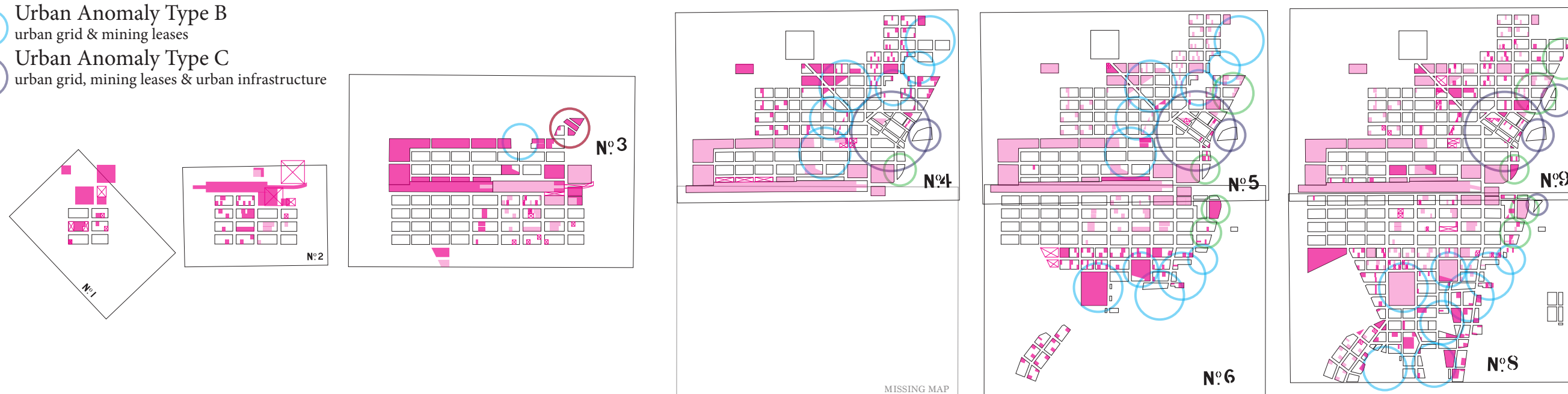
²⁴ State Records Office, ITEM-1894/3405 v1.

²⁵ State Records Office, ITEM-1895/2061School site. Reserve 2868 (cancelled 05.06.1896) Kalgoorlie. Land excised by proclamation (no jacket).

²⁶ State Records Office, ITEM-1895/2760 V1.

²⁷ State Records Office, ITEM-1895-04845-02RO: Crown Grant In Trust Reserve 2690 Kalgoorlie Lot 61 For Mechanics Institute City Of Kalgoorlie Boulder.

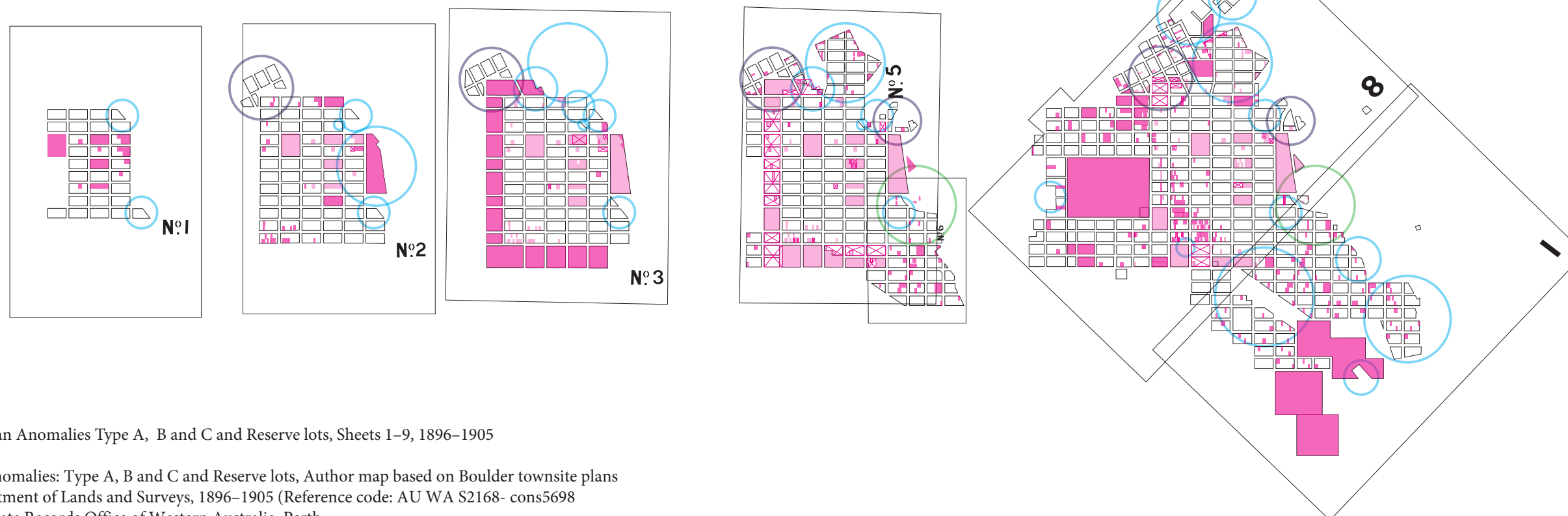
-  Urban Anomaly Type A
urban grid & urban infrastructure
-  Urban Anomaly Type B
urban grid & mining leases
-  Urban Anomaly Type C
urban grid, mining leases & urban infrastructure



Kalgoorlie

Figure 7.30a: Urban Anomalies Type A, B and C and Reserve lots, Sheets 1–9, 1894–1901

Kalgoorlie Urban Anomalies: Type A, B and C and Reserve lots, Author map based on Kalgoorlie townsite plans Sheets 1–9, Department of Lands and Surveys, 1894–1901 (Reference code: AU WA S2168- cons5698 0827-0835) The State Records Office of Western Australia, Perth



Boulder

Figure 7.30b: Urban Anomalies Type A, B and C and Reserve lots, Sheets 1–9, 1896–1905

Boulder Urban Anomalies: Type A, B and C and Reserve lots, Author map based on Boulder townsite plans Sheets 1–9, Department of Lands and Surveys, 1896–1905 (Reference code: AU WA S2168- cons5698 0175-0183) The State Records Office of Western Australia, Perth

of these interactions between mining and residential leases from Kalgoorlie and Boulder to illustrate how the reserve lot anticipated a future 'ordered' urban form. This will highlight the anticipatory nature of the reserve lot in the way it secures the possibility of a flexible urban future within the regular urban grid, allowing for both the failure of a mining lease or the lease's continuation. In any of the possible scenarios, the reserved status device was deployed in anticipation of a future outcome.

