Surveying Our Past and Building Our Future: An Environmental History of an Australian Suburb

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Australia is a suburban nation. Today, when debate about urban sustainability is of key concern, an appreciation of the complex nature of Australian suburbia is critical to the debate about urban futures. Suburbia as a built environment has a long and complex history that embodies many overlapping values and motivations. This paper will investigate the extent to which the materiality of suburbia – landforms, vegetation, low density housing and streets – is intertwined with a number of social, political, economic and environmental value systems that reshape the landscape. Taking as its focus the post-war development of Kwinana (Perth, Western Australia), it will identify and account for the environmental, political and economic factors that shaped human action to construct the built form, paying particular attention to the extent to which individual understandings and visions of the environment determined the shape and nature of the suburb’s development.

At present, urban planning efforts increasingly include attention to both environmental resources and environmental health. As with most things, however, environmental issues can be more fully understood when placed in their historical context. In identifying and accounting for the environmental, political and economic factors that have shaped human action to construct the built form, and tracing the extent to which individual understandings and visions of the environment have determined such action, environmental history can provide an information base for contemporary planning debates, as well as stimulating ideas for sustainable urban development in the future.

With approximately 70% of Australia’s population living in suburban environments, there is an obvious need to understand the long term desires and decisions that have led to such a pervasive pattern of urban settlement. Whilst Aiden Davison has argued that ‘[s]uburbs have been a convenient scapegoat in Australian discussion about urban sustainability’, one thing is certain: if we are to move towards a more sustainable form of urban development, we must first consider the environmental context in which most Australians live.

Adopting Stephen Dovers’ conviction that environmental history should make itself relevant by addressing present day concerns, this article will trace the processes by which environmental imaginaries are, and in many cases are not, translated into actual built environments. Working within the framework of urban environmental history, it will seek to develop an understanding of the very complex and value-laden histories of suburbia, so as to provide an information base from which to make informed decisions regarding our urban futures. Focusing on the post-war development of Kwinana (Perth, Western Australia), the discussion will examine the extent to which the materiality of suburbia – landforms, vegetation, low density housing and streets – is intertwined with a number of social, political, economic and environmental value systems that ultimately reshape the landscape. In doing so it will provide an insight into the environmental values and ideals that have driven, and at times come into conflict with, the seemingly endless development of the suburban landscape. Starting with the physical environment and a brief history of the Kwinana area, as well
as an introduction to the actors involved in the town’s development, the following will briefly trace the complex processes of planning and construction, before providing a detailed discussion of the roles played by each group and the environmental imaginaries that helped to determine the shape and nature of the Kwinana area.

**Landscape:**

Located approximately twenty kilometres south of Fremantle and thirty kilometres south of the City of Perth, the town of Kwinana is situated along the coast of Cockburn Sound (Figure 1). The geomorphology of the area consists of two or more parallel systems of limestone formations. Cockburn Sound is flanked by two natural piers or heads, which exist approximately eight kilometres apart. One of these heads marks the outer arm of the Sound, whilst the other, the mainland ridge, marks the coast. These ‘arms’ of the Sound, closed in the south by Point Peron - the rocky headland that forms the head of Cockburn Sound - provides for a sheltered stretch of water and thus what has long been viewed as an excellent harbour.

![Figure 1. Locality Map.](image)

The actual landscape of the Kwinana region consists of coastal limestone overlain with red-brown sand of the Spearwood dune system. These sands form the Cottesloe soil association, which supports the tall open bush, mainly characterised by the Tuart and by various varieties of Banksia and Grass trees. The eastern margin of the Spearwood dune system and the western margin of the Bassendean dunes are marked by a line of swamps and lakes, such as Wellard Swamp to the east of Kwinana and White Lake to the south-east.

