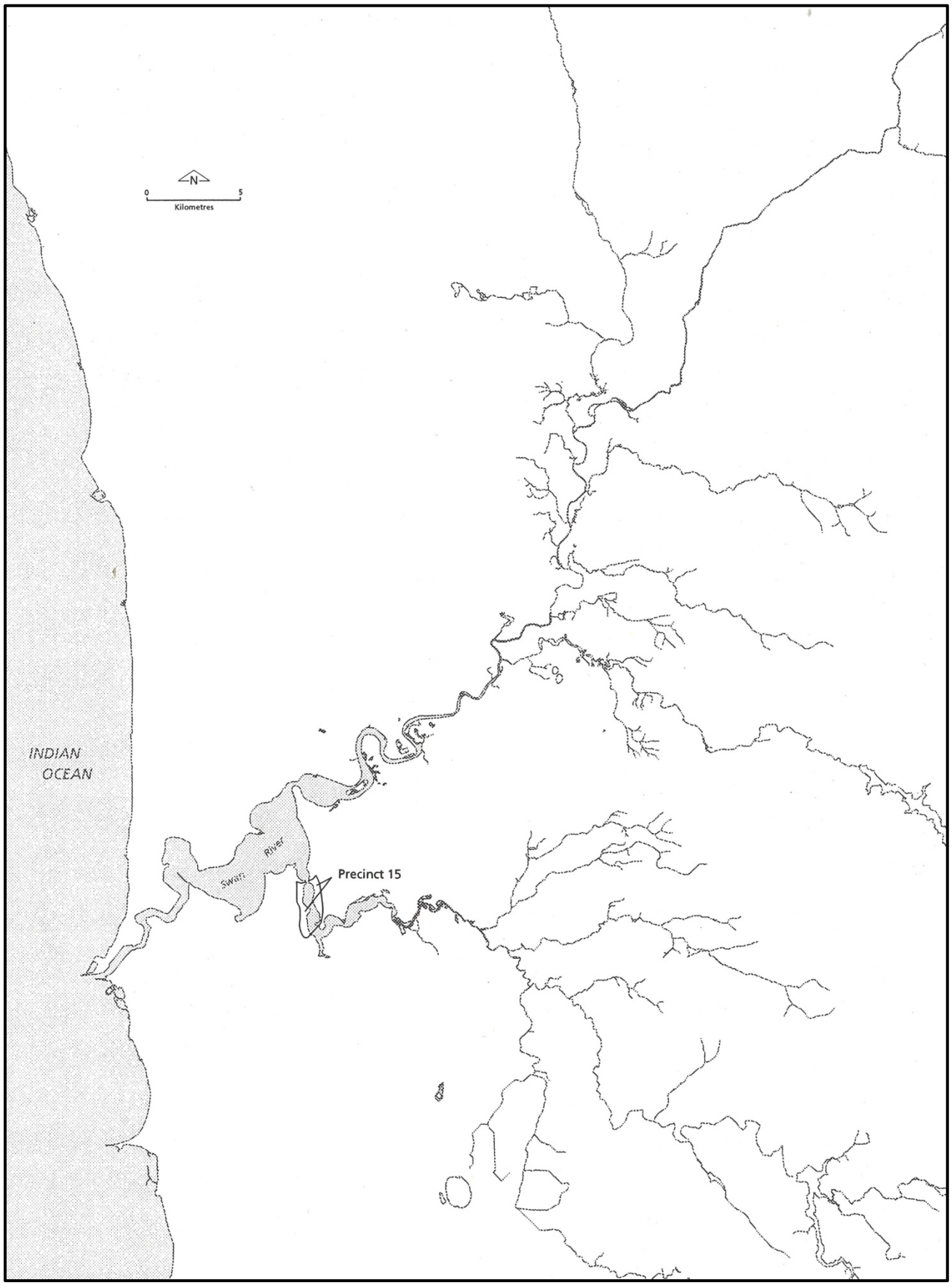
Precinct 15

Canning River – Canning River to Freeway at Mount Henry



Summary

Canning River – Canning Bridge to Freeway to Mount Henry

The precinct includes the section of Canning River between Canning Bridge and Mount Henry Bridge. From the Canning Bridge, the estuary widens into an elongated channel which becomes narrower at the triangular shaped isthmus at Deep Water Point.

