Planning for the greatest good: A case study of William Light's 'Plan of the City and District of Adelaide, South Australia', and potential World Heritage values

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Key words: urban and regional planning, cadastre and land administration, co-ordinated cadastre, Adelaide, William Light, Jeremy Bentham

SUMMARY

Adelaide, South Australia's capital and seat of government, was established as the 19th century antipodean Ideal City of the English Philosophical Radicals, following extensive analysis of the causes of successes and failures of human settlements spanning the history of western colonisation, including Greek City States, Spain's colonization of the New World, and the development of the United States of America and Canada.

In facing future challenges, Adelaide provides an inspirational model representing the culmination of an important interchange of human values on town-planning, public health, governance, surveying, and cadastre and land management. Planned and surveyed by Colonel William Light, South Australia's first Surveyor-General, in accordance with Jeremy Bentham's principles 'for the greatest good' and 'vicinity-maximizing-dispersion-preventing', the survey of the district of Adelaide is also expected to be the first implementation of a co-ordinated cadastre.

William Light's 'Plan of the City and District of Adelaide' exemplifies key principles and methodologies for the successful implementation of a sustainable, environmentally sensitive urban and regional spatial plan, offers guidance for current and future generations, and sets an aspirational benchmark for surveyors and planners. Poor modern spatial and land use planning in South Australia contrasts with the State's origins and exemplary planning heritage.

Light's sensitive response to philosophical dictums and the physical opportunities and constraints arising from climate, topography, and practical requirements has engendered a plan which has been enjoyed, revered, and stoutly defended for generations, with a pervading sense of significance which remains attributable to Light’s intuitive act of creative genius. Set betwixt hills-face and harbour, spanning a river valley, laced with a unique figure-eight of open space, Adelaide demonstrates a rare rapport between the genius of place and plan. Today
Light’s city remains a permanent testimony to a man who had the sense to recognise, and the ability to respect, the genius of the place, and is expected to have the potential to meet at least four of UNESCO's World Heritage criteria.

**SUMMARY (optional summary in one other language in addition to English, e.g. your own language)**

Type the summary in the second language here …
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1. SURVEYING AN IDEAL SOCIETY

“...a man that cannot establish a meridian line, that is not capable of finding his latitude or longitude, that cannot determine the variation of the compass or conduct a survey trigonometrically – to be Surveyor-General in a new country is truly laughable” (Light, 1838).

In founding South Australia, ‘the Great Experiment in the Art of Colonization’, sole responsibility for selecting the site of the capital (the seat of government), and for the city’s design and the survey of 'Town' and 'Country' sections, was entrusted to Colonel William Light (1786-1839). Light devised, coordinated and carried out a trigonometrical survey for the District of Adelaide, including establishing the first co-ordinated cadastre (Porter, 2007).

According to Light the only means by which the country should “be measured at first” was “by trigonometry” (Light, 1838). Aided by assistant surveyors Boyle Travers Finniss, and W. Ormsby, draughtsman William Jacob, and a team of survey labourers, Light's sophisticated survey technique was totally beyond the comprehension of the deputy surveyor, George Strickland Kingston (sometimes erroneously credited with the Adelaide plan), who condemned the intangible nature of Light's trigonometrical survey and coordinated cadastre as unworkable and reporting that “the boundary lines are wholly imaginary”. Light repudiated this criticism of his co-ordinated cadastre – just as parallels of latitude and meridians of longitude were “imaginary lines” with which “ships can pick off their positions on the globe, and shape their course ... with great accuracy”, “so could we give over the country sections”. (Light, 1838).

William Light was preeminently qualified for the appointment as South Australia's first Surveyor-General. Born in Kuala Lumpur (Malaysia), William was the son of the first Superintendent of Penang, Englishman Francis Light. After being sent to school in England Light entered the British Navy as a volunteer boy and became a midshipman, and subsequently entered the British army where he became a veteran of Wellington's Army, serving with distinction in the Peninsular War as a cavalry and reconnaissance officer, and as a Deputy Assistant Quartermaster General on Wellington's staff. With experience of strategic assessment of the topography of Spain and Portugal for the movement and accommodation of infantry, cavalry and artillery, Light was credited with providing clear reports and of being capable in all his duties, whether in the field or in the office. After leaving the Army Light travelled extensively through Europe, the Mediterranean and Egypt, published his artwork of Sicily and Pompeii (Light, ?1823, ?1825), married, and was employed in the Navy of the Pasha of Egypt.
1.1 Jeremy Bentham and the South Australian cadastre

Unlike other settlements, South Australia was intended to be a practical test of reforms, proposed by the English Philosophical radicals. These followers of Jeremy Bentham, with his principle of utility as their rule, 'systematically scrutinized the entire system of economics, politics, jurisprudence, education, religion, emigration and colonial relationships and judged them all in need of reform'. The extension of the Wakefield principle of systematic colonization, defined by political economist Edward Gibbon Wakefield and first tested in South Australia, was recognised by English philosopher and politician John Stuart Mill as the basis for the career of prosperity for all the 'Australian Colonies'.

