

Chapter Two

Melbourne's inner suburbs

2.1 Extending the *Section* principle

(a) *The rule of the Rattlesnake*

To understand the expansion of Melbourne beyond the original township discussed in Chapter 1, it is necessary to step back and examine the larger land-management practices then happening in the Port Phillip District.¹ Sub-chapter 1.2 told how Robert Russell was sent to Port Phillip in late 1836 to reconnoitre and register. He also had some formal duties that he received in a meeting in Sydney with Deputy Surveyor-General Perry. Perry conveyed to Russell the Colonial Secretary's wish that Russell should make a series of survey lines - called *section lines* - based on a meridian and datum point established by an officer of the HMS Rattlesnake,² a 500 t, 28 gun "sloop of war" under the command of Captain William Hobson.³ The instruction to Russell said⁴ that:

"..(the ship's) officer would supply the direction of the first great parallel of the meridian of Parramatta. You will use the utmost care...."

[A *meridian* is a circle of longitude on the earth's surface. It passes through the north and south poles and is thus a north-south line based on navigation equipment – accurate clocks and sextants – rather on compass readings which vary with both location and time.] The other three tasks given to Russell with greater priority were to chart the shores of Port Phillip, survey the Yarra and any other large rivers, and list all squatters.⁵

The Rattlesnake was in the Melbourne area between 30 September and 30 November 1836 and left Port Phillip on 11 December of that year. As noted in Sub-chapter 1.2, Russell had arrived separately on 5 October 1836. The relevant officer was Captain Phillip King, who had already conducted some major surveys and astronomical observations. King's log⁶ indicates that the only precise Melbourne location that the Rattlesnake established during that visit was of Point Gellibrand (Williamstown) on 9 November 1836. For a sailor, the seaside location made Williamstown the obvious choice for the meridian and its local datum.

The Rattlesnake returned to Port Phillip on 2 March 1837 and landed at Melbourne three days later with Hoddle among its passengers.⁷ It would seem that Hoddle might have had other ideas for the location of the datum. John Batman had established his house at the top of a solitary hill (Map 1.2) in late 1835 and had been continually adding to it. It had already been used for major "survey" sightings. Indeed, to land surveyors the hill would have seemed a fairly obvious choice for the datum, being a visible point on the practical edge of the initial settlement, although its selection has been subsequently criticised.⁸ Perhaps it needed Hoddle's authority and initiative to so publicly utilise Batman's backyard.⁹ Greig¹⁰ implies that Russell chose the corner of Flinders and Spencer St, but this is a misinterpretation of Russell's reference to a triangulation point for his survey of the *town section*.

Captain King was again a key officer on the Rattlesnake. During this second stay he produced two relevant maps using the ship's navigational equipment. The first, dated March 1837, shows Batmans Hill but notes only latitudes and longitudes "found on board HMS Rattlesnake" at Point Nepean at the entrance to Port Phillip Bay (latitude & longitude) and Point Gellibrand at Williamstown (latitude only). Presumably, this map produced a reaction from Hoddle, as King was provided with data on Batmans Hill on 7 March. His second map, dated 21 March 1837, gives the latitude and longitude for Batmans Hill, thus permitting the required initial *section line* "parallel to the meridian" to be located at Batmans Hill. King's log¹¹ shows that in a busy month, between 2 and 21 March he accompanied Governor Bourke to and from Geelong, including a side survey trip to the top of Mt Macedon where he fixed survey points on 20 March, surveyed the land between Point Gellibrand and Batmans Hill, calculated the latitude and longitude of Batmans Hill, and linked his Mt Macedon survey with Mitchell's earlier survey from the north.¹²

Later in the decade The Rattlesnake became famous for carrying Huxley and others on a natural history expedition around New Guinea.

(b) *Establishing the Section*

This new datum and meridian were first used in Hoddle's map dated 25 March 1837 (Map 1.2).¹³ The datum was 49 m north of the centre-line of Flinders Lane and about 140 m west of the centreline of Spencer St.¹⁴ Perhaps not surprisingly, Russell's map (Map 1.1) of 1837 (which might have been drawn as early as late 1836) shows no datum lines at all.

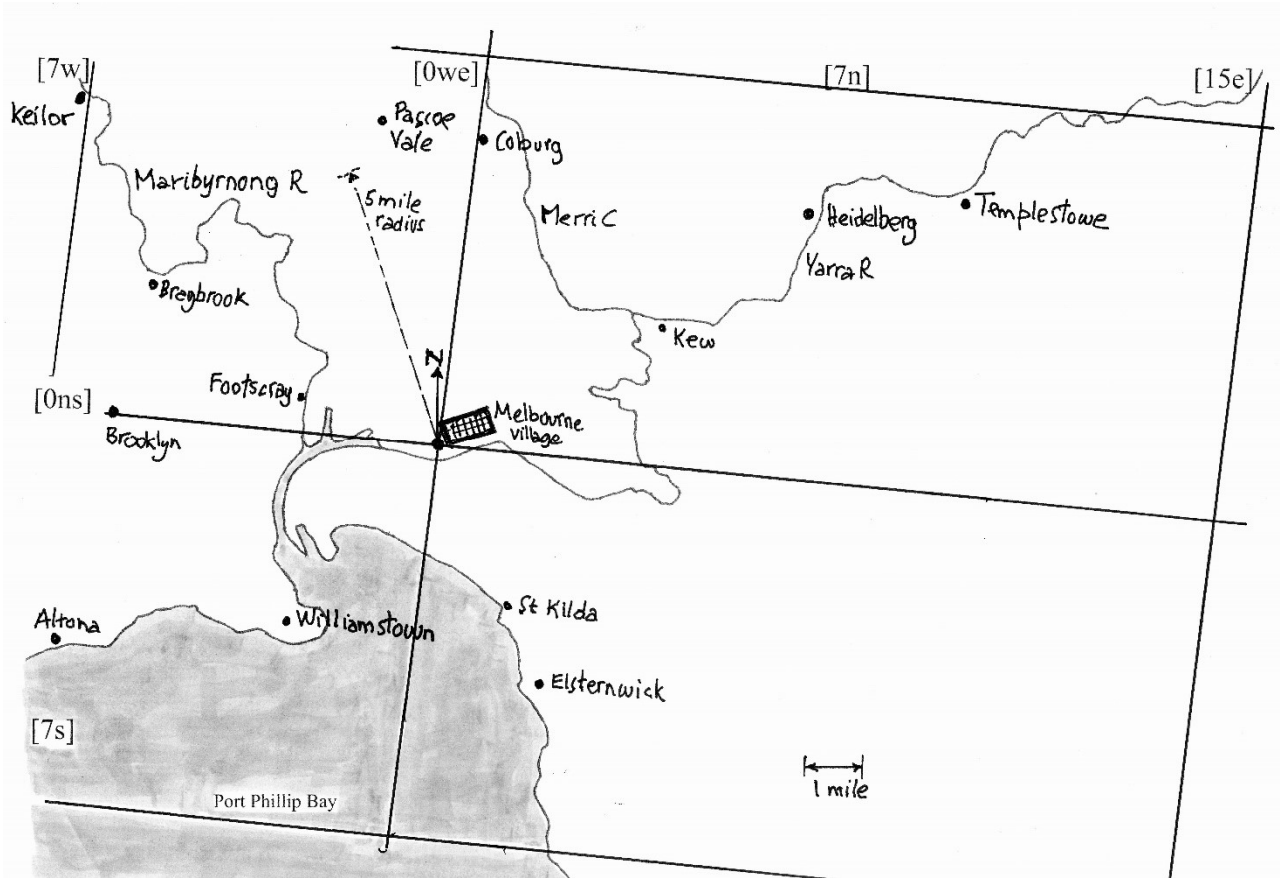
Fixed by the Batmans Hill datum, the grid of orthogonal *section lines* began with Hoddle's work in June 1837¹⁵ that divided the land into mile square *sections* with an area of 640 acre. These *sections* were to be the basis for all land sales. The process was recommended¹⁶ by J. T. Bigge in 1823 in response to a commission from the Secretary of State in London and was based on having noted its successful use in the American mid-west. It was then embodied in the Ripon land regulations issued in 1824, and revised in 1831 by the Colonial Office in London to encourage the orderly and uniform sale of large areas of land.

As an example of the use of the datum, in December 1837 Hoddle instructed assistant surveyor Henry Smyth: "You will ... commence from Batmans Hill to divide the land adjoining (Moonee Ponds Creek) into sections agreeable to the usual regulations."¹⁷

The north-south datum *section line* remains very visible today. It passed through the north-west corner of the existing town, across Flagstaff Hill with its high point marked to the present day by a flagpole already serving in 1837 as a signalling location for ships in Hobsons Bay. It then headed north – first as / Peel St and then as Royal Pde and Sydney Rd (State Route 55), until finally defeated by the Merri Creek at Gaffney St / Murray Rd (at times known as Water Rd) in Coburg North. An interesting surveying convenience was that Batmans Hill and Flagstaff Hill, the two high points of the original town, were almost on the same north-south line! Furthermore, that line is the north-south datum line. Darke's survey field book of 24 Dec 1835 puts the Flagstaff at 355°13' from Batmans Hill.¹⁸ To further the coincidence, Emerald Hill, the South Melbourne highpoint, is only about 250 m east of the same line.

For convenience throughout the text the Book will henceforth refer to a *section line* by its miles and compass direction from the datum in [brackets]. The original north-south *section line* through the Batmans Hill datum is therefore designated as [0we] and manifests itself as Royal Pde and Sydney Rd. The east-west datum line [0ns] through Batmans Hill manifests itself as Swan St and Riversdale Rd in the east (State Route 20) and as Somerville Rd (State Route 50) in the west.

More widely, for example [2e] is the *section line* 2 mile east of the north-south datum *section line* [0we] and manifests itself as Punt Rd and Hoddle St. [2n] is the *section line* 2 mile north of the west-east datum *section line* [0ns] and manifests itself as Racecourse Rd, Princes St and Alexandra Avenue. Some of the *section lines* discussed in this book are shown in Figure 1.6, Map 2.1 and Map 4.1 and on some of the following maps. Thus, the notation [xC] refers to one of the mile grid of *section lines*, and specifically to the *line* x mile in the C compass direction from the datum *line*.



Map 2.1 Map showing the first nearby villages and relevant rivers and creeks and a few *section lines*. Map 2.4 shows more detail of the region around the original Melbourne village. Map 4.1 provides a more comprehensive picture.

It is no coincidence that the roads were then located on the *section lines* as, in the absence of pre-existing tracks, these *linear* property boundaries were the obvious location for roads servicing new *sections*. Outside of central Melbourne, roads were conventionally assumed to be a chain wide and were created by a land-owner grudgingly losing 10 m of inevitable prime land from at least one of his *sub-section* boundaries. This was a 5 % loss for each boundary, or 19 % with roads on all four boundaries. The loss was well noted – certainly, roads were not willingly offered by land-owners as part of the *sectioning* process. This was to be a major problem for both Hoddle and the future metropolis.