The estuary narrows towards the Mount Henry Spit and the confluence with Bull Creek. The eastern bank of the river is relatively linear due to land infilling with the construction of the Kwinana Freeway. The only major curve is Cloisters Reserve which is a slightly convex shaped promontory. The foreshores within this area are mainly unwalled and patches of fringing vegetation remain on narrow sandy beaches. The estuary is situated in the gently undulating low sandy ridges of the ancient coastal dune system. The most dominant natural landscape feature is Mount Henry which rises up to 15 metres above sea level and has several limestone outcrops exposed between the vegetation cover of open woodland. In front of the limestone ridge the slope rapidly decreases to a sandy spit which juts out into the river. The spit is topographically low and subject to inundation which allows a paperbark and reed community to be supported. Much of the fringing vegetation is subject to heavy pressure from trampling, fires and the proliferation of weeds in the understorey. The Mount Henry landform is an aesthetically important landscape element as it acts as an attractive node among several man-made features which detract from the river landscape.

The dominant land use features in this precinct is the freeway reserve and the Canning and Mount Henry Bridges. The Kwinana Freeway is seven lanes wide and is very close to the river foreshore. The Mount Henry Bridge is a long bridge with a narrow superstructure and tall concrete piles. The bridge is lower than the Mount Henry ridge and is in line with the height of the Rossmoyne landform, and as a consequence from most vantage points the bridge does not intrude on the skyline. The Canning Bridge is a low wooden pile bridge which crosses the river at the narrow point once known as 'Hells Gate'. The residential area on the western section of the foreshore has a high degree of urban pride and is set very close to the river foreshore. The residential and institutional land use on the eastern foreshore is set back on the higher land and overlooks the freeway and river. There are patches of remnant bushland in front of Mount Henry Hospital and Aquinas College.

Biophysical Processes

Geological Processes

The Swan Coastal Plain was formed by aeolian deposition of coastal sand in linear parallel dunes during the Quaternary. Calcareous sands formed limestone, by cementation in situ, and by leaching and precipitation around tree roots forming travertine pipes. Examples of the Tamala cross bedded limestone and travertine can be seen on the exposed cliffs of Mount Henry extending from the South of Perth Yacht Club to Salter Point.

The soils of the area have been classified as part of the Bassendean Association (DCE, 1980). These have peaty podsols in the swamps, however this classification has been recently revised (City of South Perth, 1993). It is suggested that they vary from Karrakatta to Cottesloe Associations. At Mount Henry the shallow yellow soils with the limestone close to the surface suggest the Cottesloe Association.

Topography

The area is situated on the edge of the Spearwood Dune System topographic unit, which is a predominantly low, undulating dune system. Adjoining this system the Bassendean Dune System begins and consists of low hill systems which have sandy swamps in the interdunal swales. The dominant topographical feature in this precinct is Mount Henry which rises to 15 metres. From this the eastern bank becomes increasingly flatter and sandy beaches originally occurred at the foot of the cliff and adjacent foreshores. Between Deep Water Point and Canning Bridge the foreshore was composed mainly of sandy beaches with some swampy patches. Deep Water Point is a sandy headland which is approximately 1-2 metres above the water level.

Hydrological Processes

Water features

The Coverdale groundwater mound occurs between the Canning and Swan Rivers and the Mount Henry foreshore is part of the outer fringe of the Cloverdale flow system. The estuary channel has a high width depth ratio and takes a relatively linear form before its confluence with Melville Water. The river bed is composed mainly of mud, however nearer to the river banks, sand and shell and clay dominated sediments exist (SRT, 1994). North and south of Deep Water Point there are shell deposits within the channel.

Bathymetry

This reach of the river is estuarine and the tidal influence is experienced up to Kent Street Weir on the Canning River. The mean daily tidal range is 0.36 metres at Barrack Street Jetty (SRT, 1994). The estuary's hydrological condition changes seasonally, the volume of the river flow being the primary factor in controlling the estuary's status. The surface salinity in this stretch of river ranges from 3ppt to 20ppt (Riggert, 1978). Beneath Canning Bridge, a pool reaches 10 metres in depth while the rest of the river is on average just over 4 metres in depth. This pool creates a continuous eddy in the river flow. There is a second pool adjacent to Deep Water Point which is over 5 metres in depth.