Bentham is known to have written a Proposal for the Colonization Society, based upon the principle which he had discerned in Wakefield's proposals, and named 'vicinity-maximising-dispersion-preventing'. More significantly, proposals for South Australia's land definition and management system seem to originate from Betham's proposals for addressing the problems with land management in England.

Bentham believed “the aim of government should be the greatest happiness for the greatest number” and opposed penal colonisation of New South Wales in his Panopticon Versus New South Wales: Or, the Panopticon Penitentiary System, and the Penal Colonization System, Compared and A Plea for the Constitution: Shewing the Enormities Committed, to the Oppression of the British Subjects, Innocent As Well As Guilty (Bentham, 1802).

As early as 1828 Bentham communicated his Outline of a Plan of a General Register of Real Property (Bentham, 1828). Proposing “an appropriate all-comprehensive map” to assist with the registration of land, rather than a place to stand upon, as Archimedes had required to give motion to the earth, Bentham called for “a map to point to” so that he could “give rest and quiet to 'all that inherit' this our portion of the earth's surface” (Bentham, 1831). Bentham insisted that “without such an anchor as this to be fastened to, - surely to a vast proportion of the landed property in this kingdom will the title remain floating in the ocean of uncertainty” and looked to Cassini's work in France where a Chartre Trigonometrique formed “an appendage to a correspondingly all-comprehensive cadastre.”

1.2 Planning for success

In planning for South Australia, Bentham's rigorous methods of analysis were applied. The history of western civilisation was ransacked, seeking the causes for the successes and failures of settlements. Richard Davies Hanson sought the Charters for Maryland, Virginia and Georgia, and George Grote's research on the history of Greece served to provide examples, along with Spain's colonisation of the Americas, Britain's settlement of Canada and penal colonisation of Australia. The lessons of centuries were distilled into a comprehensive set of guidelines which the Colonization Commissioners for South Australia framed into 'Instructions' for William Light, whilst giving him the power to depart from these if necessary.
In tasking Light with sole responsibility, the Commissioners acknowledged this as a deliberate act, determining this to be the best means for securing the best result.

Control of land management was recognised as being the most crucial necessity for reform and therefore South Australia's Governor was to have no control over land, and no power to interfere with the Surveyor-General's decisions or directions.

According to Robert Gouger, South Australia's first Colonial Secretary, South Australia's constitution set it apart in two crucial ways: disposal of land, and principles of governance. South Australia had the “very best system of disposing of public land rendered permanent by Act of Parliament”, “a circumstance that prevails in no other colony belonging to Britain” (Gouger, 1837). Furthermore, “the mode of disposing of land involved in these principles deprives a bad government of one means of corruption.”

1.3 John Arthur Roebuck's public trust of open space

Returning from Canada, John Arthur Roebuck deplored London’s smog and advocated public green and open spaces for towns – encircling ‘large tracts of common lands … maintained by the town authorities’.

‘We must create a public trust and prevent by law if necessary the rights of the common people from being swept away’ (Hyde 1947). Along with J. C. Loudon’s (1829) proposal for concentric rings of country within a metropolis, he foreshadowed Adelaide’s great municipal Park. Observing Nature’s delineation of low-lying inundation-prone land Light was destined to lace the city with a signature figure eight of Park Lands. A natural setting of over 2,338 acres: encircling the entire city; meandering along each bank of its central watercourse, and punctuating the intended built areas, would decorate the 1,000 acres of saleable lands mandated for the capital by the Commissioners.