The *section* process discussed above could be called virtual surveying, for once the datum point and north (as defined in (c) below) were established, all of a territory could be envisaged as being divided into coherent, neatly-aligned mile-square sections, even if nobody had ever visited the location. British cabinet papers of the time referred to these seemingly unvisited locations as “unlocated districts.”¹⁹

(c) Applying the Section

Governor Darling’s intention had been that villages would occupy a half square mile *half section* and towns a square mile *section*, following the preference of British colonial administrators. One geometric problem with the Governor’s Order 28 discussed in Sub-chapter 1.2 was that it could never produce a set of *property sub-sections* for a town that would fit neatly into the embracing mile *sections*. It was as if the three-man committee had forgotten to make an allowance for road width when deciding that each *property sub-section*, rather than each centreline *sub-section*, should be 10 chain in length. The approach outlined in Sub-chapter 1.4 meant that while the *property sub-sections* were the specified 10 x 10 chain, the distance between the centrelines of the roads was 11.5 chain. These dimensions were explained in Figure 1.3. A sequence of 11.5 chain centre-line distances could not accumulate into a

pair of *section lines* at an 80 chain (1 mile) separation. As shown in Sub-chapter 1.2, instead it created a town *half-section* that in centreline terms was actually 94 chain by 46 chain (rather than 80 x 40 chain). The *half-section* was normally obtained in the field by halving a full *section* along one of its orthogonal axes.

Somewhat incredulous and sceptical of my own reasoning, I checked the dimensions of the RACV block in the city, using the Land Information Victoria computer. Some 165 years after the original subdivision that block has property sides of 10.0, 10.0, 9.9 and 10.1 chain. The road centreline spacings are both 11.5 chain.

The other problem was that the original *half-section* used for the new village was misaligned (Sub-chapter 1.2), but this was soon to be corrected. When the need to expand the settlement was addressed in 1837, it was decided to create new *section* boundaries and these were to be made consistent with the *sectioning* of the whole Port Phillip District. Without the planning burden of the river, it was possible for the larger plan to generally ignore the existing 1.15 x 0.575 mile *half-section* as a module and to assure the correctness of the overall plan by henceforth properly aligning the streets to the north-south direction.²⁰ Throughout the world, religious symbolism has often been strongly associated with a town's streets having a north-south / east-west orientation. However, in Melbourne's case, the rectification also fitted Governor Gipps' wider, simple *sectioning* of the entire Port Phillip District. Gipps had assumed governorship of NSW in 1838 and had soon realised the importance of land sales as a revenue source. Henceforth, roads and streets were aligned to the north-south *section* grid, in contradistinction to Russell and Hoddle's first Melbourne efforts.

Here a further surveying problem arose, for magnetic north derived directly from compass readings differs from meridian (or map or geographic) north and a "declination" adjustment must be made between the two. The *sections* surrounding Melbourne were laid out using magnetic north as the surveyors at the time relied solely on their compasses.²¹ At the time, these were about 7° east of meridian north. Thus, as a result of the "correction", Russell's inner city skewed 28° west (Sub-chapter 1.2), and the suburbs using compass north skewed 7° east. The difference can be seen in Map 2.1. It meant that many of Melbourne's major roads are noticeably out of alignment with map north. There is an undocumented report²² that Perry in Sydney had rescinded the order to use meridian lines and permitted the use of magnetic lines.

In the outer suburbs, discrepancies also arose when surveyors forgot or changed the ground-rules and used meridian north, as with areas to the east of Dandenong Creek (e. g. Wantirna South, Scoresby & Ringwood South). An interesting geometric example of the effect is in Dorset Rd and Colchester Rd, which were based on the [18e] and [19e] *section lines* north of Mt Dandenong Rd (State Route 62). South of that road, the local surveyors force Dorset Rd to map north. When the line of Colchester Rd / Albert Ave ends at Stewart St in Boronia, the two roads are a kilometre apart, rather than a mile apart.

However, these factors were often of lesser impact than the many simple survey measurement errors referred to in various places in the following text (e. g. ²³ & sub-Chapters 1.3, 2.1c & 2.4 and with respect to routes CT7,8 &9, EW3 & NS1,7,8,10 &11). For example, most early surveyors established angles using a compass with a 360° scale (a circumferenter²⁴) rather than the far more accurate theodolite.²⁵ This was because the theodolite was considered slow and cumbersome and required a line of sight between pegs, which was often difficult to achieve in thick bush.²⁶ However, compass readings vary with location and time of day. The time-of-day variation could produce survey errors over a day of about 10 m.²⁷ Worn measuring chains continued to be used, although they had increased in length, and rough ground was crudely compensated for by adding extra links to the chain. An 1838 map²⁸ by Darke already drew attention to serious discrepancies between *section lines* and their equivalents marked on the ground. A review has noted that "*Early Crown surveys in Victoria were often very inaccurate.*"²⁹

Russell makes an interesting point when he much later recalled that "*Mr Hoddle was a slap-dash chainman – a good man for the Government in getting work through quickly.*"³⁰ He recounts how Sydney had instructed Hoddle to use a longer (by about 100 mm) than standard chain to account for errors over rough ground. Its effect on large scale accuracies could have been significant. Major Mitchell also thought poorly of Hoddle's surveying.³¹ In the Brighton area, surveyor Foot regretted Hoddle's haste, which had led to many inaccuracies.³² On another occasion, Russell comments not too reassuringly of Hoddle's original survey of Melbourne "*I was with Mr Hoddle on horseback when he chained around Melbourne.*"³³ When the task was completed, Hoddle rode off to lunch with Governor Burke.

Reference markers indicating key survey points and lines were sometimes ploughed furrows, notches blazed into tree trunks, piles of stones or embedded empty bottles.³⁴ For example, when surveyors established the relatively contentious location of North Rd in Brighton (route DN5), their plan noted that it was marked by a succession of blazes

on the trunks of a sheoak, a box tree, a gum tree and several gum-tree stumps.³⁵ There was a marked reluctance to check completed surveys by triangulation – a technique which checks whether the recorded data would return the survey back to its origin. Writing as a surveyor in 1889, Coane commented:

A great many of the original surveys were bad, lines intended to be straight were not really so, corners of roads were set-out in defiance of the laws of trigonometry.... Even when the work was good, the lines were only approximately followed. (Furthermore) Act 855 - the Survey Boundaries Act - then gave boundaries marked on the ground precedence over those on the drawings.

Consequently, Chappel suggests that the survey errors in early Melbourne were between 1 % and 10 %, which is very large.³⁶

Only a few roads bravely carried Russell's 28° offset into the hinterland with its meridian-based *section lines*. Dudley St (SR 55) almost does; Elizabeth St does as far as the Haymarket Roundabout; and Clarendon St (SR 50) in South Melbourne does - until stopped by the lagoon that became Albert Park - and managed to carry much of South Melbourne along with it. As shown in Map 2.2 (and later in Map 2.5), the route to the future Port Melbourne, was a straight line from the left bank of the Yarra at Customs House to a proposed wharf at the initial ships berthing location on the Hobsons Bay shore (today's corner of City Rd, SR 20, and Bay St, SR 30), presumably first selected as suitable spot for safely conveying people and freight from anchored sailing ships to the land.

Map 2.2 Hoddle's March 1839 plan for "South Melbourne" (Hoddle 1839a). It is actually a map of inner Melbourne and Port Melbourne. It is the first Melbourne map to show a proposed railway. Available as <https://bit.ly/3xCRcEo>. Original held at the Public Record Office of Victoria.

St Kilda Rd (NR 3) goes the furthestmost from the meridian Order – excusing an interruption for the Shrine – by maintaining its line until Carlisle St [3s] (originally called Beach Rd) and wetlands then associated with Elster Creek. Another odd example was provided by the Edinburgh Gardens area in Fitzroy North which, in 1852, used Queens Pde (SR 46) as its datum. That datum had been separately based on the first route to Heidelberg and had avoided the Reilly St drain (see text for route PL2). The estate was modelled on an 1820s development in Edinburgh. Note that when [nC] follows a road or street name, it means that the road or street is directly on the [nC] *section line*.

Soon after his arrival in 1838, Governor Gipps was subdividing the important parts of his jurisdiction – including Melbourne and its hinterlands – according to the *section* method. Gipps carefully applied a regulation that Governor Darling³⁷ had introduced as Order 41 of 19 September 1829. A year earlier in 1828 the Secretary of State for Colonies had instructed George Stirling in laying out Perth that “you must be careful not to grant more than a due proportion of river frontage to any settler.”³⁸ Order 41 made an important concession in this water-poor country – no *section* could capture and control both sides of a watercourse. If this were likely to occur, the watercourse had to be used as a *section* boundary. Consequently, the location of subdivisional roads was often determined by the desire to maximise the number of lots with water access. Thus, Gipps' policy encouraged long, thin *sub-sections*, although Darling's Order 41 had suggested that the depth to width ratio of a lot be held at four.

The provision of through roads in this dry land was secondary to ensuring water access. Indeed, Deputy Surveyor-General Perry's instructions to Hoddle re land sales³⁹ included “You will be careful to preserve for each portion a road or right of way to the nearest river or main road, it being desirable that every portion should have a distinct right of way as the laws relative to roads in this colony do not yet bear upon the formation of roads by purchasers and locators”. Indeed, the main surveying guide of the time advised “Allowances for roads to be a later consideration (after sectioning) as they are dependent on the physical features of the country”.⁴⁰ The part of the advice about water access was carefully followed and the second part about road access was just as carefully ignored. Travellers would frequently find farm fences strung across previously well-used tracks.⁴¹ If a *section* did not have road access, colonial law allowed the land-owner to apply to the Court of Quarter Sessions to have that access granted.⁴²

There is no indication of how a surveyor or manager of land sales might have followed the above instructions and “preserved”, protected or created the required land-access provisions. The implications from Order 28 discussed in Chapter 1 may well have been that as a last resort and/or solution of least resistance, the road reservation could be taken as a one chain strip straddling the *section line* between sections. Sellers of land within a section would have had to assure purchasers of their ability to subsequently access their newly acquired land. Certainly, there are many reports of vigorous disputes between land-owners and travellers over desired access routes.

(d) Expanding the Town

The arrival of further settlers meant that the village was soon under expansionary pressure but, given the map orientation problems discussed above, there was no incentive to expand the village *half-section* into a full town *section*. Instead, the town burial ground was established in a north-south property on the edge of village *half-section*, centred near the Queen St / Franklin St roundabout and with its southeast corner at the intersection of Elizabeth St and Latrobe St. As shown in Hoddle's Maps 2.2 and 2.3, this blocked any chance of expanding the *half-section*.

Instead, the next policy decision of the representatives of the Colonial Office was that the town would expand to the estuarine water to the west, a mile to the north of the datum, and two miles to the east of the datum⁴³. This gave a slightly less-than two-square-mile Township Reserve which was close to the three-square-mile in Office policy previously used in the laying out of Perth in 1828. The instruction from the Secretary of State for Colonies to George Stirling for Perth had been that "a square of three miles (or 1920 acres) is (to be) reserved for its future extension."⁴⁴ (The acreage indicates that the wording meant 3 square miles).