Unlike the use of the reserve status for setting aside blocks for future public and civic uses the majority of the reserved blocks in this circumstance are not set aside for a specific civic, commercial or residential use. This is evidenced by the absence of the usual reserve number that was typically inscribed on the map or the presence of related archival notes in the extended Department of Lands and Surveys archive. This phenomenon is best illustrated by the residential suburb created by the forfeiting of mining leases 3607, 3608, 3609 and 3301 in northwest Boulder (Figure 7.31a–7.31d) and previously discussed as Urban Anomaly 3. The extension of the Boulder urban grid into the footprint of the extinguished leases meant that a series of irregular shaped urban blocks and lots were created that did not conform to regular 18 lot, 180 x 525-foot urban block. Of the 13 irregularly shaped reserve lots that surrounded the perimeter of the new residential suburb, only one was assigned a reserve number: 6982 ES. Even in this single instance of the use of a reserve number 6982 ES (Emergency Services), it would appear the 'ES' coding was a generic place holder that was used for a number of reserve lots across both Boulder and Kalgoorlie townsites. By the time of the subsequent issue of the townsite maps four years later in July 1905, leases 3488e, 3847e, 3497e (all part of the Hannan's Gold Estate Ltd mine) and 1551e (Hannan's Proprietary Development Company Ltd) to the west of the new suburban extension, had also been forfeited. This allowed the reserve status of the five irregular lots to be extinguished and for the three urban lots to extend and realise their regular form. At the July 1905 issue of the townsite plan, mining leases 1131E (Hannan's Central Extd GM Co), 1160e, 1087e (Lake View and Boulder Junction GM Co Ltd) and 1953e on the eastern side of the suburb extension remained in force, 'bounding' the extension of the suburban area and the reserved status lots remained. The only

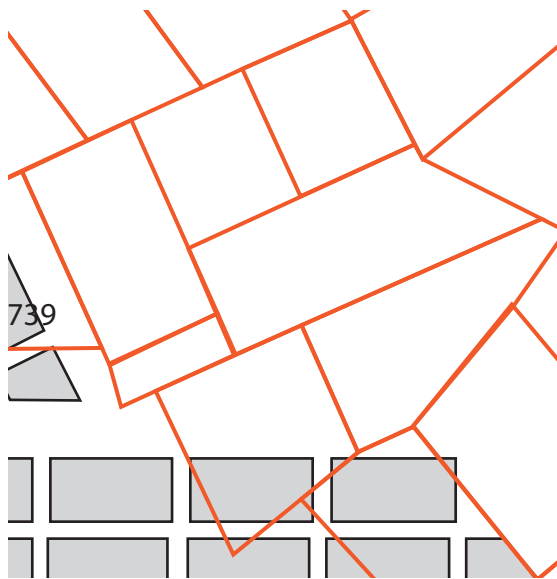


Figure 7.31a
Boulder Townsite Map 2 (1897)(Detail)

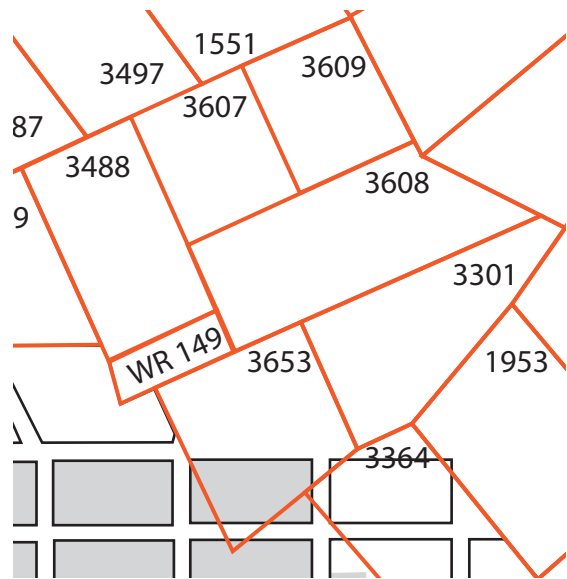


Figure 7.31b
Boulder Townsite Map 3 (1898)(Detail)

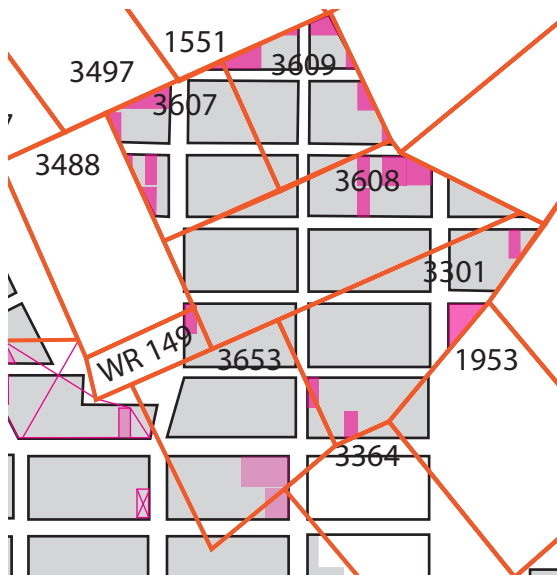


Figure 7.31c
Boulder Townsite Map 5 (1899) (Detail)

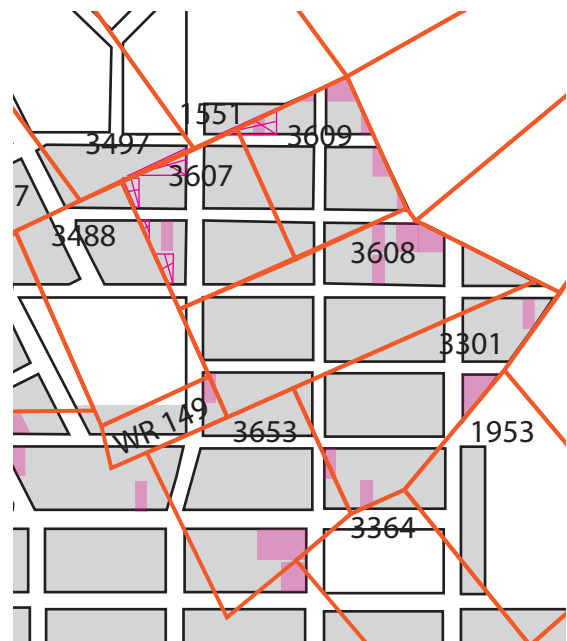


Figure 7.31d
Boulder Townsite Map 8 (c1901)