1.4 William Light's Adelaide

Light certainly started from difficulty: “the obstructions for this work were greater on this particular spot than any other part of the plain. It may be asked then, ‘Why choose it?’ I answer, ‘Because it was on a beautiful and gently rising ground, and formed altogether a better connection with the river than any other place’.” (Light 1839)

In designing a city of 1000 saleable acres Light observed the Para plateau and River Torrens valley, avoided areas subject to inundation, and placed his City to the north and south of the River, on rising ground. Reunifying these bifurcated nascent urban forms with his ‘Adelaide Park’ Light interwove a unique figure-eight of open space – through and around the City. Light had wisely realised the ‘almost ideal geographical conditions for the site of a city’ and sought ‘to make the best use of the geographical advantages’ (Historical Memorials Committee, 1937).
According to Fenner (1931:239) there is ‘no other city in the world, of similar importance, where the various geographical factors determining the site can be more easily recognized.’ Notwithstanding obvious natural advantages, the difficulties of the site aided concerted efforts to usurp Light’s power of determining the site. The Governor, Captain John Hindmarsh, ‘clung to the idea of moving the capital’, dragging the Surveyor-General and the settlement into a controversy which raged for years, and informing Lord Glenelg ‘no earthly power can bolster Adelaide up to a higher rank than that of a pretty village’ (Hindmarsh, 1838).

It could be said that the trouble lay in William Light’s own genius – Gruffyd’s description of Frederick Law Olmstead may be equally applicable to Light: ‘He had the poet’s understanding and the painter’s perception of the beautiful, the sublime and the picturesque in landscape. He was master of the genius loci, a man instinctively attuned to the subtleties of a particular place, its geology, topography, and plant life. These were the materials of his design.’ In choosing the best site for a permanent capital, from 1500 miles of coastline, Light had perceived ‘in a country perfectly in a state of nature’ what others proved incapable of comprehending - the ideal site for his intended beautiful and healthy city (Figure 1).

Figure 1. Plan of the Preliminary Country Sections in the District of Adelaide, South Australia. From the Surveys of Wm Light Esqr Survr Genl. and Assistant Surveyors, drawn by Henry Nixon late Lieutenant 96th Regiment. c.1838. Image reproduced by courtesy of The National Archives of the UK. CO700/SOUTH AUSTRALIA-2Pt1 (4).

Light’s letter to George Jones, RA, in September 1836, praised the landscape, ‘Nature has done so much that very little human labour and [art] is requisite to make this one of the finest settlements in the whole world.’ Writing to the Resident Commissioner, James Hurtle Fisher, in February 1837, Light also detailed his observations of the country whose capabilities he considered so superior. The good soil, extensive neighbouring plains and sheep walks, proximity of a plentiful yearround supply of excellent fresh water, easy communication with its harbour, a likely connection with the Murray River, and also the beauty of the country were the objects which in Light’s mind ‘could admit of no doubt of its capabilities for a capital’.

1.5 Adelaide's prosperity and progress

Lieutenant-Governor and Chief Justice, Sir Samuel Way (1905), recognised Light’s topographical instinct: ‘the exercise of that instinct preserved the infant community of South Australia from being strangled almost at its birth … After 70 years no better site can be found. A mile or two either way would have spoil the whole thing. It is situated on one of the finest plains in the world, under the shelter of the beautiful hills which have moderated the climate. They have secured us from drought, and have furnished us with a beautiful water supply and a glorious picture. Hour by hour and day by day throughout the year the hills make a beautiful landscape that eludes the skill of the best possible landscape painter … The verdict of posterity has been given … generations to come … will bear in remembrance the honoured name of Col. Light, the founder of the City of Adelaide … the saviour of the State of South Australia.’
2. ADELAIDE IN ITS INTERNATIONAL CONTEXT

According to Norberg-Schulz (1980), ‘through building, manmade places are created which possess their individual genius loci … determined by what is visualized, complemented, symbolized or gathered.’

Light visualised a beautiful and healthy capital, set amidst the plain between hills-face and sea. On a site pre-eminently adapted for his purposes he looked to the future, and designed an urban form which complemented Nature’s provisions, with conscious purpose. As an unprecedented experiment in the Art of Colonization, Adelaide would represent a radical reform in urban planning – the combined works of man and nature would elevate the rectangular plan to a remarkable exemplar of a ‘Garden City’. Light’s masterpiece of adaptive symmetrical regularity stands as a striking contrast to L’Enfant’s (1791) condemnation of the regular plan which Jefferson proposed for the Federal Capital of Washington. According to L’Enfant, however answerable or seducing they might appear on paper, such a plan must become tiresome and insipid.

Although Light is not known to have been influenced by any specific city plan, he was born in Kuala Kedah (Malaysia), and had traveled widely throughout India, Portugal, Spain, France, Switzerland, Italy, Sicily, the Mediterranean, and Egypt. He had observed great art and architecture, and painted townscapes, landscapes, seascapes, peoples, and antiquities with accuracy and sensitivity. The South Australian ‘Experiment’ also received assistance from notable thinkers including Jeremy Bentham, George Grote, Robert Owen, John Stuart Mill, and E. G. Wakefield. Before Light’s appointment a detailed examination into the past successes, failures, and progress of Greek City States, Spain’s colonization of the New World, Pennsylvania, Georgia, British Canada, America, New South Wales, Van Dieman’s Land and Swan River had been carried out.