The procedures used defined a further set of boundaries compatible with both the policy decision and the *section* process. The result was:

- * The northern town boundary of the expanded town was based on the [1n] *section line*, which in turn created Victoria Pde and Victoria St. The development of Victoria St is discussed in Chapter 5 as route EW3.
- * Proceeding a mile west along the new northern boundary, the surveyors conveniently encountered Moonee Ponds Creek and, following Darling's watercourse dictum, the western town boundary travelled south down the creek to the Yarra, approximately on the [1w] *section line*. The terrain meant that, in the north, Dryburgh St at the edge of the high ground became the effective western boundary.
- * The Yarra River – again according to the watercourse dictum – formed the southern town boundary of the expanded settlement. It is very approximately on the [0we] *section line*.
- * Proceeding two mile east along the new northern boundary defined the eastern town boundary as the [2e] *section line*. Hoddle St was based on this line.

The expanded *town section* was thus close to the desired 3 x 1 mile rectangle and so official honour was done.⁴⁵

The $28 + 7 = 35^\circ$ change from the offset of the original town *half-section* to a magnetic north-south grid created two uncharacteristic triangles of subdivision. The North Melbourne north-west triangle was enclosed by Latrobe St, the low-lands to the west and Victoria St, and the East Melbourne north-east triangle by Spring St, an embryonic Gisborne St and Victoria St. Hoddle kept the streets wide in these triangles in order to reverse a tendency of the time for citizens to build homes in allotments facing the town's Little streets.⁴⁶ A distinction between the two triangles was that produce markets developed in the north-west and caused a more focused road development there, compared with the subdividers' grid on the prime hilltop land to the north-east.

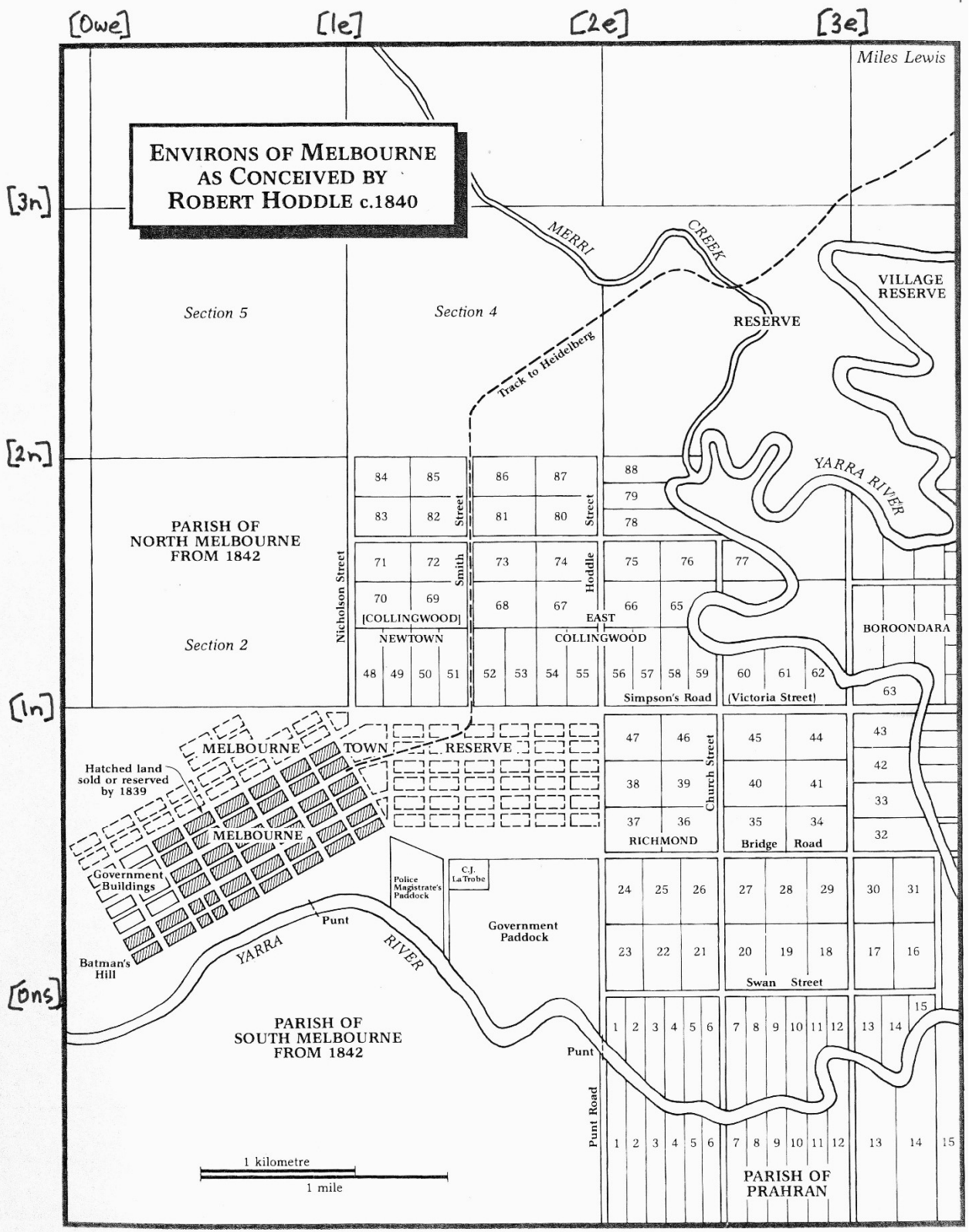
Indeed, East Melbourne (or Eastern Hill) was "*the most favoured portion of the suburban area*"⁴⁷ sitting atop its prominent hill, with a fine ridge of high ground heading east down Bridge Rd and turning right along Church St as far south as Swan St (the western end is shown in Map 2.3). There are many good reasons why road-builders prefer ridge roads⁴⁸. During the original writing of this text, the author was struck by their modern relevance whilst flying over the mountainous regions of Spain. Ridges were further favoured for road location by Governor Darling's Order 41 discussed in (c) above requiring *section* boundaries to be based on water courses and natural features. A ridge forming the watershed between two streams was therefore an obvious place for a *section* boundary, and thus a potential road alignment. Their use in Victoria was specifically noted by Anderson.⁴⁹

Map 2.3 Hoddle's 1840 map of "The Town of Melbourne, Plan of the Settlement, Port Phillip" The map is available as http://search.slv.vic.gov.au/permalink/f/1c135st/SLV_VOYAGER968073. Hoddle 1840d.

Map 2.3 still shows a road heading north from the Flinders St / Spring St intersection, and all the land to its immediate east fully subdivided with no provision for the Fitzroy Gardens. Nevertheless, the area was not sold⁵⁰ until 1860, and even then only to the east of Clarendon St in East Melbourne. As discussed in Sub-Chapter 1.2, the subdivision was unusual, with widely spaced streets, the majority favoured with a 1.5-chain reservation, based on the success of Hoddle's original Melbourne *half-section*.

Wellington Pde (SR 30) was the original property boundary between the initial Township Reserve and the Government Paddock extending south to the Yarra. This is shown in Map 2.4. The misalignment of the original town (Chapter 1) meant that the road east from the Spring St / Flinders St corner did not align with this boundary. This misalignment created the widest of all Melbourne's roads. Wellington Pde was established in 1853 as a magnificent 5

chain wide boulevard as it swept east from Flinders St to Bridge Rd, its north carriageway aligned to the south-east corner of the original town, and its south carriageway (now Wellington Pde South) to the quartered-*section* [0we] boundary. Today's Wellington Pde and Wellington Pde South are the remnants of these carriageways, separated by a wide median. The median was resumed for, and the boulevard destroyed by, the construction of the Victoria Park (Collingwood) railway line via Jolimont in 1900. In 1906 there were even plans to subdivide the remains of the median.⁵¹



Map 2.4. Melbourne's first suburbs. This map is Lewis's⁵² recasting and elaborating Hoddle's 1840d map shown earlier as Map 2.3. This author has added the *section line* identifiers.

Returning to the core theme, Hoddle had wanted the first town expansion to be to the south of the Flinders St line, using the land to the Yarra River and opening up new adjacent land across the river in South Melbourne (Map 2.2

& Map 2.3). Indeed, although Hoddle called his favoured expansionary spot South Melbourne, Map 2.3 shows that it was actually located in the area taken today by the Kings Domain and the Royal Botanical Gardens. Hoddle's chief, Deputy Surveyor-General Perry, considered the scheme impractical and firmly instructed him to ensure that the town's first expansion would be to take up the Latrobe St option and then move in a north-westerly direction into the North Melbourne triangle.⁵³ Map 2.2 shows that some land was sold on the north side of Latrobe St in about 1840. However, the next Sub-chapter will indicate that market forces were already driving the town in other directions.

2.2 Moving beyond the original *Section*

A relatively sophisticated agricultural economy soon developed around the new settlement. The inevitable move outside the original "*half section*" was initially accommodated by the move from a village to the 3 x 1 mile *town section* described in the previous Sub-chapter.

Further pressure to expand beyond the *town section* brought to focus the key difference between Hoddle on the one hand and, on the other hand, Governor Gipps abetted by his fellow administrators. The Gipps model for Melbourne was of a town contained within in its *town section* (or even *half section*), surrounded by a ring of *sections* subdivided into dairy and vegetable farms with their intense cultivation, and - beyond them - a vast sea of large properties with less intense agriculture and utilising the full 640 acres (259 Ha)⁵⁴ of the square mile grid *section*. A land-owner could subdivide its land as it wished. Any resulting streets and lanes were known as *private streets* and their maintenance was the responsibility of the land-owner⁵⁵. Over time and by default, this responsibility tended to be accepted by the local municipality.

Any roads in this hinterland, other than the earliest tracks, would be based on the *section lines*, which had no relevance to the topography. Reviewing the situation his profession had inherited in 1891, surveyor Wells wrote:⁵⁶

Surveyors are too apt to run long straight lines (in circumstances where) lines following the contours of the ground become necessary.

Whilst this was fine for foot traffic, many *section lines* - without the benefit of contouring - were at gradients inappropriate for wheeled vehicles and which made their surfaces prone to rapid erosion by wind and water.

There were a few pre-existing villages within this countryside (Map 2.1). The bayside town of Williamstown had been a "first" settlement but its development was hampered by a lack of fresh water, Footscray was at crossings of Maribyrnong River (routes WT4-7) and St Kilda was the first easily accessible high land beside the Bay (Sub-chapter 4.11). In addition, a number of satellite villages were planned or at least considered in the countryside at five mile from the town - Brooklyn on Kororoit Creek, Braybrook and Keilor on Maribyrnong River, Pascoe Vale (or Pascoeville) on Moonee Ponds Creek, Pentridge (Coburg) on Merri Creek, Warringal (Heidelberg) and Templestowe on Yarra River, Camberwell, and Brighton/Elsternwick and Altona on Port Phillip Bay. One version of Map 2.3 suggests that Hoddle also considered a village reserve at Royal Talbot in Kew.