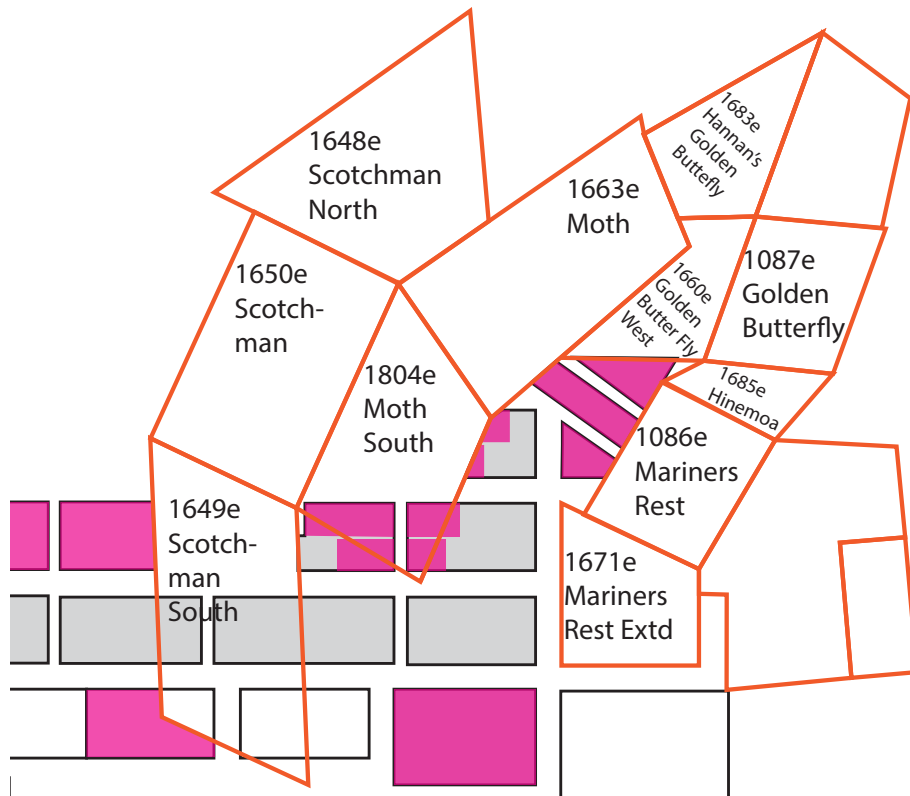


Figure 7.32a
Kalgoorlie Townsite Map 3 (1897)(Detail)

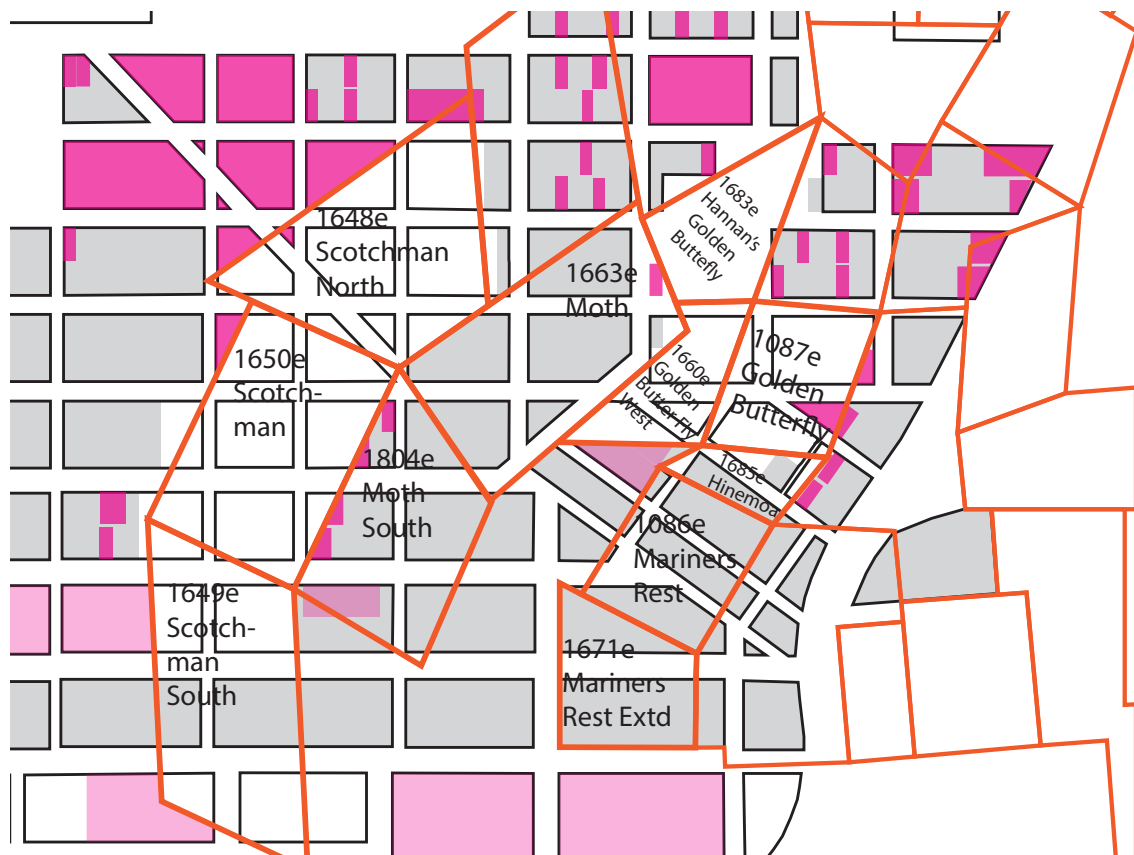


Figure 7.32b
Kalgoorlie Townsite Map 4 (1898)(Detail)

trace of the former reserved status of these lots is the discontinuity between the lot numbers within the single urban block. Between the issue of the maps, roughly another 1000 urban lots had been created in Boulder so, as an example, the adjoining lot numbers leapt from 783 to 1699, in a newly regularised block formation.