Entirely original in its form, Light’s plan of Adelaide symbolises a wide gathering of human endeavour, evocatively suggesting more than a nodding acquaintance with Gother Mann’s 1788 ‘Plan for Torento Harbour’. From a surveyor’s perspective, the square one-acre town sections common to Mann’s model and Adelaide are not predicated upon convenience (Porter 2007). Although never implemented, Mann’s urban design seems nonetheless memorialized in Adelaide’s inscrutably ‘square’ Town Acres.

Figure 2. Proposal for concentric belts of country for London. In Hints for Breathing Places for the Metropolis, and for Country Towns and Villages, on fixed Principles. J. C. Loudon, 1829. Colour added.

Despite despoliations and alienations Adelaide’s vast Park provides tangible evidence of Roebuck’s campaign to secure public walks, and of Loudon’s (1829: 686-689) ‘beau ideal of a capital for an Australian or European union’ (Figure 2).
The ideal Australian city design of Maslen (1830), also never implemented, seems partly memorialised in miniature in the hierarchy of Adelaide’s street widths which undoubtedly assist the city to avert the tiresome insipidity L’Enfant attributed to regular plans.

2.1 After Light

With Light’s death in 1839 the art of natural design was lost – the genius loci and South Australia were deprived of their greatest ally, Light’s good sense. A proliferation of little Adelaides (Williams 1974:356) were senselessly stamped out across South Australia, ignoring the genius of each place. Without Pope’s ‘true Foundation’ ‘the best Examples and Rules’ had been ‘perverted into something burdensome and ridiculous’, and drew inevitable and bitter criticism. With heavy sarcasm the editor of Jamestown’s Review derided the ‘rules’ of the surveyors who had set that town across Belalie Creek:

‘Avoid all sites that are naturally high and dry and possess natural facilities for easy drainage. If there be a gentle slope, sheltered by friendly upland, avoid that also; eschew any elements of the picturesque, and select rather the flattest, most uninteresting site possible; if a flat with a creek running through it and subject to overflow, by all means get on the lower bank of the creek and peg away. If a running creek be not available get in the way of a storm channel. A mangrove swamp with sinuous cozy channel is a combination of favorable conditions too good to be often hoped for, and if subject in addition to direct tidal overflow, consider it perfection.’ Street layout was characterized as a ‘wanton exhibition of cussedness’.

Despite the inability to replicate Light’s successes his plan continues to inspire Adelaide’s citizens to protect their city’s layout and Park Lands, with the notable exception of its harbour. Adelaide’s harbour had once taken centre stage. However, today it is strangely divorced from its crucial place in Light’s Plan for the City, Port and District of Adelaide. Notwithstanding the fact that 29 of Adelaide’s Town Sections were chosen at the harbour, ‘Light’s Plan’ is often mistakenly considered to be limited to the City of Adelaide (North and South of the River Torrens) set within its Park Lands (Figure 3).

Figure 3. City of Adelaide detail from the Plan of the Preliminary Country Sections in the District of Adelaide. Image reproduced by courtesy of The National Archives of the UK. CO700/SOUTH AUSTRALIA-2Pt1 (4).

Ebenezer Howard’s comments on the advantages of Adelaide’s design have often been noted. However, the vastness of Light’s Plan also escaped Howard who mistook North Adelaide for a subsequent extension rather than part of Light’s original plan. In Australia Light’s Plan is also subject to similarly strange misunderstandings.

As a mandatory prerequisite the harbour (Port Adelaide River) had figured largely in Light’s design: ‘one of the finest little harbours I ever saw … I have never seen a harbour so well supplied with little creeks that would answer for ship building … as beautiful and safe a harbour as the world can produce’ (Light, 80). Although Light’s plan of Adelaide is being
considered for inclusion on Australia’s National Heritage list, Australia’s Environment and Heritage Minister rejected an emergency application for heritage protection, concluding ‘there was insufficient evidence . . . to form a belief that the role the Wakefield Scheme played in the history of [Port Adelaide] was in itself of outstanding significance to the nation’ (Campbell 2005).

Given the multitudinous writings on the South Australian experiment, ‘insufficient evidence’ seems hardly credible, yet that decision stands despite a wealth of evidence of the harbour’s importance in Light’s Plan and for the success of the experiment defined by Bentham, Grote, Mill, Molesworth, Wakefield and others. In addition to eschewing the use of convict (slave) labour, the experiment sought to revolutionise Britain’s management of Crown Lands well in advance of Lord Durham’s Report on British Canada, and was emulated in Australind (WA), Wellington, Christchurch and elsewhere in New Zealand.