When tracing the history of the development of Kwinana, there is evidence to suggest that it was this physical environment that formed part of the primary economic, and in some regards political attractions and motivation for the town’s ultimate development. For example, with the 1952 decision to build a new refinery within Western Australia, a waterfront location with deep water was required for incoming and outgoing heavily laden tankers as well as adequate hinterland for factory development.
and employee residence. Cockburn Sound, with its limestone ridges forming protective ‘arms’ to the Fremantle and Cockburn harbours, thus provided the ideal conditions for such development. Furthermore, the flat, sandy plain, which extends beyond the inner limestone ridge, proved most suitable for the immense pressures of the Refinery ‘tank farm’ and other modern industries that developed along the coastline. Secondly, it is many of the natural features of the land, particularly the flora and fauna that, as shall be demonstrated, informed at least one of the environmental imaginaries shaping the development of Kwinana. More importantly, however, it was due to the environmental conditions of the land that the area had remained, for the most part, unpopulated. Although there had been European visions of settlement in the area from as early as 1829, all such attempts were largely unsuccessful. From the early settlement scheme initiated by Thomas Peel, to the Peel Estate Group Settlement Scheme of the early 1920s, all European attempts at substantial development in the area were defied by factors of the unknown and somewhat harsh physical environment, limited knowledge of land utilisation, along with a number of adverse circumstances.

Negotiating Relationships / Planning a Suburb

Although the physical features of the land were critical to the town’s development, a number of organisations and individuals also played a role in the establishment of the new suburb. As argued by Max Neutze, in any study of the broad processes of urban development there are a number of ‘major decision-makers’ who ‘influence the shape of development’ of a city or suburb. Ultimately, the development of Kwinana – particularly Medina – was a direct result of the decisions and actions of the decision-makers, the Anglo-Iranian Oil Company, Margaret Feilman as consultant planner and, to a lesser degree, the State Housing Commission (SHC). An ideology of industrial development also appears to have played a substantial role in the development pattern of the region.

In 1951, the Anglo-Iranian Oil Company, known today as Beyond Petroleum (BP), unveiled its intentions to establish a new refinery within Australia. With a growing belief in the value of industrial development and an increasing post-war movement into resource development, the Western Australian State Government, led by the Public Works Department’s powerful engineering head R.J. Dumas, successfully negotiated for the new refinery. In a new era of Western Australian industrialisation, the establishment of the Kwinana refinery led the way in what would soon become an industrial strip, extending south from Fremantle to Rockingham.

In forging an agreement with the Anglo-Iranian Oil Company the Western Australian Government agreed to a number of generous concessions. Not only was land made available to the company cheaply and in large quantities, it was also agreed that the Government would supply sufficient water to accommodate vessels, electric power, portable water, and a large area of reasonably flat land with good foundations adjacent to sea water for cooling purposes. Of even greater significance, however, was the agreement made to establish a new townsite for refinery employees. Under the proclamation of the Oil Refinery Industry (Anglo-Iranian Oil Company Limited) Act (WA) in 1952, the State agreed to a number of terms directly related to the development of the new township. These included: an area no more than ‘two and one-half miles’ from the Refinery site to be used ‘solely for the purposes of a residential area, social centre and recreation ground’; the erection of ‘333 houses’ in each of the three years following the commencing date – 1953 – to the standard design of the State Housing Commission; and finally, that the Government would provide ‘roads, septic tanks, sewerage, fencing and water and electricity services necessary for the reasonable occupancy of the houses’.

As appointed planning consultant, Margaret Feilman, Perth’s first female town planner, was given the task of planning the new suburb in accordance with the aforementioned stipulations. Seeking to integrate landscape site analysis with residential neighbourhoods and hierarchical traffic circulation, Feilman based the design and planning of Kwinana on the British ‘new town’ model. Locating the town on two main ridges running north and south rising to 200 feet, four ‘neighbourhood units’ were developed: Medina and Calista on the western ridge and Parmelia and Orelia on the eastern ridge. While the valley between the two ridges, Gilmore Parkway, was (and still is) flanked...
by a number of major open spaces, each neighbourhood was to consist of approximately 1000 house sites and a local shopping and amenities centre. The road system was to be designed in accordance with modern town-planning concepts to ensure maximum safety for residents, with two arterial roads employed to service fast and heavy traffic.

With the Anglo-Iranian Oil Company setting the primary terms for the establishment of the town and the State Housing Commission and Margaret Feilman (under the jurisdiction of the Town Planning Board) responsible for the overall layout and the suburban skeleton of roads and subdivisions, Kwinana, covering approximately 7560 acres, was one of the first comprehensive applications of the ‘new town model’ within Australia. By tracing the multifaceted negotiations between those involved in the town’s development, and the key forces that shaped the suburban landscape (as discussed above), the following will provide insight into the differing perceptions of the environment (in different social and institutional contexts) and the range of environmental, social and cultural factors and processes that shaped the way in which the suburb was built.