While the use of the reserve device is relatively straightforward in Boulder, with lots held in reserve status until surrounding mining leases were forfeited, the example in Kalgoorlie illustrates a more complex and shifting use of the reserve to maintain urban form. One example centres on Mining Lease 1804e (Moth South) that first appeared on the Department of Lands and Surveys map in 1897, despite a forwarding application for the goldmining lease being made in 1895 (and which instead made the mining lease contemporaneous with Map 1 in the Series 2168 map of Kalgoorlie, issued in August 1894).²⁸ The appearance of the outline of the 1804e (Moth South) on the urban map of 1897, coincided with the surrender of the lease in the same period sometime between 1896 and 1897 as the notation, markings and newspaper reports indicate.²⁹ The notation on the map points to correspondence about the particular conditions of the lease's surrender in the Department of Lands and Surveys archive.

1804e (Moth South) is one of a cluster of goldmining leases that blocked and directed development in the Kalgoorlie suburbs north of the railway line between 1897 and 1899 (Figure 7.32a–d). The goldmining leases 1804e (Moth South) and 1663e (Moth) as well as 1648e, 1649e and 1650e (the various Scotchman leases as part of the North Western Associated Gold Mine)³⁰ were located further west than the main gold-bearing seams that link the two townsites together. As Kalgoorlie's growing urban grid expanded northward, it intersected with the mining leases' location on the western edge of the field. The forfeit and surrender of the two Moth

²⁸ State Records Office, ITEM-1895/7811, Record Item: Gold Mining Lease No 1804E Moth South forwarding application.

²⁹ *The Kalgoorlie Miner*, 11 May 1897; *The Kalgoorlie Miner*, 10 May 1897; *The Kalgoorlie Miner*, 14 May 1898.

³⁰ State Records Office ITEM-1895/6272, Record Item: Gold Mining Lease No 1648E (East Coolgardie) forwarding application; ITEM-1895/6273, Record Item: Gold Mining Lease No 1649E Forwarding application; ITEM-1895/6274, Record Item: Gold Mining Lease No 1650E Forwarding application.

leases and the Scotchman's group of leases point to the use of the reserve lot. Again, the process of the transformation from mining leases to residential leases is evident across a number of Series 2168 maps. As the urban grid expanded northwestwards, but before the Moth South fails, the urban lots that overlapped with the Moth South were reserved from sale. Interestingly, at this point, the surface rights of 1694e Scotchman South would have been surrendered, which means that part of the lease was converted to residential leases. By the issue of Sheet 4 in March 1898, when both Moth South and Moth mining leases were surrendered, the reserved lots on the southernmost portion of the lease were extinguished and the footprint of both leases changed with the expansion of the Kalgoorlie urban grid. However, to the north the Scotchman's leases were still in force at this stage, so that within the footprint of the Moth South boundary, residential leases 735, 758, 759 and 768 were all placed on reserve as they formed irregular triangular shaped lots on the boundary with 1650e (Scotchman). Later similar reserves status lots appeared on the junction between the 1663e Moth and 1648e Scotchman North preventing similar irregularities. By the issue of Sheet 9 early in 1900, the remaining Scotchman leases had failed, the reserved status on lots in the old Moth and Moth South had lifted and what was a gap in the urban grid in 1897 had become a uniform grid by the turn of the century.

Summary

The case study has illustrated, through a drawn and textual investigation of series of maps from the Department of Lands and Surveys, the complexity of the process of urbanisation that occurred between 1894 and 1905. This summary will draw together a number of findings with regard to both the methodology used and nature of boom urbanism revealed.

Methodologically, the serialisation of the maps and the tracing process offer the opportunity for the process of boom urbanism to be made clear. The large number of impermanent and transient urban forms, of both Kalgoorlie and Boulder, point to the strength of a methodology that organises and investigates a number of maps over time to trace change. The methodology of serialising the maps allows radically different urban forms, that appear and disappear within a very short

space of time, to be understood concurrently. The tracing process offers the opportunity for the investigation of the process of urban change to be considered at a number of scales. The tracing process points to the nuance and complexity of the urban processes at play and their shifts across time.

With regard to new understandings about boom urbanism, there are a number of findings. Firstly, the case study mapping process, and the identification of urban anomalies, illustrate that the interaction between urban and mining leases occurred at a range of scales from the individual urban lot to suburban subdivision and the consolidated mining lease. The discovery of these interaction extends Harper's ideas about 'interdependencies' between 'planned and unplanned' in gold rush urbanism to consider the interdependencies between a number of 'planned' orders that constitute boom urbanism.³¹ There are a number of manners in which these interdependencies are manifest:

- Using the flexibility of the grid
- Within the regularity of the grid

The permanent changes to grid by the interaction between mining and urban forces (and the spread of that impact beyond the initial site of the interface) extends Kostof and Busquet's notion of the grid as 'exceedingly flexible and diverse system of planning'.³² As Kostof suggests these type of interactions result in 'impure, composite or other sorts of hybrid uses' of the grid.³³ The discoveries in this case study point to new hybrid grid forms which refer to a number of parameters outside of those typical of urban development, in this case mining. However, the small number of these permanent changes to the grid form illustrated the fact the most of the boom takes placed *within* the orderly framework of the grid. The temporary urban forms suggest that new parameters, which measure change, transience and modification within the apparently orderly framework of the urban grid, need to be developed to properly understand boom urbanism. Drawing these two points together, this case study further indicates the

³¹ Harper, 'Gold Rush Urbanism', 238.

³² Kostof, *The City Shaped*, 96.

³³ Kostof, *The City Shaped*, 96.

limits of the ordering potential of the grid form, especially as it interacts with the novel conditions of industrial development.

Secondly, the case study research extends notions about the contingent or instant city where 'improvis{ed}, novel solutions' were deployed to negotiate its rapid growth.³⁴ This can be seen in two examples: The changing and extensive use of the reserve status and the coexistence of urban and mining lots. With regard to the reserved lots, the case study illustrated the shift from using a planning device that was primarily deployed to allocate the provision of civic, public and religious institutions, to one that was implemented as a device to satisfy a desire for regular urban form. With regard to the coexistence of urban and mining lots, despite legislation that should have prevented this occurrence, there are many instances in the boom town where these laws are ignored. In these instances, hybrid urban mining forms and modes of the occupation of land emerge, if only temporarily, as a method of negotiating between these competing demands.

The case study methodology and discoveries that the process of goldfields urbanisation that occurred in Kalgoorlie and Boulder required the negotiation between the two very different orders of city-making and mining. That process of negotiation resulted in a novel kind of city-making that both temporarily and permanently changed the form of the towns in which it took place.

³⁴ Davison, 'Goldrush Melbourne', 53.