In 1837 Deputy Surveyor-General Perry instructed Hoddle to ensure that that the town and village reserves were to be located on a watercourse. Town reserves were to be 1 sq mile (a *section*) and village reserves 0.5 sq miles (half a *section*). Otherwise, there were few restraints as the Colonial Secretary, Lord Russell, had declared in 1841 that the establishment of villages and their expansion into towns should be left to the enterprise and judgement of the individual land-owners.⁵⁷

Parishes were required to allow English land laws to be applied - there were no ecclesiastical connotations. They were created by combining 25 *sections* and were to contain either a village reserve or a town reserve. The "average" case of a 5-mile by 5-mile parish with a reserve at its centre indicates that, on the same "average", reserves would be 5 mile apart (e. g. Coburg and Heidelberg). The first Melbourne parish was North Melbourne (the village was originally called Hotham), which was the "extended town *section*" described in the previous Sub-chapter and thus contained only three *sections* (Map 2.4). The Melbourne parishes were initially combined into the County of Bourke in order to further utilise English legal processes. The County was formally proclaimed on 3 May 1838 and is biased towards Melbourne's west.

This *sectioning* process also demonstrates the "farm" vision for Melbourne. For instance, the model saw the north of Melbourne as a rural Jika Jika Parish served by a single village at Coburg and covering the land between Moonee Ponds Creek [c1.5w] and Darebin Creek [c3.5e] from Princes St / Alexandra Pde [2n] to Boundary Rd [7n].

This town-and-village outcome came from a model based on many towns and villages elsewhere in the Empire and reflecting the “large” but compact towns of rural England. It was given force of law by the British Waste Lands Act of 1842, which set aside all land within five mile for sale in small farms or suburban holdings.⁵⁸ Beyond these limits were country lots. For Melbourne, the five mile limit was measured from the edges of the existing settlement and was given by North Rd {at [5s] measured from the Yarra}, Balwyn Rd {at [7e] measured from Hoddle St [2e]}, Gaffney St / Murray Rd / Southern Rd {at [7n] measured from Racecourse Rd / Alexandra Pde [2n] and Duke St {at [6w] measured from Moonee Ponds Creek c[1w]}. Sub-chapter 2.4 will show how the definition of these five-mile measurements was a cause of considerable dispute. Indeed, it was not the common man’s five mile measured “as the crow flies” and thus producing a circle, but the artificial rectangularity of the *section* process that had seduced the local administrators.

Hoddle had also argued that villages should be established every two miles along a major road at each major intersection, and this explains the location of many of the suburban centres. Nevertheless, many of the village reserves were located by the convenient coincidence of a *section* corner coinciding with a watercourse, rather than by the appropriateness of the location. On the other hand, he presumably had a larger vision for his new town, seeing the circumferential ring of small *sub-sections* and one chain roads as strangling the future expansion of Melbourne. How right he was! The one-chain roads soon proved inadequate – particularly as it is possible to count at least 268 one-mile-square, orthogonally sub-divided *sections* within the Melbourne metropolitan area, equivalent to a 16 km square of subdivided land, all these *sections* focused on just two inner *sections*.

Hoddle never articulated any characteristics of Melbourne that had inspired his view that it would become a great city needing great roads. Pragmatically, it was perhaps merely the Hoddle of the “village every 5 mile rule” who found it inevitable that there would be a city every 500 mile. Here he had Brisbane, Sydney, a gap and then Adelaide. The gap would thus be partly filled by this latest city.

In the countryside, each mile-square *section* contained 640 acres and could be successively halved along each boundary. The survey process for subdivisions was relatively simple. Surveyors used a chain (which was a chain in length) for their basic measurement. A simple process was to mark off a succession of strips (perhaps to the full 80 chain of a *section*), each 2.5 chain wide. The strips were then cut every one-chain along their length to produce a series of 2.5 chain by 1 chain allotments, each with an area of 2.5 square chains, or a quarter of an acre, thus producing the “classic” Australian quarter acre allotment. Of course, this was a land-seller’s view. If the real world demanded road access to each allotment and if narrow lanes were not marketable, then each allotment would lose 0.5 chain to provide for the 1 chain-wide road. This meant that the actual allotments were 2 chain by 1 chain and thus had effective area of only 1/5th of an acre.

The process for a full *section* is illustrated in Figure 2.1 where the process produces 32 strips each 2.5 chain wide and with an area of 20 acre. Cutting these strips into 1 chain lengths produces 80 allotments per strip and thus $80 \times 32 = 2560$ allotments from a single *section*. However, owners could sub-divide their *sections* into *sub-sections* with few if any imposed restraints. This subdivisional simplicity proved irresistible to the speculators, who soon outnumbered genuine land buyers at sales of Melbourne land.

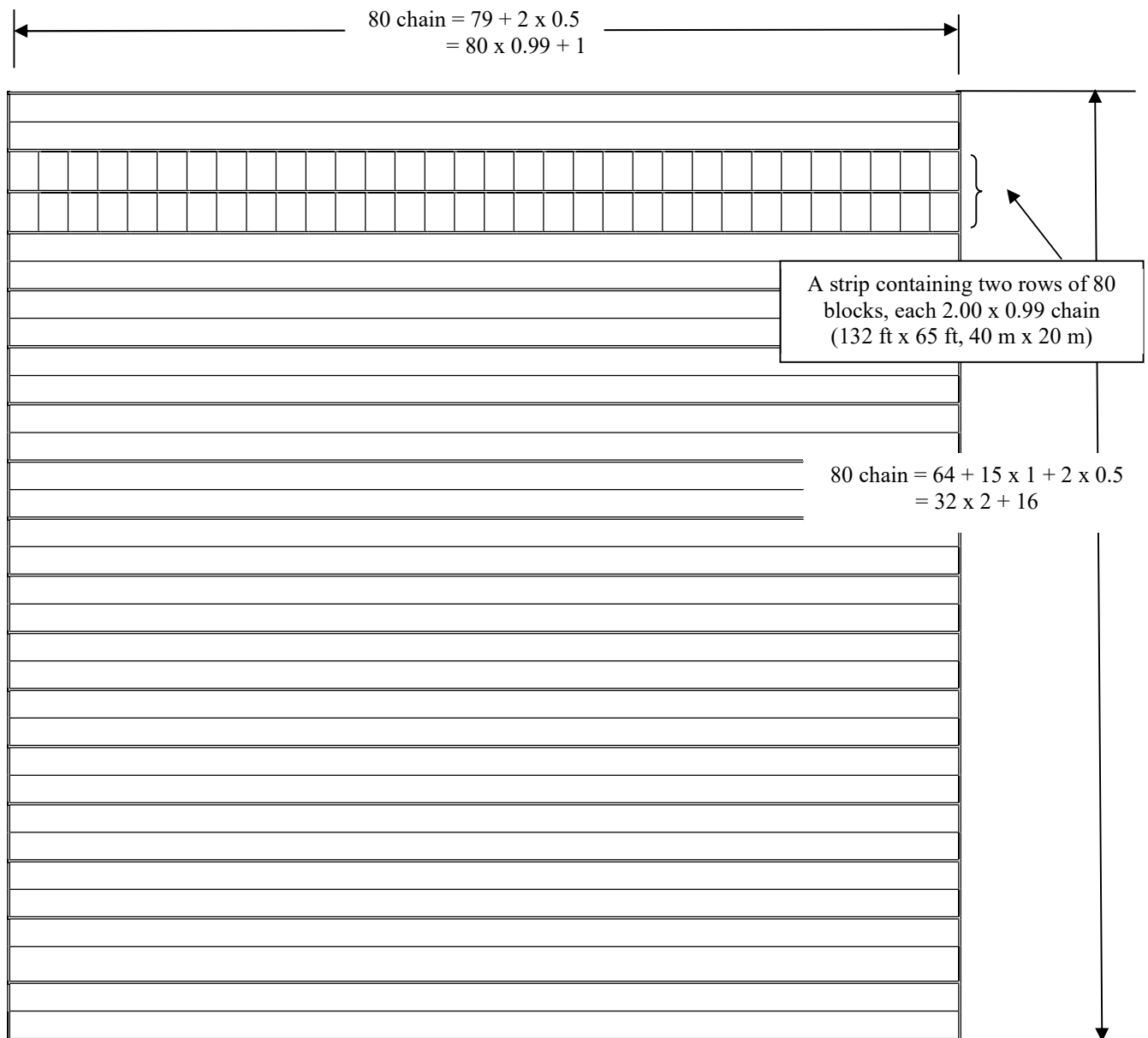


Figure 2.1 - A typical subdivision pattern, illustrated for complete *section*. The double lines are one chain (or narrower) roads and the single lines are property boundaries. The 32 horizontal strips are nominally $80/32 = 2.5$ chain wide but would lose 0.5 chain if their frontage street was a chain wide. The calculations assume all roads are one chain wide.

The first land sales in the “dairy farm” *sections* immediately outside the boundaries of the original *town section*. As shown in Map 2.4, these were in the mile-square *section* of Fitzroy/Collingwood bounded by Hoddle St [2e], Victoria Pde [1n], Nicholson St [1e], and Alexandra Pde [2n].⁵⁹ The sales took place in February 1839 with Hoddle himself as auctioneer. The land under the hammer comprised 24 allotments, each approximately 10 Ha in area. Before land-ownership was tightened, particularly with the introduction of Torrens Titles in 1862, general law covered land-dealings, and owners could issue a Plan for Sale for their land, sub-divided as they saw fit. Thus, new owners of the allotments could subdivide their allotments as they wished – and without considering the neighbouring street pattern. Indeed, Perry had counselled Hoddle before the auctions to subdivide the *sections* to be sold into halved, quartered or even “eighthed” *sub-sections*, as this would make land near towns more desirable to potential purchasers.⁶⁰

The roads and streets involved in these sales deserve particular attention.