**Visions for Kwinana’s Suburban Landscape**

All suburban landscapes are produced through a complex, opaque system of collective (if unequal) decision-making that allows residents, planners, architects and builders, industry and government, to shape (to varying degrees) the landscape in their own manner. While it is important to understand the factors shaping diverse visions of the environment, it is as equally important to trace what happens to those visions in the process of building a new suburb. As will soon become evident, the development of Kwinana, and more specifically Medina, was the result of a number of competing visions. It is these visions that, in an ongoing process of negotiation, determined the final siting and layout of the town.

The first of these visions was that of the Anglo-Iranian Oil Company. Driven by capital gain, the Anglo-Iranian Oil Company imagined an environment conducive to the productivity (and indeed the proximity) of its workers. Whilst not wanting to produce an ‘oil town’, the Company’s interest in the development of Kwinana was first and foremost in the interest of providing accommodation for company employees. The second vision was that of the State Housing Commission. In the context of a post World War Two rise in population, along with the State’s drive for industrial growth, the State Housing Commission, brought into being by the passing of the State Housing Act in 1947, was largely responsible for the development of vast estates throughout Western Australia. Governed by three circumstances: the social demands of low to moderate income earners for housing; the economic demand of industries for a stable and accessible workforce; and the level of funding available to the Commission to erect such housing, the SHC was largely responsible for translating the specific economic and social aims of both the Anglo-Iranian Oil Company and the Western Australian Government into a suburban environment. Together with the Anglo-Iranian Oil Company, the State Housing Commission, driven by economics, the doctrine of industrialisation and post-war urban planning saw the development of Kwinana as imperative to the successful industrialisation of the State. The final, and to my mind, most pervasive vision for the development of Kwinana was that of Margaret Feilman. Feilman sought to establish Kwinana as a new suburb with ‘an individual identity’. It was to be ‘an experiment in methods of site selection, traffic segregation and house siting in relation to open spaces’. Together with the State Housing Commission, Margaret Feilman provided the basis upon which the town of Kwinana, particularly the sub-unit of Medina, was ultimately built.

**Environmental Imaginaries**

Having identified the competing visions for the development of Kwinana it is important to trace how those involved in the shaping of Kwinana’s suburban landscape responded to or sought to reshape the environment.

Based on the application of the English ‘new town’ model, the overall plan for Kwinana was based on the ‘integration of landscape site analysis, residential neighbourhoods and hierarchical
traffic circulation’. Placing the development of Kwinana within the greater context of pre- and post-war planning ideology, deterministic understandings of the environment appear to have been quite prevalent. Linking the organisation of space in suburbia to the behaviour, values, health and experiences of the people who inhabited it, planning ideology of the post-war period held belief in the idea that a suburban area, particularly one based on the principles of the ‘neighbourhood unit’ - neighbourliness, reform and stability - would engender in its citizens heightened moral and ethical values. As a planning ideal, the ‘neighbourhood unit’ sought to achieve physical and social integration resulting in a neighbourhood ‘identity’ that would provide a basic structure for social behaviour and social relationships.

Between 1953 and the early 1960s, the State Housing Commission, acting on behalf of the West Australian Government to fulfil the requirements stipulated by the Anglo-Iranian Oil Company, provided the means by which such an environment could be achieved. The first neighbourhood development – Medina – was produced primarily for company workers and employees. An agreement forged between the Anglo-Iranian Oil Company and the State Housing Commission provided for five year leases on individual houses whereby it was up to the Company to ensure that premises, including dwellings and gardens, be kept in good condition. Whilst health and safety considerations were bound up as regulatory measures in the various housing and building codes and thus constituted a strong emphasis on constraints to avoid conditions hazardous to the physical well being of the community, ‘quality of environment’ including issues such as environmental amenity, dwelling types and materials, land-use types and locality appear to have been given little consideration. Given the stringent requirements of the Anglo-Iranian Oil Company and the little time allocated to complete construction of the new houses, dwelling types and materials, land-use types, as well issues of locality, were driven primarily by expenditure and expediency. Although there was a level of ingenuity shown in the housing designs, so as to avoid the usual monotony of workers’ houses (often seen in similar housing estates) through colour variation and outward design, housing designs generally evolved around a few basic types, based on a similar layout and material, whilst other issues, including those listed above, were largely tangential to the more pressing concerns for expediency. Given that the administrative relationship between the public (the State Housing Commission) and private (the Anglo-Iranian Oil Company) sectors was based on achieving necessary development for a particular use – in this case, the development of Kwinana as a residential area for company employees – the stipulated requirements of the Anglo-Iranian Oil Company acted as a guiding force for the State Housing Commission’s development of Kwinana.