CHAPTER 8: Conclusion

At the start of the thesis, the research aimed to explore how novel visual methodologies can assist in understanding of the rapid development of Kalgoorlie, Boulder and the Goldfields after the discovery of gold in 1893. Further to this aim, the research sought to investigate the manner in which photographs and maps recorded and constructed the spatial and temporal events of the booming town and industrial fields. The motivation for the study could be summarised as an attempt to address the twin problems of methodology and content. This chapter draws together several longitudinal findings from Chapter 4 and the three case studies, discusses the significance of the thesis and points to the future research potential of the methodologies and the nature of boom urbanism that has been discovered.

Findings: Methodology

The research has made several findings, firstly about the novel methodological approach used in the thesis and secondly, the new knowledge generated about the process of boom urbanism that the application of these methodologies generated.

With regard to methodology, this section of the conclusion proposes that three major findings emerge from the research:

- the benefit of the close reading of objects
- the serial interpretation of multiple images
- the reorganisation of multiple-page visual data to understand relationships between and across images.

Firstly, paying focused attention, through written and drawn investigation, to the rich visual data contained in what are otherwise overlooked everyday objects—a souvenir from an event, a series of postcards, a newspaper supplement, a photographic album, a set of working maps (and that sit outside the normal objects of consideration for the writing of architectural and urban history)—has revealed something new about the nature of these quotidian objects and contributes to a greater understanding of the events and spaces that they recorded or were produced as a consequence of. The close exploration, description and analysis were undertaken in two modes. The open-ended exploration of the objects in Chapter 4 allowed for broader conclusions to be drawn about the visual and spatial conditions in which the objects were situated. Drawing connections from the initial objects led to an expanded network of related objects, and that informed the spatial history being developed. In the case studies presented in Chapters 5 to 7, a more self-contained and detailed visual analysis, though the techniques of visual overlay, tracing and visual categorisation, allowed for a more nuanced and in-depth readings of these selected objects. The visual data required a process of abstraction to reveal patterns or relationships that then could receive further focused attention. The simplification of the visual data through these processes, which resulted in the loss of detail, is actually beneficial to reading the greater organisation structure or patterns.

The second finding of the methodological approach emerges from this later mode of analysis. When analysing a number of photographs together, the serial interpretation of multiple images allows for the change, stasis, difference or similarity of the places depicted to be understood. This is important for the understanding of the nature of the boom town where, as the research argues, at

least two states of its development need to be depicted: its current state and the state from which it has boomed. It is in this serial interpretation of the images of the same place depicted at two different times that the nature of the difference, or the boom, is revealed.

Thirdly, the graphic reorganisation of visual data in the case studies—the laying out newspapers, the organisation of the Souvenir in sequences and series, the serialising of maps—provide both an overview and the opportunity for detailed inspection of the case study objects. Here, a greater sense of the totality of information can be apprehended. In printed matter, the patterns of organisation of images that together offer the opportunity to look for relationships between and across images. When applied to the organisation of cartographic images, their serialisation allows an investigative process to be applied to the totality of the urban change, or stasis, rather than its individual moments.

However, given these findings, as illustrated by both Chapter 4 and the case studies, there are limits to how much the visual analysis in itself can reveal about the objects under discussion. Despite the information gleaned from the close reading of the objects, the research looked to other text-based sources—post office books, pieces of legislation and letters—to confirm, extend or enhance the visual readings. Again, although the tracings of the serialised maps reveal fine detail about the formal nature of boom urbanism, additional information on the maps, that pointed to other sources of information, was required to find the additional detail. This matrix of more conventional, text-based, archival sources of information such as newspaper reports and surveyor's notes, provided further crucial insight into the factors that influenced the changes noted in the visual analysis. The thesis illustrates that a methodology that begins with visual analysis as well as drawing in other more conventional text-based sources.

Findings: Boom Urbanism

This next section of the conclusion looks what the research revealed about the nature and imagining of boom urbanism in Kalgoorlie, Boulder and the Goldfields. There are four major findings in this section:

- the importance of the process of urban development
- the transient nature of urban form
- novel drivers of urban form and development
- self-imagination of boom urbanism through serial practice and serial production

Firstly, the research reinforces the importance of the investigation and understanding of boom urbanisation as a process as much as the study of the 'final' urban artefact. While the contemporary metropolitan form of Kalgoorlie and Boulder gives clues to its historical development, another finer-grained history of the towns can be written by the study of the process of rapid change over a short period. The thesis finds that a great deal more (and across of greater range of scales) of the urban particularities of boom urbanism and the boom town are to be found in the study of the process of its urbanisation rather than just the urban artefact.

That the research points to boom urbanism as a process suggests that a new vocabulary needs to be developed for describing this form of rapid development at the site of mineral extraction. Some of this language was utilised in the fourth case study and terms such 'flooding', 'blocking' and 'funnelling/fluming' draw on the language of mining. Other examples from engineering terminology and mining vernacular used in Kalgoorlie, Boulder and the Goldfields such as 'costean', 'sluicing', and 'stoping' (which refer to cutting, washing away and horizontal digging, respectively) all have potential in being used to describe processes of boom urbanism.⁴⁷⁵

⁴⁷⁵ Adrian Forty argues that many of the words in the 'architectural lexicon come from science' (e.g., 'circulation') and suggest that 'each of the countless scientific metaphors in ... architecture is a little experiment'. If we extend Forty's purview to engineering, there are further words that might be useful to describe this process. Adrian Forty, *Words and Buildings: A Vocabulary of Modern Architecture* (London and New York: Thames & Hudson, 2000), 86. The Oxford English Dictionary defines 'costean' as a Cornish mining term: 'a orig. Cornwall. Mining. A pit or trench sunk through surface deposits in order to locate a vein of ore and ascertain its extent. Also costean pit.' OED Online, March 2018, Oxford University Press and <https://www-oed-com.ezproxy.library.uwa.edu.au/view/Entry/42323?rskey=nXjYcm&result=1#eid>. The Oxford English Dictionary defines 'sluicing' as 'c. U.S. and Australian. To wash (auriferous ore) in a gold-miner's sluice. Also with out.' OED Online, March 2018, Oxford University Press, and <https://www-oed-com.ezproxy.library.uwa.edu.au/view/Entry/182259?rskey=9KM2f5&result=1#eid22318690>.