- * Smith St probably pre-dated both the *sectioning* and the sales as it follows the top of the escarpment forming the western edge of the extensive Yarra flats.⁶¹ It thus provided firm ground for travelling up the Yarra valley (see the discussion of route PL2) and, subsequently, the first housing developments in the area occurred on the high ground to its west. In keeping with this first role, it was originally called East Rd or Eastern Rd. In 1851 it was renamed after Cr John Smith, who was seven times mayor of Melbourne. In the late 1860s individual shopkeepers began paving the pieces of street outside their shops. Collingwood Council finished the task on the east side in 1874.⁶²
- * Alexandra Pde [2n] was first called North Government Rd, Darebin St and then Reilly St. It was named Reilly St in 1851 after Francis Reilly, a Melbourne City Councillor. Princess Alexandra was the wife of Edward VII.⁶³ Alexandra Pde is further discussed as part of the road to Heidelberg (routes PL2&3) in Sub-chapter 4.7. The eastern part of the road was still called Reilly St in 1907 but by 1917 the whole road was commonly called Alexandra Pde.
- * Johnston St (named after a Melbourne City Councillor in 1851), Gipps St (after the Governor) and similar streets were a result of subdivision prior to the sale process.
- * Brunswick St and Gertrude St were begun immediately after the sales when a new land-owner named Benjamin Baxter neatly created the two streets to quarter his newly purchased 10 Ha allotment, giving him far more frontages for the next round of subdivision.⁶⁴ Gertrude St was named after one of his daughters. Baxter was then Melbourne's postmaster and also influenced the development of St Kilda Rd (see comments in route SK2, Sub-chapter 4.11). Somewhat atypically, the two streets subsequently grew in length as both sub-dividers and local government saw virtue in their extension across more than one property sub-*section*. Brunswick St is shown reaching as far north as Alexandra Pde in Map 2.5, however no Langridge St yet exists to extend Gertrude St to the east. Brunswick St was finally declared a Main Rd in 1995.⁶⁵ The term "main" road was first used legally in the Local Government Act of 1863.⁶⁶

Map 2.5 James Kearney's 1855 map of "Melbourne and its suburbs". Available at http://search.slv.vic.gov.au/permalink/f/1cl35st/SLV_VOYAGER786996

Overall, the outcome of the private Fitzroy subdivisions was causing considerable local distress. In 1851 a Council sub-committee reported that the developments had been very haphazard. It stated⁶⁷ that "*Scarcely any of the streets is continuous, and the whole mal-arrangement forms a very haphazard labyrinth.*"

Land with the same east-west *section* boundaries ([1n] and [2n]) as the initial "dairy farm" *section*, but between Hoddle St and the Yarra River, was auctioned in Sydney later in 1839 as 17 rural allotments. The allotments mainly sold to Sydney speculators who paid about £6/acre.⁶⁸ By 1849, only a fifth of this land had been subdivided, however five years later - with the impact of the gold rush - only one allotment survived uncut.⁶⁹ A similar pattern occurred in Brunswick, which had been surveyed by Darke in 1839 and largely sold in 1840. However, only one purchaser actually settled on the land he bought.⁷⁰

The eastern subdivision of the growing town was created between 1839 and 1840 (Map 2.4). It basically added three further *sections* (Richmond {24 allotments}, Richmond East {8 allotments} & Richmond South / Burnley {15 allotments}) in the area bounded by the Yarra River, Hoddle St / Punt Rd [2e] and Victoria St [1n]. An internal *section* boundary was provided by Swan St [0we]. Burnley St (originally Government Rd) followed the [3e] *section line* but was inside the sale area. Twenty-five single acre allotments were promoted as "rural retreats for gentlemen."⁷¹ Church St / Chapel St north, and Bridge Rd were created by the subdivision process.

There was a subsidiary extension of the dairy farm *sections* to a fertile area on the left bank of the Yarra bounded by Kooyong Rd ([4e], originally Boundary Rd), Williams Rd north [3e] and Toorak Rd [1s]. The first land sales in this area occurred in June 1840 and are now marked by a Yarra-side plaque a little east of Punt Rd.⁷² The press of the time described these local sales as "*The largest sale of Crown lands which has ever been held within this province*".⁷³ The subdivision produced a series of narrow north-south properties, all with their own private water access to the Yarra and with Toorak Rd as their back fence. This application of government policy (see Sub-chapter 2.1) prevented any other east - west roads developing between Toorak Rd and the Yarra. Thus, by 1840 the settlement's town reserve had expanded beyond the *town section* to about 5 square miles.

Beyond these town *sections*, most of the more valuable land around Melbourne, from Sunshine clockwise to South Yarra, and bounded by the right bank of the Yarra River, had been subdivided into mile square segments.⁷⁴ Sub-chapter 3.2 will show that in 1839-40 there had also been extensive sales and subdivision of broad "farm" lands north of the [3n] *section line*, and bordering the Moonee Ponds Creek, Yarra River, and Plenty River, and as far north as the [26n] *section line*.⁷⁵ What a rosy picture the sales brochures must have presented to the Sydney buyers of the land between the streams! Numerically, most of the land fell approximately in *sections* between [7w], [20n], [8e] and [3n] –

some 255 sq mile (650 km²) of Melbourne's north. With market pressure, the administrators' five-mile town limit had lasted just a few short years.

Then, in 1840-41, came the curious and short-lived intervention of the Special Surveys, deliberately placed outside the five-mile limit and resulting in the distant suburbs of Brighton and Balwyn. The story of the Special Surveys is continued in Sub-chapter 2.4.

After this first flush of land sales, the next visible developments involved the subdivision of existing allotments. From the first land sales in 1837 (Figure 1.3), any planning control rested with the colonial government in Sydney. Outside the original *section*, at the best, the Colony reserved the land needed for roads along the surveyors' *section* or *sub-section* lines. However, this was often not the case and so on 29 January 1841 the Colonial Secretary instructed Superintendent La Trobe to ensure that roads were to be included in any future pre-subdivision surveys and that the associated land sales should not include any (now pre-existing) road reservations. Joseph La Trobe had been appointed Superintendent of Port Phillip District in July 1839 and had arrived in October of that year.

As described above, many quartering roads were then placed at a 0.5 mile (790 m) spacing in inner areas (e. g. Church St and Bridge Rd in the Richmond *section*) although subdivisional circumstances often forced a spacing closer to 500 m. Within these resulting *sub-sections*, any streets were to be provided by the land-owners when they subdivided their piece of land. Such internal streets were uninfluenced by wider needs or nobler objectives. Barrett notes that:

*"the original purchaser of each allotment could draw upon a street plan with little, if any, reference to the layout being adopted in neighbouring allotments."*⁷⁶

The problem was evident by 1845⁷⁷ and the situation in Fitzroy became so bad that in 1854 the State Government passed an Act empowering the Council to "*drive through twenty-six streets and squares.*"⁷⁸ Relief came slowly and in 1857 Westgarth described the situation in Collingwood as: "*streets blocked by a cluster of hovels, jutting out like old Holborn bars.*"

Following the *sectioning* process described above, housing allotments were readily created by continually subdividing the mile square *section*, as illustrated in Figure 2.1. In the simplest case, the *section* would be subdivided into sixteen strips. With 80 x 2 back-to-back house allotments in each strip, the *section* would yield 80 x 2 x 16 = 2560 allotments, each nominally 100 mHa (¼ of an acre) and measuring 20 m x 50 m. If all the streets were a chain wide, this becomes 90 mHa (0.22 acre) or 20 m x 45 m. The streets of Brunswick provide some good examples of the results of this process. Barrett⁷⁹ gives the case of a 10 Ha allotment on the south-west corner of Johnston St and Hoddle St in Collingwood which in 1853 had been subdivided into 400 allotments with a typical size of 21 m by 8 m or about 17 mHa (1/24 acre), and with no street more than 0.7 chain wide. He notes that, elsewhere, subdivisions in 1849-1852 produced streets that were only 0.45 chain wide. Soon lanes a mere 0.3 chain wide were being rebranded as streets.⁸⁰

In 1855 Collingwood contained over 40 streets that were 10 m wide, or less. One 4-acre lot north of Vere St was subdivided into 400 lots averaging 4 mHa (0.01 acre).⁸¹ In such subdivisions, the essential access provisions were often no more than narrow lanes, described as right-of-ways on the subdivision plans.⁸²

Keeping the streets at or below a one chain width had maximised the number of allotments that could be sold. This type of subdivision created much of the current local pattern of closely spaced streets and houses. Its initial impact on Fitzroy and Collingwood was discussed above and further indications are found throughout Melbourne. For example, the early Richmond *section* mentioned above (Map 2.4) was quartered by Church St and Bridge Rd, which later became major thoroughfares. It was then subdivided again by Lennox St and Coppin St.

One suburban planning intention was to ensure that no allotment was more than two street blocks from a park. However, this scheme was soon subverted by the speculators who bought the land and - as shown above - quickly produced up to eight allotments from a quarter acre purchase. Thus, it was the subdivision process - rather than any strategic intent - that then created the local suburban street system in the settlement's first five years. Consequently, this ring of development around the city commonly did not acknowledge, let alone provide for, any further development into the hinterlands. This legacy still afflicts Melbourne today.

Furthermore, although the process generated significant revenue for the government, little or none of that revenue was used to create a network of strategic roads to service the subdivided land. For the next 30 years, petitioners would strongly but ineffectively remind successive governments of this inadequacy. In addition, many land-owners saw little value in roads running through their holdings. They therefore proceeded to - by both legal and

illegal means – close any such roads and resume the land. This enclosure practice was to be the source of major political controversy.⁸³

2.3 A second blush of sales (1840 - 1860)

As a result of the Collingwood / Richmond sales described in the preceding Sub-chapter, the town was already skewing dramatically to the east, and the original Melbourne had lost its role as geometric centre of the developed area. In 1841, the settlement had a population of about 4 500. Only 800 of these lived west of Sydney Rd [Ons], and another 800 south of the Yarra. Half of the population lived east of Sydney Rd and north of the Yarra.⁸⁴ The later discussion of Heidelberg Rd (route PL6 in Sub-chapter 4.6) will also show that by this time the settlement was actively reaching out into its hinterlands.

The systematic movement of the geometric centre of Melbourne away from the west is occasionally ascribed to the west's weather or basalt plains. Neither hypothesis withstands testing. The true explanation was first proposed by Hodgart.⁸⁵ There is a body of transport planning work known as travel time budgets⁸⁶ which postulates that daily travellers are reluctant to budget much more than an hour a day to travelling to and from work. Like other cities of the world, 19th century Melbourne was - for most people - a walking city.⁸⁷ Thus, a maximum practical commuting distance was 3 to 6 km, although there are instances⁸⁸ of people routinely walking about 12 km. Unfortunately for the west, the intermediate and unproductive journey from Spencer St across Batmans Swamp to Maribyrnong River was itself about 4 km, and the way was putrid in summer and swamp-like in winter (Map 1.1). The swamp is described further under route WT2 in Sub-chapter 4.1. The workers and their factories voted with their feet for the far more accessible areas such as North Melbourne, Collingwood, Richmond and Prahran.

The land sales in the late 1830s and 1840 in parts of this inner ring were followed by severe economic depression in the Colony between 1840 and 1844. Nevertheless, during this quiet time, Elizabeth St had extended north and given rise to Flemington Rd, Cemetery Rd and Royal Pde [Ons]. By 1844 subdivision had also occurred in Flemington and in Ascot Vale between Epsom Rd and Maribyrnong River and between Ascot Vale Rd [2w] and Moonee Ponds Creek, and in Williamstown south of Stony Creek and east of Melbourne Rd.⁸⁹

As a prelude to the land-boom of the latter part of the 1840s, Kew and Hawthorn were subdivided into large lots. Following Nutt's Boroondara parish plan of 1843, the first Hawthorn sales were in late 1843 in the Scotch College area and offered lots from 2 to 8 Ha in area with water frontages to the Yarra River or Gardiners Creek. Sales in 1845 moved slightly up-river to the Coppin Grove and Creswick St areas and reached as far east as Glenferrie Rd. A few parcels of land were sold in Kew in 1845, including farm-land in Willsmere Rd (see discussion of route TW6). By 1849 land was subdivided along the left bank of the Yarra as far as Warrandyte. In the same year much land was sold south of Toorak Rd in Prahran⁹⁰ and subdivisions had headed east through Malvern to Gardiners Creek.