Despite such facts, quality of environment as it related to environmental amenity and the conservation of flora and fauna was a primary concern for Margaret Feilman. For Feilman, landscape site analyses, as well as issues concerning preservation, were of key concern. In deciding on a location for the new townsite there were a number of what, broadly speaking, may be viewed as ‘environmental’ factors, which were taken into account. Not only were issues of refinery fumes and pollution given extended consideration, but so too were topographical features and other natural aspects of the Western Australian environment, including the native vegetation referred to earlier.

Having recently returned from the United Kingdom, Margaret Feilman applied much of the valuable knowledge acquired through her experiences of British planning principles to the planning and development of Kwinana. As argued by Barrie Melotte, in her design and planning of Kwinana, there were...

... at least three pioneering contributions to Australian planning. She contributed new applications of the English ‘new town’ model; the integration of landscape site analysis, residential neighbourhoods and hierarchical traffic circulation.

Working with approximately 7560 acres, Feilman skilfully adapted the British ‘new town’ model to local conditions. As the first comprehensive application of the ‘new town’ model in Western Australia, and one of only a few throughout Australia, Kwinana became a model development for future planning within Australia. As argued by Mark Peel in his brief history of the ‘new town’ of Elizabeth (South Australia), Australian planning had always relied on British models: ‘Australians
looked to their British counterparts for ideas about how to reform and how to claim power.\textsuperscript{38} With the appointment of yet another British-trained person to a position of planning influence (as was the case with Kwinana), there was a surety that the dissemination of British planning ideology onto the Australian landscape would continue.\textsuperscript{39} What distinguished Margaret Feilman from many other Australian planners of the post-war era, however, was her willingness and indeed resolute commitment to cater for local conditions. Although Peel argues that most planners were ‘ambivalent’ about the ‘new town’ model,\textsuperscript{40} Feilman drew on many of its principles for the development of Kwinana. Of particular interest (to her) was the idea of demonstrating that convenient thoroughfares, quiet domestic streets and ample public open spaces were economically feasible as well as socially and environmentally beneficial features of Australian suburban development.\textsuperscript{41}

Unlike the development of Elizabeth, which Peel suggests was not a particularly ‘self conscious planning process’,\textsuperscript{42} Kwinana’s creation, under the planning guidance of Feilman, was clearly based on set of philosophical, social and environmental planning ideals.Whilst such ideals, including notions of neighbourliness and reform, stemmed from the ‘new town’ movement, Feilman also sought to incorporate her own planning philosophy. Based on what she has described as a ‘three dimensional exercise which sought to achieve the best use of the land as part of a total environment – to be good for the people who used it, to give safety and convenience and the maximum amenity’, this planning philosophy meant ‘responding to the land’ as it was found, ‘using contours as a basis for design as well as the best of the natural features, including trees, views etc’.\textsuperscript{43} For Feilman, planning was as much about the natural environment as it was about the built environment.

Having grown up in the Southwest region of Western Australia,\textsuperscript{44} Feilman had what she has described as a ‘special understanding’ of Western Australia’s natural environment. It was her belief that Our environment was rather special and there was no real reason why we couldn’t keep some of the best of it as a permanent situation, fairly accessible to people living in an urban environment.\textsuperscript{45}

Most urban areas contain a number of public parks and reserves, mainly for aesthetic and recreational purposes. However, for Margaret Feilman, the specifications for open space provided an opportunity to maintain some examples of natural vegetation and certain species of fauna, whilst also providing for a pleasant living environment.\textsuperscript{46} Though it was common for new suburban developments to begin with a radical clearing of land, Feilman invested much time and effort in learning about the land so as to allow for the preservation of various areas and, in particular, trees. As a planner, Feilman accepted that parts of the land would have to be cleared; however, it was her priority to maintain as much of the ‘natural environment’ as possible.\textsuperscript{47} In terms of the removal of natural tree growth to accommodate the location of services such as water and power, it was noted in the Kwinana Road Board Minutes – a body formed in February 1954 to help govern the development of Kwinana – that a tree-planting scheme was to be put in place by the State Housing Commission.\textsuperscript{48} According to Margaret Feilman, this tree-planting scheme ‘added more native trees, a number of them with brilliant flowers such as the red flowering gum, the bottle-brush and the yellow flowering wattles’ along with ‘some non-indigenous trees’ which were ‘introduced in special locations to provide a contrast with the grey-green bush’.\textsuperscript{49}