The first finding, boom urbanism as a process, leads to the second finding: the distinctive qualities of boom urbanism is the transience and changeability of urban form. The finding is drawn from the study's collective organisation of photographic based images as well as the study of maps. With regard to analysis of urban maps, the findings reveal the emergence and disappearance of a large number of temporary urban forms which leave no permanent palimpsest on the on the grid of contemporary Kalgoorlie and Boulder. In some instances, the temporary urban form may exist only for a matter of months, and the space (and the potential of the space) described by those maps is profoundly different to that which replaces it. With regard to the imagining of the town and industrial landscape in photographic images, the unrecognisability of many scenes of images organised into series or sequences points not only to the city's rapid transformation but the number of iterations of urban and industrial space that occurred between the moments of photographic fixity.

Thirdly, and returning to the impact of mining on the boom towns urban form, the thesis finds there are a number of novel drivers, beyond the expected and usual metropolitan factors, that determine both temporary and permanent changes to the development of the towns. The impact of mining on the urban extends across a wide scale: from the 'cellular' level of a single residential lot to a number of blocks that are distinctive enough to be categorised as their own census district. Many of the circumstances and novelty of these forms can be attributed to the interaction between the expanding urban settlement and the growth and shrinkage of the adjacent mining leases. The impermanent character of mining leads to changing urban form inflected by mining's geological order.

The fourth finding about boom urbanism concerns self-imagination of boom urbanism created of the inhabitants of the town. This finding is related to two aspects:

- the serial practice of image-makers

The Oxford English Dictionary defines 'stope' as '*transitive*. To cut (mineral ground) in stopes; to excavate horizontally, layer after layer; to extract (ore) by this process. Also with *out*.' OED Online, March 2018, Oxford University Press and <https://www-oed-com.ezproxy.library.uwa.edu.au/view/Entry/190895?rkey=eRhWVE&result=1#eid>.

- serial publication of those images.

The thesis argues that images were made with the awareness of what came before them and the archive to which they were contributing. This serial practice perhaps begins with photographers who purchased, rephotographed and absorbed into their archive the work of studios who imagined the town before them. This serial practice extends to photographers who returned multiple times to the same site to record the transformation that had occurred to the mines and towns. While none of the commercial photographers in Kalgoorlie, Boulder and the Goldfields produced a body of work as rigorous as that of the Bechers or even as compositionally exacting as their near-contemporary Marville, thinking about how these photographers produced their work offers an insight that can be applied to the manner in which the urban and industrial fields were imagined by their photographers. In analysing the rich visual data produced by goldfields' photographers, within the relatively contained field of the town and mines, through the lens of serial production allows the research to understand these places better both as subjects and facilitators of image-making.

The second aspect of the self-imagination of the boom town is found in the serial publication of images by newspaper, journal and publishers. The imagine of place, and therefore boom urbanism is made through the selection and organisation of images by editors, compilers and publishers of newspapers, journal and souvenirs. Here, the urban imaginary of boom urbanism is made by the contrast and juxtaposition of images together. When images are organised together across a page, at a glance, a case can be made for the transformation of the town and, perhaps more importantly, for the potential of its further transformation in the next iteration of the series. In serial publication, images are selected not just for the information that they contain but to be used in contrast or comparison from how different they are to other images. This appears to have been understood by the inhabitants of these places during these times of changes as the organisation of images together was a principle manner in which they pictured themselves. Of course, there are conceits and slights of hand that occur when placing images next to one another. At first, the transformation looks radical, but through close examination, it is revealed to be contrived.

Combined, these two notions of the urban imaginary of boom urbanism as constructed by serial practice and production points to what might be described as a serial consciousness: a mindset that anticipates progress and waits to see it manifest in print as in life. This adds further nuance to the understanding of late-nineteenth century (and more contemporary) seriality and its pervasiveness in the remotest of places. The research points to the ongoing usefulness as a framework for understanding images across time and the transformation they depict.

Future Research

The research undertaken in this thesis and the methodologies utilised provide the basis for future research in a number of ways.

Firstly, the opening of the thesis acknowledged that a significant body of theoretical and historical research, which has informed the studies of colonisation, industrialisation, capitalist development which support narratives of settlement during the period under examination, sits outside the scope of this current investigation. The detailed investigation of the visual data and the findings that emerge from the research hold the potential to reappraise those broader thematic concerns, enriching and problematising previous readings. In acknowledging that the study is framed as re-examination of goldfield urbanisation using visual data as the primary source, it recognises that even given the range of media consulted, this data is exclusionary in its production and reception.

Further, embedded in the maps of goldmining leases and images of urban settlements are a set of other values influence the interaction between mining and urban development. These include late-nineteenth century industrial science, notions of governmentality, legislative interpretation, industrial science and empirical measurement were then transferred between mining and city-making. Further research holds the potential to draw together this empirical reading of the visual data and the broader theoretical research already undertaken in this field.

Secondly, the methodology developed in the third case study in the serialisation of maps of urban development could be applied in other places and at other times.

This manner of investigating urban processes could be applied to resource-dependent and non-resource dependent settlements to allow comparative urban studies to be undertaken. Building on the discoveries of this thesis, the most immediate application would be:

- comparing gold-dependant settlements across Australia (and across time)
- comparing settlements of different extraction industries across Western Australia (and across time).

Finally, again concerning the methodologies used by the research, the organisation, description and analysis of public photographs provide a technique for beginning an investigation into the representation of a place. By being both a limiting device for negotiating archives as well as being indicative of preferences for certain types of images, within the context of the culture that produced them, is an insightful manner of understanding a place. The application of the techniques and understandings gained from the thesis research offers the opportunity for further discoveries about the way a place imagined itself as well as the manner of the interaction between competing organisation orders. This will lead to a more nuanced understanding of places, events and their representation.

Concluding Comments

To return to the original map (Figure 1.6) that inspired this study and the questions that arose from it: why were the townsites of Kalgoorlie and Boulder located and orientated that way? Why did a map with the obvious focus of mining include such detailed urban information? How did the two different orders of mining and urbanity coexist? The maps can now be viewed as one moment of temporary fixity in the flux of the boom town. The photographs, maps, drawings, souvenirs, postcards, panoramas and newspapers investigated in this thesis constitute one of the many urban and industrial imaginaries created between 1893 and 1903 in Kalgoorlie, Boulder and the Eastern Coolgardie Goldfields.



Figure 1.6: The density of information about industrial and urban Kalgoorlie and Boulder contained in in 1901 map.