Land sales began in St Kilda in 1842, abutting The Esplanade and Fitzroy St. Although the initial subdivisional survey of Port Melbourne (Sandridge) occurred in 1839, no land was sold until an 1849 subdivision of the land around Bay St and between Graham St and the sea. Across the city, there were further land sales in Ascot Vale and Essendon in 1845-7. A small subdivisional survey of Footscray township was undertaken in 1849⁹¹ whereas there had been extensive subdivision into farm properties in the plains to the west of Footscray. Driving the expansion was an increase in the area's population from 200 in 1836, 4 500 in 1841, 12 000 in 1846, 23 000 in 1851, to 100 000 in 1854. As a consequence, Melbourne had leapt from being a colonial outpost to becoming Australia's largest city. It was to hold that title until 1901.

This spurt of development occurred before the magic of the gold rush and the euphoria of political separation of Victoria from New South Wales in 1851. The Separation Act was passed in November 1850, formal Separation from New South Wales was on 1 July 1851 and the first Victorian gold discovery was announced on 7 July 1851. Melbourne had officially become a City in 1847 when Queen Victoria ordained it a bishop's See.⁹² These events enhanced and accelerated but did not create the momentum and incentive for Melbourne's development.

All around Melbourne the countryside came under major threat from the ravenous new city. Prior to 1852 subdivision had occurred in West Melbourne between Latrobe St, Adderley St, Hawke St, Victoria St and King St (suggested in Figure 1.3 and Map 2.3), and in North Melbourne in the Curzon St, Harker St, Flemington Rd, Elizabeth St, Victoria St [1n] triangle. For example, the initial 32 *property sub-sections* were shown in Figure 1.3. *Property sub-*

sections 33 to 38 were in the West Melbourne triangle and lay between Latrobe St and Franklin St.⁹³ Within this latter triangle, the area bounded by King St, Victoria St, Elizabeth St and Latrobe St remained unsubdivided until successful land sales between 1849 and 1851. By 1855, to meet the demands generated by the gold rush, North Melbourne had been further subdivided into quarter acre blocks in the area bounded by Victoria St, Dryburgh St, Macaulay Rd, across to Flemington Rd and back to Curzon St. An exotic subdivision of the south-west side of Flemington Rd is shown in Kearney and Clarke's map of 1855, but this did not survive to the current day. The area west of Curzon St and adjoining the Haines St creek had been largely protected by La Trobe's green belt scheme discussed below. However, this land came on the market after 1865.

In Hawthorn, land sales began occurring to the east of Glenferrie Rd (SR 19) in 1850⁹⁴ and all the region had been sold⁹⁵ by 1854. In contrast to the highly developed and subdivided Richmond, the Hawthorn area remained an attractive farming area, with 38 farms in 1858 and over a thousand cattle in 1861.⁹⁶ Later in this period, the area of tiny⁹⁷ subdivisions (Sub-Chapter 2.2) extended east to Auburn Rd [5e], well beyond the "dairy" sections. This activity was essentially in the area prescribed in the north by Barkers Rd [1n & SR 32] and in the south by the watercourse boundaries of the Yarra River and Gardiners Creek.

The first sales in the Box Hill area occurred in 1850. In 1853 there were land sales in Camberwell and Nunawading and sections to the east of Springvale Rd [SR 40] were subdivided into farm-sized lots and sold. Land sales in Prahran had extended south from Toorak Rd [SR 26] to Commercial Rd by 1852 and east to Williams Rd [SR 25] in 1854. Malvern and Caulfield land sales also occurred in 1854. Elsternwick and Elwood were surveyed from 1852 onwards. By 1855 housing had pressed as far south as Carlisle St in St Kilda and as far east as Orrong Rd in Prahran. Land sales had spread even further outwards and by 1854 there was a continuous strip of subdivision from Melbourne to Dandenong, mostly of allotments no larger than quartered mile sections and lying in a 5+ km wide zone to the north of Dandenong Rd [NR Alt 1] (see later Map 4.8). As another example, the Moorabbin / Cheltenham area was subdivided in 1852-3, creating such roads as Highett Rd and Balcombe Rd [SR 10].⁹⁸ An idea of the nature of the process can be gleaned from Figure 2.2 which is a notice for land sales in the Ringwood North / Croydon Hills area in 1855.

This really valuable Property is now offered to the public for sale, in lots to suit purchasers at the low rate of £1 per Acre for 80 acres and upwards, and £1.10s per Acre for any smaller portion. Terms of payment Half Cash, Balance in 6 and 12 months, bearing 8 per cent interest. The Estate is well wooded with Gum, Cherry Tree and Stringy Bark, with Wattle in the valleys of the several Creeks. Every lot is Staked and Trenched at the corners marked on the Plan thus - The Surveyor has carefully sub-divided the Property, in order to give every Farm a Creek for Water, Valley for Cultivation, and Hills for House and Grass Paddock. The ROADS have been very carefully laid out so as to give a firm, well drained, and nearly level road to each Homestead. Intending purchasers can readily find the property by the following directions, viz: Start from Richmond Bridge, at Hawthorne, then take the left-hand road to KEW. When at the "Woodman Inn", take the Cotham Road to the right, bearing due east, keep this Road, passing Trainor's "White Horse" Inn, and before you leave the fences, you will see calico bills (see margin) nailed to the Trees on the bush track leading to the Upper Yarra country, follow the Bills till you come to the SOUTH boundary line of the Property, which bears East and West (see Plan) where you will see Bills nailed up "THIS PROPERTY FOR SALE, etc." The Bills from Town lead direct to where Mr. Jull is erecting his Store, and arrangements have been made with him to shew the lots to intending purchasers free of charge.

At the respective corners of the lots the Bills are nailed up double, with numbers to denote the lot, and that the corner stake is adjacent.

Any parties wishing to proceed to the property by way of BULLHEEN will find Bills nailed on the Trees, commencing at the NEW INN, at "Wilson's Slip Rail." Keep this Track till you come to the log Bridge, over the Deep Creek at Bloxhorne's Paddock; go through the land now being cleared; keep the track over the hill till you come to an Iron House, you will then be on the property, which lies to the North and East as per Plan. Follow the Bills till you come to Mr. Jull's Store, etc. etc.

Further particulars can be had from the Agent for the Property. THOMAS HAM.

2000 acres
of
Land for
SALE
etc. etc.

This information is missing from the map. It has been taken from another copy of the map, and was supplied by Mrs. Pullen, of the Ringwood Historical Society. 19

Title on copy in College papers: "PLAN OF LOCALITY Showing the whole line of route to the District, from Melbourne by way of NUNAWADING, AND BULLHEEN For sale on liberal terms by Thomas Ham, Land Agent, 35 Swanston Street, opposite the Bank of Victoria"

VALE MAP
Vol III P105
c.1855.

Figure 2.2 Land sale notice produced by Thomas Ham, a Victorian land Agent for the sale of Sections 20, 23 and 24 in North Ringwood (bounded by 14e, 4n, 16e & 5n). The accompanying map is Map 2.6.

Map 2.6 Ham's map of 1855, originally attached to Figure 2.2. The scales are distorted. SLV Vale Collection, vol 3, p105, 821.03A. http://search.slv.vic.gov.au/permalink/f/1c135st/SLV_VOYAGER685109

The Moorabbin land was 15 km and the Ringwood land 30 km from the city centre so it was natural that interest also returned to some of the more difficult inner areas. Firstly, aborted earlier subdivisions were revisited.⁹⁹ Indeed, in 1855 the living - rather than the sub-divided - township was confined to the original Melbourne, an L shaped surrounding area from North Melbourne east to Collingwood and then south to St Kilda, and three isolated settlements at Williamstown, Footscray and South Melbourne / Port Melbourne.

By 1858, land had been subdivided and sold as far east as Ringwood. Squatting leases used by stockmen were terminated and their grazing lands subdivided. (Squatting leases or "pastoral runs" were defined by their cattle-carrying capacity rather than by surveyed boundaries. They had been codified in the Colony in 1833 and theoretically lasted for 8 years.)

Although some land had been sold in Port Melbourne (Sandridge) in 1849, most of Port Melbourne between the railway track and the Sandridge lagoon (see discussion of route AY3) was surveyed from 1852 onwards. Re-subdivision of South Melbourne began with a new survey in 1852 (Map 2.6). The newly chosen land was above the surrounding swamps as it perched on a volcanic cone called Emerald Hill (Map 2.3, where Emerald Hill is just north of the Soldiers Barracks and marked on some versions of the map by the "Green Tank Pole"). It was perhaps an auspicious decision for, in November of that same year, the Yarra River broke its banks in flood and entered the Bay via Kings Way and Albert Park.¹⁰⁰ A similar flood occurred in 1860.¹⁰¹

Albert Rd (originally Beach Rd) was then developed as a three-chain road securely linking the "island" to St Kilda Rd (SR 3) and its new flood-free bridge to central Melbourne discussed in Sub-Chapter SK2. In 1855 the isolated Emerald Hill became the first Victorian suburban municipality operating outside the Melbourne City Council. Emerald Hill is still marked today by the location of the South Melbourne Town Hall.

South Melbourne was the only one of the suburbs to copy the non-cardinal orientation of the streets of early Melbourne. The datum for its street location was established by the Clarendon St extension of Spencer St, although no Spencer St bridge existed at the time. Indeed, that link was not made until 1930 when a bridge replaced a steam ferry introduced in 1884 (Figure 2.3). The plate girder bridge was built by the Railway Construction Board. By 1861, South Melbourne was still largely contained in the rectangle defined by Montague St, Park St, Moray St and York St (Map 2.5), although the larger subdivided area was bounded by Nelson Rd, Albert Rd, Eastern Rd and City Rd (SR 20). For instance, the St Vincent Place precinct¹⁰² and other areas south of Park St had been surveyed in 1854, but they were not offered for sale until 1864. Nelson Rd at the western end of the precinct also represented the western end of the Emerald Hill high ground. St Vincent Gardens - which contained public open space (Sub-chapter 1.2) was an 1850s reaction to the Melbourne then resulting from Hoddle's austere plan. However, the unusual street layout around the South Melbourne Town Hall arose later from the resumption of the site of the Melbourne Orphan Asylum in 1875.