Whilst many may see such actions as contradictory to the standard process of suburbanisation – to what Hogan has called a ‘culture of erasure’, where local flora and fauna are removed and the topography flattened\textsuperscript{50} – it is important to note that land clearing has long been a cause for public concern. By the early twentieth century, public concern for the destruction of wildflowers, forests and other natural areas was reflected in the deliberations of a number of societies, including the WA Naturalists Club and the Country Women’s Association. As the clearing of natural bushland continued, local support for preservation increased. By the late 1950s, numerous groups, including the newly formed Tree Society and the Society for the Growing of Native Plants, emphasised the loss of bushland as a primary cause for concern. For many of those involved in such societies, the bushland was pivotal to the development of a sense of place and the preservation of native flora and fauna was seen as imperative. It is thus possible to assume that Feilman’s attempt to overcome the suburban tradition of ‘erasure’ and to preserve as much of the native flora and fauna as possible\textsuperscript{51} stemmed
from an awareness that is often neglected in discussions of Australian suburbia. Although it is widely acknowledged that most new subdivisions commence with the complete levelling of the bush, Feilman’s planning and development of Kwinana provides an example that contradicts this norm.

Clearly Margaret Feilman exhibited great regard for the Australian environment. For her, planning was not only about the human-made physical environment, but also about the natural environment. But how original was such thinking in the early period of post-war planning? Feilman has argued that it was relatively original within Australia, yet for someone who had studied in the UK, where the basic tenet of planning was ‘taking note of the social and community issues as well as taking note of the land’ this was a normal and practical way of planning. As Arthur Edwards describes in his book *The Design of Suburbia: A Critical Study in Environmental History*, from as early as 1944, when the Ministry of Town and Country Planning published the Dudley Report, British town planning demonstrated a clear commitment to an appreciation of site layout and requirements. According to the Dudley Report, site planning ‘must be based on a thorough study of the characteristics of the site to be planned and on an appreciation of the site requirements of the buildings to be erected’.

‘Modern town planning’ as it was conceived and applied throughout Britain was (more often than not) based on a thorough study of local conditions. As seen in a number of Britain’s post-war planned suburbs, including those based on the ‘garden city’ and ‘new town’ movements, there was a conscious effort to overcome what has often been viewed as the inherent problem of suburbia – a residential development isolated from its surroundings. Seeking to overcome the long tradition of building over or escaping from nature, town planning along these lines sought to work with and to incorporate basic physical elements of the landscape such as the topography and the contours of the land. In Feilman’s mind, the ‘best of modern town planning was taking note of these factors’. Ultimately, Feilman imagined the development of an Australian town, planned along modern planning principles, integrated into a particularly attractive landscape.

In considering Feilman’s environmental imaginary and its influence on the planning and development of Kwinana, of particular importance is the material and social framework within which she was working. Clearly, Feilman’s experience of place, that is her understandings and experiences of growing up in the Southwest region, would have influenced and informed her understanding of such an environment. As suggested by Peet and Watts, ‘the places groups of people inhabit are main sources in the creation of their meaning systems, aesthetics and systems of thought’. Whilst Feilman suggests that she had a ‘special understanding’ of the West Australian environment, as a planner this ‘special understanding’ was refigured or at least reconsidered in an ongoing process of active interaction between practice and idealisation. Stemming from her own familiar connection to and visual images of the Southwest region, Feilman’s imagined ideal environment was incorporated (at least partially) into a planning ideology which arose from a series of ways in which different people – planners and developers – thought, saw and discussed the urban or built environment. In the post-war period the ideology of land-use planning in Australia centred on five broad areas or categories: (i) health, (ii) safety, (iii) convenience, (iv) economy and (v) amenity. Health and safety considerations were generally linked to the avoidance of conditions deemed hazardous to physical well-being. Such ideas were clearly emphasised in early planning literature concerning the ‘city beautiful’ and ‘garden city’ movements, where it was believed that public health and safety could be fostered via the physical environment. Taking an environmentally deterministic approach, planning along these lines aimed at improving the physical and social contexts in which people lived, not only by addressing problems directly linked to issues of health, such as sanitation, but also by attempting to produce a pleasant environment through the provision of parks and open space. ‘Environment’ within this context was thus largely considered as it concerned beautification and moral and physical health. Yet, despite the fact that Feilman drew on British planning ideology, expressing a clear interest in the use of low-density housing and ample open space, she also demonstrated a clear commitment to retaining natural bushland and native trees and to using contours and topography of the land in the planning of Kwinana. In this context, Feilman’s environmental imaginary conceived of the environment in a much broader sense than that of the ‘beautification’ notion of environmental
determinism envisaged in the ‘garden city’ movement and, more specifically, by the State Housing Commission and the Anglo-Iranian Oil Company.