'Map Shewing Gold Mining Leases at Kalgoorlie, Eastern Coolgardie GF', Department of Mines, 1898–1901 (Call number: 24/7/15 RARE), The State Library of Western Australia, Perth

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Photographs
5816B/211, Series J. J. Dwyer collection
5816B/211
0912110d,
041238PD,
000861d figs XYZ).
4406b/10 or call number 008940D

Maps

Battye Library maps were accessed and photographed in May 2008. Maps consulted included

Townsite of Kalgoorlie (1897) (Call number)
Mining leases at Colgoola Hannan's Find (Date) (Call number),
Mines and batteries from Kalgoorlie to Sir Samuel and Kingway
(Date) (Call number),
Map shewing the gold mining leases in the Direct Hannan's Belt
Kalgoorlie (Date) (Call number),
Map of Direct Hannan's Belt (Date) (Call number),
Kalgoorlie Electric Tramways Limd. pole map showing location of
centre poles bracket construction Kalgoorlie Municipality (Date)
(Call number),
Geological sketch map of Kalgoorlie (Date) (Call number)
Wine list map Townsite of Kalgoorlie (1907) (Call number)

The National Library of Australia maps of Kalgoorlie were accessed in May 2000 as part of an earlier research project. Digital version of the physical maps access in 2000 were purchased in

The KCGM drawing archive from the mines that previously worked the area that is the now the Fimiston Super Pit was accessed in September 2010.

Newspapers

Post Office Books

Chamber of Minerals and Energy of Western Australia
Level 10, 2 Mill Street

Perth WA 6000
chamber@cmewa.com

Western Australia Legislation
Department of Justice
Parliamentary Counsel's Office
Perth WA 6000

Goldfield Acts
The Goldfield Act, (1895) Part 1, Section 4
The Goldfields Act 1895, Section 21
Goldfields Act 1895, Section 16
Goldfields Act 1895, Section 35
Goldfields Act of 1895, clause 'force': clause 14, 15
The Goldfields Act, 1886 Part 2
The Goldfields Act, 1886 Part 2
Goldfields Act Clause 3 4 5 9

Western Australian Government Gazette
Government Gazetteer of Western Australia
No. 49.1 Perth: Friday 17 September 1897 No. 7354-C.S.0

The Heritage Council
Department of Planning, Lands and Heritage.
Baird's Building
Level 2, 491 Wellington Street
Perth WA 6000
info@dplh.gov.wa.au

State Records Office of Western Australia
Alexander Library Building
James Street West Entrance
Perth Cultural Centre
PerthWA600-0
sro@sro.wa.gov.au

State Records Office of Western Australia archive was accessed in May – June 2014.
This included Department of Lands and Survey maps as well as archive notes.
<http://www.sro.wa.gov.au/archive-collection/collection/maps-online> (Accessed 17.10.2017)
State Records Office, Consignment: 1755, Item number: 1896/00137
volume 1, folio 8
State Records Office Consignment 1775, Item 1896/00137 Townsite Great Boulder

The State Records Office of Western Australia has these maps is a series of maps that 'comprises cadastral plans of proclaimed townsites or parts thereof, including suburban lots. The plans are drawn to imperial scales (between 2 to 8 chains to the inch).' State Records Office of Western Australia, Record Series Detail, Series 2168, http://aeon.sro.wa.gov.au/Investigator/Details/Series_Detail.asp?Sort=Series_number&Order=ASC&Page=1&Series_number=2168&Series_title=&Descriptive_note=&selFunction=&selActivity=&Start_date=&End_date=&Id=2168&SearchPage=Series (accessed 29 December 2014)

Map 1: Boulder Townsite and Residence Areas,
Map 1: Townsite of Kalgoorlie (Hannan's Find),
Map 2-8: Townsite of Kalgoorlie
Map 2: No Title ,
Map 3: Boulder Townsite,
Map 4: Boulder Townsite,
Map 6b: Residential Lots in Ivanhoe Suburban Area near Boulder,
Map 8: Townsite of Boulder,
Map 9 Ivanhoe Suburban Area and Townsite of Boulder.

Item-1897-08192-01RO, Record Item, Reserves Government Requirements Reserve 2671 Kalgoorlie Lot 62 63 64 65 City Of Kalgoorlie Boulder, 12 Jun 1897 – 10 Jan 1997
State Records Office ITEM-1894-03242-02RO
State Records Office, ITEM-1894/3405 v1
State Records Office, ITEM-1895/2061 School site. Reserve 2868 (cancelled 05.06.1896) Kalgoorlie. Land excised by proclamation (no jacket).
State Records Office, ITEM-1895/2760 V1
State Records Office, ITEM-1895-04845-02RO: Crown Grant In Trust Reserve 2690 Kalgoorlie Lot 61 For Mechanics Institute City Of Kalgoorlie Boulder
State Records Office, ITEM-1895/7811, Record Item: Gold Mining Lease No 1804E Moth South forwarding application
State Records Office ITEM-1895/6272, Record Item: Gold Mining Lease No 1648E (East Coolgardie) forwarding application, ITEM-1895/6273, Record Item: Gold Mining Lease No 1649E Forwarding application, ITEM-1895/6274, Record Item: Gold Mining Lease No 1650E Forwarding application

Western Australia Goldfields Water Scheme: A souvenir of the official opening and visit to the mines of the Golden Mile, 24th-26th January 1903, The Chamber of Mines of Western Australia (Incorporated). Kalgoorlie. Melbourne: F. W. Niven & Co., 15 December 1903, unpaginated.

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Appendix

Table 1

Business that move from Coolgardie to Kalgoorlie 1894-1897

Coolgardie 1894	
1. Curran Jas., aerated water mfr	
2. Paisley J., storekeeper	
4. Wisdom, E.A., hotelkeeper	
5. Mahomet, F. & T. carriers &c.	
6. Walsh & Son, Storekeepers	
Coolgardie 1895	Kalgoorlie 1895
7. Climie, Eastwood & Co., auctioneers, Ford Street	1. Curran James cordial manufacturer
5. Mahomet Faiz & Taigh, camel props. & carriers, Bayley st	2. Paisley James, store
2. Paisley J., store	4. Wisdom E.A Exchange Hotel
4. Wisdom, E.A., hotel	5. Mahomet, Faiz & Tagh, storekeepers
8. Bloom Henry, gen. dlr. Renou st	6. Walsh, J.G. & Son, storekeepers
9. Carrigg Michael (Mays & Carrigg), Sylvester street	7. Climie, Eastwood & Co., auctioneers, &c.
10. Clarke John (Clarke & Co.0, Bayley street	Kalgoorlie 1896
11. Cohen Edwd.S. mg.agt. Bayley street	8. Bloom H. Livery stables . See advt
12. Fox & Lyons, butchers, Bayley st	9. Carrigg M. (Mays & C)
13. Freedman S. The Farmers Draper; also at Perth, Cue & Southern Cross. See advert.	10. Clarke & Co (G.N.) aerated water and cordial manufacturers; & at Coolgardie.