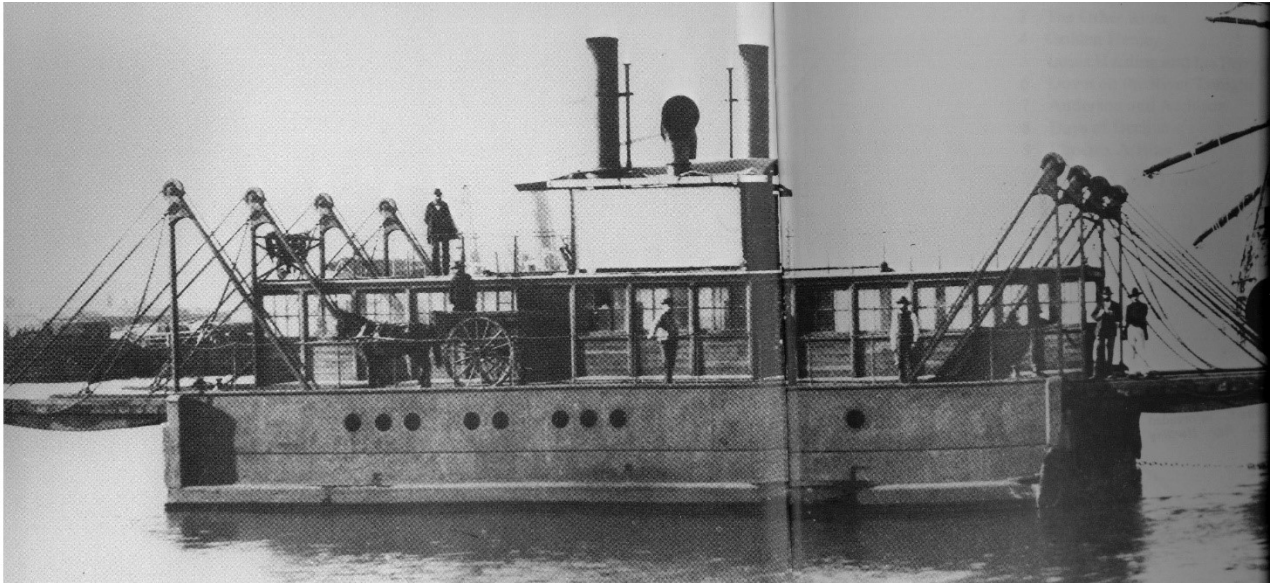


Figure 2.3 The Spencer St steam-powered ferry, operating between 1884 and 1930 *SLV*

In 1850, Carlton had still only been subdivided as far north as Queensberry St and in 1852 this pattern had extended no further than Grattan St. Indeed, the subdivision did not reach Park St until the early 1870s. This relatively slow growth was despite the earlier rapid expansion of Melbourne to its east and south before 1860, the creation of Brunswick Rd / Park St [3n] in 1844, and the survey of Clifton Hill in 1852. The reason for the delay was that Superintendent La Trobe had successfully introduced a “green belt” plan¹⁰³ for the area, with the unsubdivided land earmarked for a cemetery, a university and parkland. His intended purposes still remain as the current land uses. The associated parks are Royal Park and Princes Park. The subdivision process and the unusual street patterns resulting from it has been described by Perry.¹⁰⁴

One constant that emerges from this review of Melbourne, and of most other cities of the New World, is that - despite popular current perceptions - these cities expanded well before the invention and application of the car, which did not occur in earnest until the 20th century.¹⁰⁵ They expanded due to population pressures, economic development, land subdivision and speculation. It has always proved easiest to develop land at a city’s fringes where land is cheap and development unconstrained – particularly when no piper is around to play tunes reminding developers of the costs of infrastructure servicing, lost green space and lengthened travel times.

Three unusual Melbourne land subdivisions are found at Brighton (discussed in the following Sub-chapter and in route SK5), Edinburgh Gardens at Fitzroy North (see Sub-Chapter 2.1) and at Park Orchards. The last began as an apple orchard in 1902. In 1925 it was bought by Melbourne businessmen who intended developing it as a Country Club estate, modelled on Ranelagh in Mt Eliza. The scheme slowly failed, dying in 1951 but leaving a curious road network as a lasting memorial.¹⁰⁶

It is well to recall with John Monash’s engineering partner, J. Noble Anderson,¹⁰⁷ that early Melbourne was a small settlement on the first firm ground beside the Yarra River – firm ground that was ringed with swamps and “a series of marshes” in a 180° clockwise arc from Prahran to Ascot Vale. Small settlements such as early South Melbourne sat on islands of high ground surrounded by, in Garryowen’s typically colourful words, a “snaky, scrubby jungle.” Continuing clockwise, Yarraville, Footscray, Flemington, North Melbourne, Melbourne, Richmond, Prahran and St Kilda formed a ring of settlements on the higher ground surrounding the estuarine marshes. Behind this ring were flat and ancient silurian planes, sometimes overlain north of the Yarra by basalt from more recent lava flows, and frequently indented by the deep, well-worn valleys of persistent, ancient but now-minor creeks and rivers.

Indeed, it will be observed throughout this text that, in the era of 19th century animal-drawn traffic, creeks and rivers – through their width, swampy approaches and/or steep sides – were major factors in determining the location of many of Melbourne’s roads and streets. This is despite the fact that they were all relatively small by world standards. Map 2.1 locates all these key streams.

There were pre-existing tracks in the land beyond the initial settlement but threatened by the march of subdivision:

- * aboriginal tracks (usually destroyed by cattle, see Sub-chapter 3.1),
- * stock routes (see Sub-chapter 3.1),
- * routes to adjacent settlements (e. g. to Geelong, see route GL6 in Sub-chapter 4.1), and
- * tracks to early farms.

To the west of the Yarra, many of the initial tracks came to form the basis of today's roads, as the deep valleys cut into the basaltic planes and provided few route-choice options. To the east of the Yarra, the older silurian countryside had weathered and eroded into far gentler curves and there were many paths and options available to travellers. Indeed, the big decision for travellers from the east was how to cross the Yarra to reach the settlement on its right bank. This decision had often to be made by Oakleigh, as Gardiners Creek was frequently uncrossable. Travelling south of the creek meant crossing at Princes Bridge, travelling north of the creek led to Palmers Punt (or Crossing) at the east end of Bridge Rd. Thus, whilst there are many tracks to the east of Melbourne shown on early maps, few of the lesser tracks are reflected in the current road system. Later formal roads were able to follow the subdividers' *sectioning*, rather than the track-makers' topography.¹⁰⁸

In particular, the parish of Nunawading - which embraced all the land between Warrigal Rd and Dandenong Creek, and between Mullum Mullum Creek and the large Carrum swamp, and serviced by the usually gentle waters of Gardiners Creek and Scotchmans Creek and the many springs south of Dandenong Rd - had become Melbourne's breadbasket. Some of the farm tracks were fit only for walking, but the need to take farm produce to market meant that many had to be up-graded to dray tracks capable of carrying the narrow steel-rimmed wheels of the horse-drawn drays. Most settlers had established their farms on the relatively fertile banks of the various creeks.

2.4 The Special Surveys

A variant to the *section* method was the "Special Survey". Based on a South Australian model, this process had been introduced in August 1840 by the London-based Colonial Land and Emigration Commissioners of the British Government.¹⁰⁹ and should be seen in a larger historical context.¹¹⁰ The Commissioners were led by Colonial Secretary Lord John Russell. They had already caused a colonial furore in May 1840 by abolishing the auction system and requiring all land to be sold as *half sections* (320 acres) at £1/acre. Governor Gipps had correctly described the policy of selling land of equal area but unequal value as a poor form of gambling.¹¹¹ Almost in the same Whitehall breath (i. e. in August of the same year!), the Commissioners made the unrealistic decision to let people buy 8 square miles (5120 acres) of land in the Colony at the same price of £1/acre. The regulations only defined the property boundaries – the internal subdivision was left to the owner. The method was highly disliked by the local administration as the process wasted potential revenue and was largely beyond their control or regulation, although part 9 of the notice included¹¹² "*The Land ... will be subject to all regulations ... in the Colony respecting ... reserves for roads ...*"

London erroneously thought that its £1/acre scheme would save the colonies the cost of any surveying within the 8 square miles, ignoring the needs of the *section* process and of the provision of through roads. To preserve some sanity in the aftermath of the May 1840 decision, in December 1840 Governor Gipps introduced a local control, requiring the land chosen to be at least 5 miles from a surveyed township and thus preventing the forced sale of land worth many times more than £1/acre.

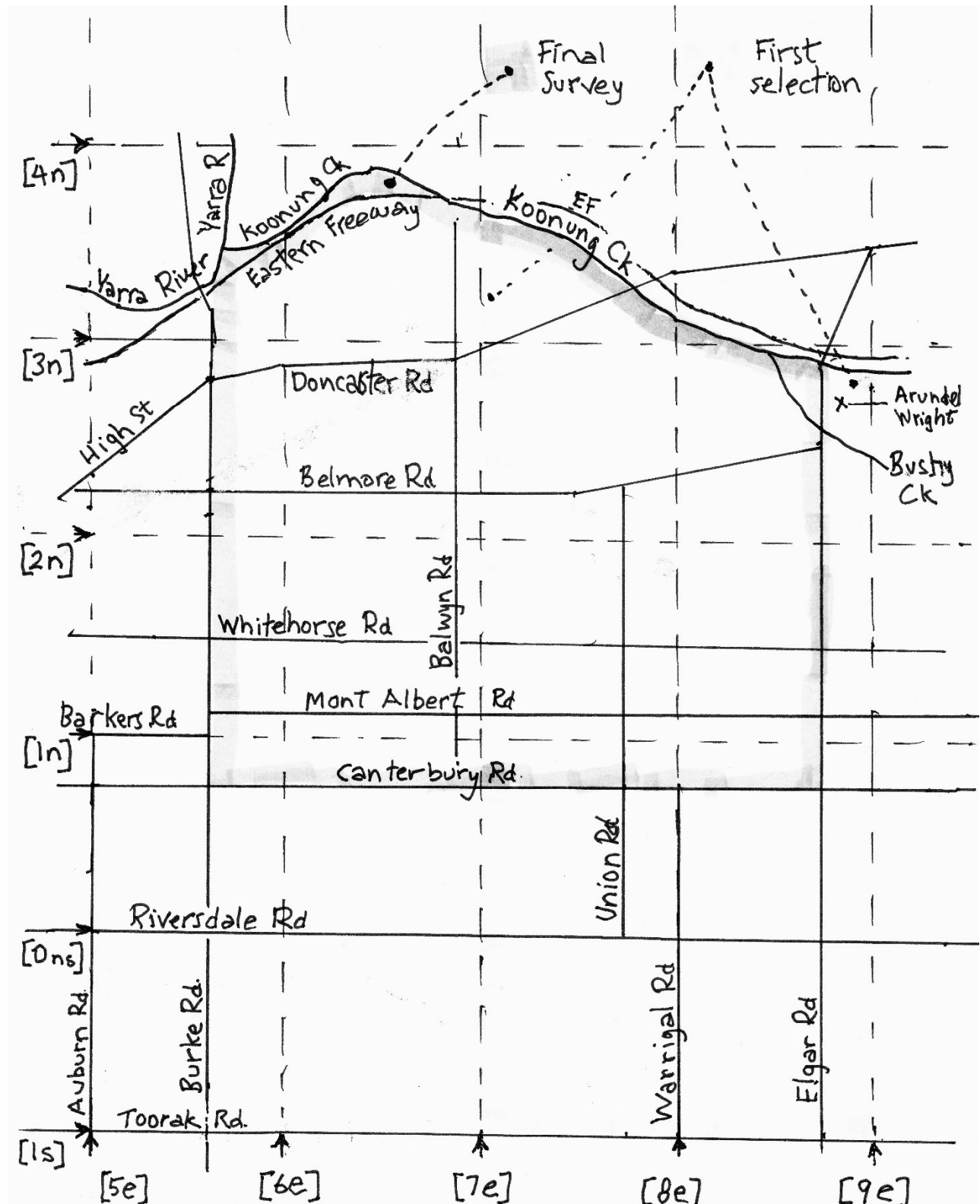
When London understood the economic cost of its actions, a pseudo-rescinding order was issued in August 1841 as one of Lord Russell's last acts. It was fortunate in this respect that the outpost had entered a period of economic depression. As a consequence of these two factors, there were only three significant Special Surveys in metropolitan Melbourne – Frederic Unwin's at Templestowe / Bulleen (see discussion of routes TW1 and NS8), Henry Elgar's at Box Hill / Balwyn (see routes CT1, NS4 and NS6) and Henry Dendy's at Brighton (see route SK5). To illustrate the farce, Sub-chapter 2.2 showed that the first Fitzroy land had sold for £6/acre in pre-boom 1839. Up to the end of 1839 the average land sale price in Melbourne had been £209/acre, and Gipps had conveyed this information to the Secretary of State for the Colonies.¹¹³ Compared with London's £1/acre, land in the areas at the 5-mile limit had since been locally valued¹¹⁴ at £16/acre (e. g. Unwin's to the east) and Gipps valued Dendy's land at about £200/acre.¹¹⁵ Land in distant Portland had sold for £125/acre.