2.2 Adelaide's decline

With the ‘City’ increasingly being equated with the central business district (formerly South Adelaide), further contraction and encroachment upon the Park Land river banks encourages the cynical view that such redefinitions presage further attempts at alienation. Despite partial inclusion on Australia's National Heritage List (7 November 2008) and token references, the government's current draft 30 year Plan for Metropolitan Adelaide has no specific provisions for preserving key aspects and components of the planning and surveying heritage of the City and District of Adelaide.

The art of forgetting seems greatest in the State and Municipal governments, joint custodians of Light’s Adelaide Park. Despite documentary evidence of the land having been purchased in fee simple and dedicated in perpetuity, Government and Council maintain the nonsense of the land being ‘Crown’ land. The historical evidence of their own able advocate, R. D. Hanson, refutes this. Hanson, who had served with Lord Durham in Canada before arriving in South Australia via New Zealand, was instrumental in defending Victoria Square from being constructed upon. Even the Speaker of the House of Assembly (Kingston 1877) denied the right of the Government ‘to interfere with or make any use of any portion of the Park Lands not specifically reserved or set apart for Government purposes by Colonel Light.’ Others have defended Light’s Plan and his Park Lands from the infamous Metropolitan Adelaide Transport Scheme and other such destructive ‘plans’.

3. POTENTIAL WORLD HERITAGE VALUES

South Australia's land management, including the Torrens Title mark the culmination of centuries of human endeavour in colonisation and land management. On the basis of previous and recent research, the City and District of Adelaide planned and surveyed by William Light, would appear to have the potential to meet four (4) World Heritage criteria:

- as an inspirational spatial plan demonstrating the technical and artistic genius of Colonel William Light, master mariner, artist, surveyor and town-planner
representing the culmination of an important interchange of human values on town-planning, public health and surveying and land management

- as the superlative exemplar of a 19th century Public Walk for the health and recreation of the inhabitants of a town, and for a Garden City
- having direct and tangible associations with South Australia's remarkable and unique foundation as the 'Great Experiment in the Art of Colonization' and as an ideal society by the English Philosophical Radicals, connected with literary works of Jeremy Bentham, John Stuart Mill, John Arthur Roebuck, George Grote, Edward Gibbon Wakefield, Charles Napier, Robert Torrens, and Felix Wakefield and Charles Frome.

Like Schama’s guardians of landscape memory, Light became rooted in the landscape of the City of Adelaide. Of all his adventures – from Kuala Kedah to his service in the Royal Navy, Peninsular Wars, and for the Pasha of Egypt – Light completed his greatest work in South Australia. In fulfilling his aim to follow in the footsteps of a father who had founded the British settlement of Penang Light was beset by formidable opposition which threatened to bring all his efforts to nought.

It seems fitting that Light’s endeavours to preserve his vision for the good of future generations is a battle those generations have continued to this day – invoking Light’s name to protect the place, and consulting Light and his original Plan as their guide and measure of good sense.

Despite often erroneous or cropped interpretations of ‘Light’s Plan’, it continues to be invoked as a defence against encroachments upon the public realm of the City of Adelaide. Inspired by Light, town planner Charles Reade (1919) asked,

‘What finer monument is there to the memory of genius than the logical continuation of its great and imperishable work?’

Adelaide provides an inspirational model for planners and surveyors, demonstrating key principles and methodologies for the successful implementation of a sustainable, environmentally sensitive urban and regional spatial plan, and offering guidance for current and future generations. The philosophical foundations of South Australia, as the first practical test of proposed reforms inspired by the principles and methodologies advocated by Jeremy Bentham, William Light's plan and survey of the City and District of Adelaide, South Australia, are unique, and warrant inclusion on UNESCO's World Heritage List.

Acknowledgements

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REFERENCES

Bentham, Jeremy, A Communication to the Commissioners appointed under Letters Patent, of date the 6th June 1828, to inquire into the Law of England respecting Real Property,
Bentham, Jeremy, 4th July 1831
Bentham, Jeremy, 1832, Outline of a Plan of a General Register of Real Property contained in A Communication to the Commissioners appointed under Letters Patent, of date the 6th June 1828, to inquire into the Law of England respecting Real Property, and first printed in the Appendix to their Third Report, ordered by the House of Commons to be printed, 24th May 1832.
Light, William, ?date, Sicilian Scenery, London
Light, William, ?date, Views of Pompeii, London


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Sydney, Australia, 11-16 April 2010
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