Flooding

The topographically low areas are subject to inundation during periods of high water conditions. Seasonal inundation on the foreshore has recently caused algae, which has proliferated due to increased nutrient load, to be deposited on the foreshore. This causes a line of rotting algae on the beaches once the waters recede. Limestone walling on the eastern side of Canning Bridge has reduced seasonal inundation along this section of the foreshore.

Erosion and accretion

The river banks adjacent to The Esplanade and Mount Pleasant are eroding due to the removal of riparian vegetation and heavy recreation use. An area of significant accretion occurs beneath Canning Bridge.

Vegetation Communities

Native

Bassendean Complex

The indigenous flora of this precinct is classified as part of the Bassendean Complex (DCE, 1980).

The vegetation ranges from woodland of jarrah *(Eucalyptus marginata),* sheoak *(Casuarina obesa),* and various banksia species *(Banksia* species) to sedge lands on the moister and lower sites. The various communities which make up this complex are described below.

Juncus community

The shoreline community extends from just below the high water mark and supports the shore rush *(Juncus kraussii)* which occurs in thin sections along the Kwinana Freeway section of the foreshore. Sections occur as isolated stands while in other areas, these have joined up to form a continuous ribbon (City of South Perth, 1993).

***Sarcocornia* and *Halosarcia* communities**

At Mount Henry Spit, there are a small salt marsh community which consists of seablite *(Suaeda australis)* and beaded glasswort *(Sarcocomia quinqueflora).* In addition, samphire *(Halosarcia sp)* occurs in a monospecific stand at Mount Henry Spit.

***Melaleuca Juncus* community**

Parallel to the Kwinana Freeway there are a number of stands of shore rush *(Juncus kraussii)* and swamp paperbark *(Melaleuca rhaphiophylla).*

***Casuarina-Melaleuca* community**

There is an isolated pocket of the swamp sheoak *(Casuarina obesa)* and swamp paperbark *(Melaleuca rhaphiophylla)* on the Cloisters foreshore. On the opposite bank the saltwater paperbark *(Melaleuca cuticularis)* is found interspersed in the narrow belt of vegetation at Mount Pleasant. At the Mount Henry Spit this community occurs fringed by a *Juncus* community which often extends into the understorey of the paperbark-sheoak complex. Another understorey includes the saw sedge *(Gahnia trifida).* On the slightly higher land there is moonah *(Melaleuca preissiana).*

***Banksia* community**

The flora of the Bassendean Complex would have originally dominated the higher land surrounding this section of the Canning River (City of South Perth, 1993). The ridge in front of Aquinas and Mount Henry Hospital is dominated by banksias including firewood banksia *(Banksia menziesii),* slender banksia *(Banksia attenuata)* and holly leaved banksia *(Banksia ilicifoila).* There is an understorey community of small shrubs and weeds. The sandy slopes of Mount Henry Spit are covered with a low woodland community dominated by Christmas tree *(Nuytsia Jloribunda),* sheoak *(Allocasuarina fraseriana),* spearwood *(Kunzea ericifolia),* and grey stinkwood *(Jacksonia furcellata).* The understorey supports low shrubs such as pineapple bush *(Dasypogon bromeliaefolius),* and leschenaultia *(Leschenaultia floribunda).* The community once supported jarrah *(Eucalyptus marginata)* however this has been selectively logged.