Ironically, at the other extreme the depression in the 1840s following the initial boom meant that in 1842 land in Melbourne could not be sold for £1/acre.¹¹⁶ Even in pre-gold rush 1851, Unwin's land was selling at only £2.6/acre.¹¹⁷

The one clear advantage of the scheme was that it provided a safe way to remit money to the Colony. The land could be purchased in full in England – the traveller need only bring to the Colony an order to acquire the land. However, during its 15 month existence only ten people used the system and only Dendy took it to its financial limit. Dendy's role has been carefully documented by Bate.¹¹⁸

Each of the Surveys created its own special mess. In the context of this book, Elgar's deal requires specific attention.¹¹⁹ Henry Elgar (1816 – 1852) was an Englishman operating as a merchant in Macao and then, predominantly, in Manilla where he later died.¹²⁰ He (or possibly his agent) came to Melbourne in 1840 as an "agent for a company in Sydney."¹²¹

The first survey of his purchase was performed by surveyor Thomas Nutt in 1841 and neatly gave Elgar his 8 square miles as the area bounded by Balwyn Rd [7e], Toorak Rd [1s], the [9e] *section line* between Elgar Rd and Station St (originally Sims Rd)¹²² and the very minor Koonung Creek [then assumed to be at 3n] [2 x 4 = 8]. Balwyn Rd was the five miles from the recently established (Sub-chapter 2.2) town boundary along the [2e] *section line* of Hoddle St, as required by Gipps' interpretation of the London decision (Map 2.7).



Map 2.7 The physical consequences of Elgar's Special Survey *The Author*

Unwin - a Sydney solicitor - in the meantime had protested that the five mile should be measured from the centre of the town and not its new, outer boundary. Head Office in Sydney agreed with Unwin and the Swanston St / Collins St intersection appears to have then been used, rather than Hoddle St. This created a new 5 mile limit at the current location of Burke Rd (route NS4) some 400 m short of the [6e] section line. As a consequence, in 1843 Unwin

was given land nearer the Yarra. It was actually given to James Atkinson, who had bought Unwin's rights.¹²³ This water access was a great asset in a water-poor region.

Elgar then made a similar application, which was approved in the same year. His west boundary was moved over a mile citywards from Balwyn Rd [7e] to Burke Rd to satisfy the new five-mile interpretation. This importantly now gave Elgar's land direct access to the far more plentiful waters of the Yarra River, just below the congruence of Koonung Creek. The north Koonung Creek boundary was theoretically untouched. One might have expected the east boundary to be 2 mile east of the west boundary (near today's Union Rd) but Elgar successfully advocated that it be further west at Elgar Rd, which increased his creek frontage and included good farm land at today's Elgar Park and the lower reaches of Bushy Creek. It also avoided interfering with a farm that an argumentative Arundel Wright (or Wrighte) had established in the late 1830s in the south-west segment of the confluence of the Koonung and Bushy Creeks. Wright had been a member of Batman's original party of Tasmanians.¹²⁴

To maintain the required area 8 square mile area, his south boundary was moved 1.6 mile (2.6 km) north from Toorak Rd [1s] to establish Canterbury Rd (route CT1), which was also 400 m short of a *section line*. The dispute was finalised when Hoddle discovered that Koonung Creek had been wrongly mapped¹²⁵ and resurveyed the coordinates for Burke Rd, Canterbury Rd and Elgar Rd in 1844. For instance, errors of about 10 chain occur in the *section lines* in Darke's map of 1842a for the adjacent Unwin survey. The resurvey also had shown that the creek was further north than had been previously assumed. In hindsight, it is interesting to observe that Elgar and his agents traded the scrubby hills of Camberwell and Canterbury for the more desirable creek-side land at Box Hill North.

This process fixed road locations and left them – and broad parts of the eastern suburbs - permanently out of kilter with the underlying *section* concept. The 400 m displacement can be readily seen in Hoddle's map of 1842. The negative consequences of this "adjustment" on east-west through roads is discussed, for example, under route CT1. Another odd but permanent geometric effect relates to Bulleen Rd and is described in the discussion of route TW6.

Notes for Chapter 2

¹ Powell 1970, p34

² The Rattlesnake became famous later in the decade for carrying Huxley and others on a natural history expedition around New Guinea.

³ Greig 1927

⁴ Greig 1919

⁵ Cannon & McFarlane 1988, p6

⁶ King 1837, p90

⁷ Cannon & McFarlane 1988, p74 & Grant & Serle 1957, p27

⁸ See Surveyors' 1989 and Darke's field book (see footnote 16).

⁹ Cannon & McFarlane 1988, p71.

¹⁰ Greig 1919, p43

¹¹ King, p56-109

¹² Boys 1959, p57-.

¹³ An excellent map of the key features located in a modern context is given on p80 of Harcourt 2001.

¹⁴ L. J. Perry in a private communication gives the co-ordinates as 319 714E, 5 811 988N. See also Perry 1996, p3.

¹⁵ Surveyors', p65

¹⁶ Commons Papers, 1823, Vol 10, p33,136

¹⁷ Aldous 1988, p4

¹⁸ Perry, L. 1996 and based on the original field book in the Mitchell Library.

¹⁹ Bonwick 1856, p69

²⁰ Lay 1992, p14

²¹ Chappell 1966, p26

²² Colville 2004, p172

²³ Brown-May 1999, p9

²⁴ See drawing on p47 of Cannon & McFarlane 1988.

²⁵ Chappel 1966, p6

²⁶ Surveyors' 1989, p64 and Arnold 1973, p89

²⁷ Chappel 1966, p101

²⁸ Darke 1838

²⁹ Powell 1970

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- ³⁰ Father 1899
³¹ Speaking 1983
³² Bate 1962, p38
³³ Father 1899
³⁴ Surveyors' 1989, p55
³⁵ Bate 1962, p32
³⁶ Chappel 1966, p23 & 74
³⁷ Cannon & McFarlane 1988, pxvii
³⁸ Clark 1950, p83
³⁹ Cannon & McFarlane 1988, pp98-100
⁴⁰ Dawson 1840
⁴¹ Port Phillip Herald, 13 July 1841, p3
⁴² Chappel 1966, p23
⁴³ See Hoddle's map of 1837b.
⁴⁴ Clark 1950, p83
⁴⁵ Lewis 1995, p26
⁴⁶ Cannon 1984, p39
⁴⁷ Greig 1919
⁴⁸ Lay 1992, p9
⁴⁹ Anderson 1910, p85
⁵⁰ Burchett 1977
⁵¹ Burchett 1977
⁵² Lewis 1991, p9
⁵³ Cannon 1984, p141-3
⁵⁴ 1 acre = 0.405 Ha and 10 acre = 1 sq furlong
⁵⁵ Barrett 1971, p67
⁵⁶ Wells 1891, p106
⁵⁷ Chappel 1966, p7
⁵⁸ Jeans 1981, p234. 5 & 6 Vic, Ch 36, 22 June 1842.
⁵⁹ Cutler 1989, p7
⁶⁰ Cannon & McFarlane 1988, p98
⁶¹ Hibbins 1977, p7
⁶² Barrett 1971, p67
⁶³ Cummings, p2
⁶⁴ Barrett 1971, p18
⁶⁵ VGG, p2150
⁶⁶ Alsop 1986b, p7
⁶⁷ Barrett 1971, p67
⁶⁸ Barrett 1971, p22
⁶⁹ loc cit, p9
⁷⁰ Barnes 1987, p7
⁷¹ McMillan 1993, p5
⁷² Malone 1988, p1
⁷³ Greig 1912, referring to The Patriot for 10 June 1840.
⁷⁴ See Arrowsmith's map of 1840.
⁷⁵ See, for instance, Well's map of 1840.
⁷⁶ Barrett 1971, p20
⁷⁷ Port Phillip Herald, 1 April, p2
⁷⁸ Lewis 1995, p47
⁷⁹ Barrett 1971
⁸⁰ loc cit, p27
⁸¹ Hibbins 1997, p12. The author has an 1850 indenture/conveyance for a 9 m by 33 m property in Fitzroy.
⁸² Port 1998, p4
⁸³ e. g. Age, 27 Aug 1874.
⁸⁴ Lack 1991, p23 & p42
⁸⁵ Hodgart 1975
⁸⁶ Lay 2009, Section 31.2.1
⁸⁷ Lay 1992, p302-5

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- ⁸⁸ Leaney 1991, p22
⁸⁹ See the Jika map of 1844.
⁹⁰ Malone 1982, p8
⁹¹ Lack 1991, p39
⁹² Lewis 1995, p25
⁹³ Barrett 1979, p11
⁹⁴ Peel et al 1993, p21
⁹⁵ Lemon 1978, p15
⁹⁶ Peel et al 1993, p18
⁹⁷ Powell 1970, p39
⁹⁸ Sheehy 1970, p19
⁹⁹ South 1988, p4
¹⁰⁰ Blainey 1984, p23
¹⁰¹ Argus 12 Dec 1860, p4
¹⁰² South 1988, p6
¹⁰³ Sturt 19??, p7
¹⁰⁴ Perry 1975, p449-52
¹⁰⁵ Lay 1992, Chap 9
¹⁰⁶ Green and Beavis 1983, p5-15
¹⁰⁷ Anderson, 1934, p359
¹⁰⁸ See, for example, Anon's map of 1855.
¹⁰⁹ McCombie 1858, p81 and Scurfield 1995
¹¹⁰ For example, see M. Roe in p88 of A New History of Australia edited by F. Crowley (1974)
¹¹¹ Shaw 1991, p155
¹¹² Schumer 1975, p3
¹¹³ Cannon 1984, p142
¹¹⁴ Bate 1962, p26
¹¹⁵ Schumer 1975, p4-7
¹¹⁶ Port Phillip Herald, 20 October 1842
¹¹⁷ Collyer 1994, p6
¹¹⁸ Bate 1962, Part 1
¹¹⁹ Lemon 1978, p8
¹²⁰ Brennan 1972, p9.
¹²¹ Port Phillip Herald, 30 April 1841, p2
¹²² It was declared a Main Rd in 1990 (VGG, p1731)
¹²³ Leaney 1991, p8
¹²⁴ Lack 1978, p1-3
¹²⁵ Brennan 1972, p109-110