In summary, the development of Kwinana was the result of a number of competing visions of environment. On the one hand there was the environmental imaginary of the Anglo-Iranian Oil Company as translated through the work of the State Housing Commission, and on the other there was the imaginary of Margaret Feilman. The Anglo-Iranian Oil Company’s vision or understanding of the environment stemmed from industrial paternalism. In an era governed by deterministic visions of the environment, it was believed that housing workers in a clean, orderly environment would provide for a productive industry. Furthermore, it is clear that the general needs of industry also informed the way in which the State Housing Commission imagined the environment. Both the location for the townsite and the planning of the town itself were based primarily on refinery requirements. Although it is doubtful whether the State Housing Commission, in conjunction with the Anglo-Iranian Oil Company, consciously considered the geographical and topographical features of the environment when it came to housing, such features inadvertently formed much of the economic basis for development in the region. Of greater impact, however, was the environmental imaginary of Margaret Feilman. ‘Environment’ for Feilman was a broad concept encompassing both built and natural features. Responsible for the major planning and development of the new town, Feilman’s understandings of the environment appear to have dominated the shaping of the suburb. From the layout of the land to the native flora and fauna it supported, Feilman drew her insights into how the suburb would evolve. As already suggested, an environmentally deterministic planning ideology informed her role as a planner, but a broader understanding and vision influenced the way in which she set out to develop Kwinana.

Conclusion

The development of Kwinana’s suburban landscape was influenced by a number of political decisions, demands of economy, industrial ideology and environmental factors, interacting in contingent and complex ways. By bringing such issues to the fore, environmental history can be used to inform planners and other government organisations and residents about the various factors that structure a suburb’s form and subsequent impact on the environment.61 By examining, for example, how planning patterns determine land subdivision and street formation; how housing and domestic lifestyles shape suburban areas; and the ways in which transport patterns influence housing development, environmental history can evaluate the extent to which suburban planning has, in the past, identified or ignored environmental considerations. This allows for a greater understanding of the ways in which changing understandings of the environment have impacted on the planning and development of suburban landscapes. By using environmental history to make comparisons with the past, to highlight significant patterns in changing landscapes or political and institutional structures which are often taken as a given, environmental history can help to create new discussions and suggestions for new ways forward.62 In developing an appreciation of the processes that inform urban and suburban development – from the imaginary to the reality – we can make sense of urban pasts and develop greater insights into one of the many ways in which environmental history can be relevant to contemporary debates about urban futures.

Notes

Throughout this paper ‘environmental imaginary’ is used to refer to the way in which people have thought about the environment, the way in which they have envisioned the environment and the way in which they have viewed the environment.


See C. F. Makin, ‘Social Differentiation and the Concept of Community in a Western Australian Township’, M.A Thesis, University of Western Australia, 1962, pp.32-33.


G. Seddon, *A Sense of Place*, University of Western Australia Press, Nedlands, 1972.

For the purposes of this paper, ‘settlement’ and ‘development of land’ are restricted to European arrivals. However, according to Robert Menli Lyon, a settler who during the early 1800s volunteered his help in learning to understand Australia’s Indigenous population, the area known today as Kwinana was situated in Beeliar, one of Perth’s three Indigenous ‘districts’. For further information on Indigenous population in the Southwest Region, see Seddon, pp.187-197.