14. Gibson Dr. surgeon Coolgardie hospitals	11. Cohen E.S., Brookman street
15. Gregory & Schnader, plumbers & tinsmiths, Bayley street	12. Fox & Holmes , butchers, Hannan st
16. Henderson & MacGeorge, forwarding agents, Hunt Street	13. Freedman S. (J Mendelssohn, manager), draper Hannan street
17. Henning Andrew H solicitor	14. Gibson Walter, surgeon, Hannan street
18. Knight & Co. ((Charles R.), forwarding agents, Ford St	15. Gregory & Fitzgerald, plumbers, Maritana street
19. Matheson & Co (Alexander) commission agents, Bayley Street	16. Henderson & MacGeorge, customs & forwarding agents, forage merchants &c. see advert
20. Mohar & Smith, butchers, Bayley st	17. Henning A.H. (Henning, Rounsevell & Isbister), Hannan St
20. Mohar John (Mohar & Smith), Bayley street	18. Knight & Co. (C.R.), produce and general merchants, auctioneers &c. See advertisement
21. Moline & Reid Architects, Bayley street	19. Mattheson* & Co. (Alex), merchants *note spelling difference
22. Monger & Co. whole sale merchants, Bayley street	20. Moher J. (M. & Smith), Hannan St
22. Monger Jophn H. (Monger & Co.), Bayley Street	21. Moline & Summerhayes & Hawkins, architects &c.; & at Coolgardie. See cartd
23. Parson Harold G. solicitor	22. Monger & Co. Lim. (J.H.), merchants, Brookman street
24. Philp & Royle, builders, Sylvester street	23. Parsons H.G. (Sinclair, P. & Mann), Hannan Street
25. Proctor & Cooper, storekeepers, Bayley street	24. Philp & Royle, builders, Cassidy street

26. Reynolds William J. Coolgardie hotel, Bayley street	25. Procter & Cooper, drapers
27. Rockcliffe & Co. (Claude Le Meurier, manager), forwarding agents, Hunt street	26. Reynolds W.J. Grand htl. Hannan street
28. Sinclair Walter John L. solicitor	27. Rockcliffe & Co. (h.), forwarding agents, ironmongers, wine & spirit & general mers. See advert
29. Smith William (Mohar & Smith), Bayley street	28. Sinclair, Parsons & Mann (Walter John L. Sinclair, Harold G. Parsons, Charles Mann & Reginald Marshall Stow). Barristers, solicitors, proctors, notaries public & commissioners for affidavits Hannan street; & at Coolgardie, Menzies and Norman.
30. Strother & Co, store	29. Smith W. (Moher & S.), Hannan St
31. Tibbits Wm.ming.engnr.Bayley St	30. Strother – (McKenzie & S)
6. Walsh & Son (Joseph & George) storekeepers, Bayley street	31. Tibbits W.H.
32. Wells Richard N. (Lovely & Wells), Ronou street	6. Walsh & Son, grocers & ironmongers.
33. Weston William (Riddle & Weston), Ford Street	32. Wells R.N. assayer
	33. Weston & Riddle, forwarding agents & at Coolgardie.

Table 2

Newspapers advertised for sale by Hocking & Co, 01 May 1896

Adelaide Observer
Age
Auckland Weekly News
Australasian
Australian Mail
Argus
Ally Sloper (comic strip, London)
Answers
Black and White
Bulletin
Bendigonian (VIC)
British Australasian
Bird o' Freedom (NSW)
Barrier Miner (NSW)
Canterbury Times
Cornhill
Dublin Freeman
Family Herald (GB, weekly)
Graphic
Glasgow Weekly Mail
Hawklet (VIC)
Harper's Magazine
In Town
Investor's Review
Illustrated Bits
Illustrated London News
Idler (Illustrated monthly)
Journal Amusant (France)
Lloyds

Leader
London Punch
Mining Journal
Melbourne Punch
Nineteenth Century
N.Q. Register (QLD)
New Budget
New York Police Gazette (USA)
Otago Witness
Pick Me Up
Pearson's Weekly (GB)
Pall Mall Gazette (GB)
Puck (USA)
Quiz
Queenslander
Reynolds
Referee
Review of Reviews
S.A. Chronicle
S.A. Register
Sketch
Sportsman
Sydney Mail
Sunday Times
Snap Shots
Strand
Scraps (USA Satirical)
St. Paul's
Tit Bits (GB, weekly)
To-Day
Tasmanian Mail
Town and Country

Truth (Sydney)
Truth (London)
West Australian
Western Mail
Weldon's Journal of Fashion (GB)
Westminster Budget (GB)
Windsor Magazine
Westminster Review

Table 3

Eastern Coolgardie Goldfield Newspapers (1893-1903)

1. The Broad Arrow Standard (1896-1899)
2. Coolgardie Miner (Coolgardie WA : 1894 - 1911)
3. Coolgardie Mining Review (Coolgardie WA : 1895 - 1897)
4. The Democrat (Published Perth, Fremantle and Kalgoorlie: 1904-1905)
5. The Evening Star (Boulder, WA: 1898 - 1921)
6. The Goldfields Morning Chronicle (Coolgardie, WA : 1896 - 1898)
7. The Hannan's Herald (Kalgoorlie, WA : 1895 - 1896)
8. The Kalgoorlie and Boulder Standard (Kalgoorlie WA: 1897-1898)
9. Kalgoorlie Miner (WA : 1895 - 1950)
10. Kalgoorlie Western Argus (WA : 1896 - 1916)
11. Kanowna Democrat 1896-1897
12. The Mirror (Published Perth and Kalgoorlie WA: 1905-1910)
13. The North Coolgardie herald (Coolgardie WA : 1904-1911)
14. The Sun (Kalgoorlie, WA : 1898 - 1919)
15. Sunday Figaro (Kalgoorlie, WA: Weekly, 1904)
16. The W.A. Sportsman (Kalgoorlie, WA: 1901-1902)
17. Westralian Clarion (Kalgoorlie, WA: 1903)
18. Western Australian Goldfields Courier (Coolgardie WA: 1894-1898)

List compiled from Battye Library catalogue and Trove online newspapers