With a syndicate formed in England in November 1828, Thomas Peel, an early settler in the Cockburn Sound Region, was granted a portion of land stretching southward from the townsite of Clarence (located between Woodman Point and Lake Coogee) to the Murray River and inland to the foot of the Darling Ranges in return for settling some 10 000 immigrants in the new colony (W.C. Smart, *Mandurah and Pinjarra: History of Thomas Peel and the Peel Estate, 1829-1865*, Paterson Brokensha, Perth, pp.1-13). However, when Peel’s immigrants arrived in Cockburn Sound in 1829, the harsh environment and somewhat dismal conditions of the proposed Clarence townsite led many of the migrants to seek release from their indenture in favour of moving to the more attractive areas of Perth and Fremantle. Yet for those who chose to settle in the Peel region, many of whom came from the overcrowded urban areas of London, the openness of land, along with its cheapness, was a clear attraction. Most settlers within the region soon became landowners of large tracts of land. However, quite often unsuited to the rigours of colonisation and with minimal knowledge of land utilisation, such land often proved well out of the proportion of their ability to produce. Thus at the end of 1831 over a million acres of land had been allotted, but there were only 200 acres under cultivation’. Makin, p.30.

The Peel Estate Group Settlement Scheme sought to accommodate ex-servicemen and British migrants. In an attempt to establish a dairy industry, newcomers to the area were granted approximately 100 acres of land. Despite being subsidised with basic housing, animals and farming equipment, the venture was a complete failure. Unsuitable land and livestock, coupled with inadequate planning, was responsible for the large abandonment of properties between 1922 and 1930.

According to a 1930s Royal Commission into Dairy Farming in the Southwest area, most of the Peel Estate ‘had remained practically undeveloped since the earliest days of land settlement in Western Australia’. One could thus assume that a failure to develop the land it once was return by the State was indicative of its intrinsically poor quality, particularly with regard to agriculture. *Report of the Royal Commission Dairy Farming in the Southwest*, Government Printer, Perth, 1932.


Medina was the first of the six proposed ‘neighbourhood units’ (or ‘sub-units’) to be developed in Kwinana. Much of the focus of this paper will be placed on this sub-unit.

For a detailed discussion of industrialisation and the postwar ideology of development within Western Australia, see L. Layman, ‘Development Ideology in Western Australia, 1933-1965’, *Historical Studies*, vol. 20, no. 79, 1982, pp.234-260.

In 1951, a telegram was sent by the Anglo-Persian manager (London) to the Western Australian manager of COR (Commonwealth Oil Refineries), the forerunner of BP in Australia, stating that: ‘Information is urgently required in this office concerning possible refinery locations in various parts of Australia for the Anglo-Iranian Oil Company’. ‘Telegram from Anglo-Persian manager (London) to Western Australian manager of C.O.R, 1951’, as quoted in L. Russell, *Kwinana “Third Time Lucky”*, Town of Kwinana, Kwinana, 1979, p.151.

The Liberal Party under the leadership of Sir Ross McLarty (1947-1953).


Under the Provision of the Industrial Development (Kwinana Area) Act, March 1952, Margaret Feilman was appointed as area planner. According to the Minutes of the Kwinana Inter-Departmental Committee, dated 14 April 1953, Margaret Feilman was to operate ‘under the jurisdiction of the Minister for Town Planning’ and her work was to be ‘subject to the approval of the Town Planning Board’. ‘Notes & Correspondence’, Kwinana Co-ordinating Committee, State Records Office, Western Australia (SROWA hereafter), ACC 1205, item no.33.

The modern new towns movement was started by (Sir) Ebenezer Howard (1850–1928), who published his book *To-morrow: A Peaceful Path to Real Reform* in 1898. The first ‘new towns’ were purposefully founded, planned and developed (first in Great Britain and subsequently in other countries) as an alternative and corrective to city overgrowth and congestion, while also providing reinvigoration in sparsely populated country districts. According to Osborn and Whittick, ‘The original reason for the building of new towns ... was the necessity of reducing the concentration of people and work places in very large towns, which otherwise cannot be relieved of congestion, disorder and squalor and rebuilt on a fully healthy, pleasant, socially satisfactory or efficient pattern’. Whittick and Osborn also argue that that ‘new towns based on modern industry in impoverished agricultural regions, declining in population owing to mechanisation and other technological

24 It is significant that throughout the post-war period there were a number of similar developments taking place, including the development of Elizabeth in South Australia. According to Mark Peel, Elizabeth drew on the ‘planning assumptions and objectives of the postwar British town planning movement and represented a specific plagiarisation of the empowering British tradition which dominated Australian planning’. M. Peel, ‘Planning the Good City in Australia: Elizabeth as a New Town’, *Urban Research Program Working Paper*, no. 30, February, 1992, Research School of Social Sciences, Australian National University, ACT, p.v.

25 In March 1952, the General Manager of the Oil Refinery stated in a letter to the State Housing Commission that he ‘definitely did not want an “oil town”- it is essential that workers’ homes be interspersed between various industrial projects and other avocations’. ‘Letter from the General Manager of the Anglo-Iranian Oil Company to the Chairman of the State Housing Commission’, 10 March 1952, State Housing Commission File 666/52, as quoted in Makin, p.58. Interestingly enough, this point was also advocated by Feilman: ‘Although the impetus to the development of the township came from the building of the Refinery, Medina, or any other of the neighbourhood units, should not become an “oil town”- only a proportion of the houses are for Refinery employees’. M. Feilman, quoted in *Sydney Morning Herald*, 25 April 1955.


29 Such ideas are similar to the notion that the physical environment of the slum had a negative effect on the moral and physical health of citizens’ at the turn of the century.


31 ‘Tenancy Agreement for Refinery Houses’, Kwinana Co-ordinating Committee, Notes & Correspondence, SROWA, ACC 1205, item no. 33.

32 For further discussion see Makin, pp.51-54.

33 Whilst the Committee convened under the Industrial Development (Kwinana Area) Act had identified a number of factors limiting the site location, and proposed that the town be located north of Thomas Road. According to Margaret Feilman, this proposal had been put forth without any detailed study into the topographical features of the area. M. Feilman, interviewed by Rod Moran, 1991, BL, Perth OH2402/1-24 (1).

34 See, for example, other Western Australian State Housing Commission developments such as Balga, Koongamia, Wundowie and Wilson.

35 Melotte, p.35.

36 The town of Elizabeth in South Australia paralleled the development of Kwinana.

37 Moving away from the typical grid system applied so liberally in earlier suburban developments to a system based on an emergent concept of road hierarchy, the planning of Kwinana sought to avoid the use of crossroads, to reduce through traffic, encourage the use of public transport facilities and reduce the need for private transport. In doing so, it was forecast by the media as a ‘show piece for Australia’. *West Australian*, 26 February 1953.

38 Peel, p.4.


40 Peel, p.7.

41 Feilman’s ‘new town’ model for Kwinana was based largely on the physical design criteria of Clarence Perry’s ‘neighbourhood unit’. These criteria included boundaries that would be determined by wide, arterial streets to direct the movement of through traffic past the neighbourhood; internal roads which would be no wider than required by their function and which would give easy access to neighbourhood facilities; a minimum of ten per cent of the neighbourhood acreage would be reserved for park, playground and recreational use; and the planning of each neighbourhood would be centred around the local school. T.G. Birtles, * Origins of the Neighbourhood Unit as a Twentieth Century Urban Residential Planning Ideal: A Tribute to Clarence Perry*, University of Canberra, ACT, 1994, pp.23-24. A previous version of this paper was first published in 1982 by the Canberra College of Advance Education under the title of: *Clarence Perry & the Neighbourhood Unit: Welfare Origins of a Twentieth Century Urban Planning Ideal*.

42 Peel, p.12.

43 M. Feilman, as quoted in Melotte, p.35.

44 Feilman spent part of her childhood in Holyoak near Dwellingup (Southwest, Western Australia). She also lived in Jarradale and Carlisle. J. Gregory, pers. comm., 5 March 2007.

45 Feilman, interviewed by Moran.

46 Planning guidelines for Kwinana sought to retain twelve acres of bushland for a natural park.

47 Feilman, interviewed by Moran.

48 SROWA, Kwinana Co-ordinating Committee, Notes & Correspondence, ACC1205, item no. 33.

49 Anon., Australia’s first oil township planned by a woman, mimeo, undated, as cited in Melotte, p.37.
51 According to Mr Doug Waddingham, Kwinana Roads Board health inspector, and building surveyor (1950s), as well as Acting Commissioner and long term Kwinana resident, Margaret Feilman was responsible for the planting of most of Kwinana’s early trees, particularly those seen in Medina. D. Waddingham, interview with author, 7 November 2006.
53 Feilman, interviewed by Moran.
55 For a further discussion of post-war suburban planning legislation and processes, including an informative discussion of the criticisms and problems of such planning see Edwards, pp.147-192.
56 Feilman, interviewed by Moran.
59 Feilman, interviewed by Moran.