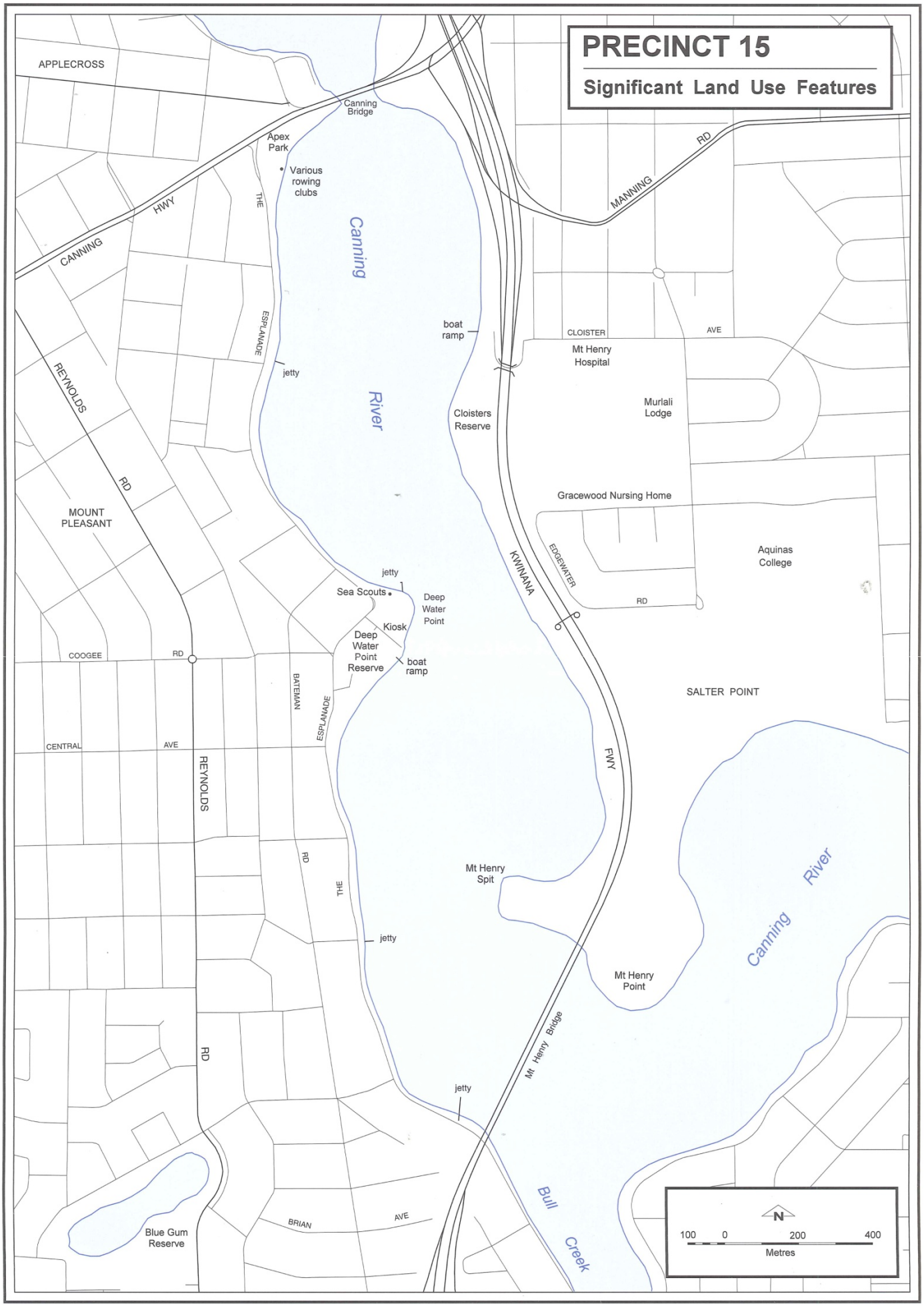
On the limestone outcrops in front of the main Aquinas building, species such as parrot bush *(Dryandra sessilis),* basketbush *(Spyridium globulosum)* and cockies tongue *(Templetonia retusa)* occur.

Exotic

Veldtgrass *(*Ehrharta* sp) is prolific within the woodlands. Kikuyu *(*Pennisetum clandestinum)* and couch grass *(*Cynodon dactylon)* are also abundant and have replaced understorey species particularly in remnant fringing paperbark communities. Watsonia *(*Watsonia bulbilifera)* and cape tulip *(*Homeria breyniana)* are common on the foreshores. Morning glory *(*Ipomoea indica)* lantana *(*Lantana camara)* are common in the drier areas of the Bassendean Complex. The exotic bulrush *(*Typha orientalis)* is also present along the foreshores. The endemic species *(Typha domingensis)* is not able to invade areas of remnant vegetation and therefore is under threat from the introduced species. There are Norfolk pine trees *(*Arauccaria heterophylla)* planted adjacent to the Canning Bridge Rowing Clubs. Several exotic and Australian trees have been planted at Deep Water Point Reserve.

Historical Land Use and Resulting Environmental Changes

The Canning River mouth was first recorded by Europeans during a French exploratory expedition lead by Sub-Lieutenant Heirisson. They discovered the entrance to the Canning River which they named Entree Moreau. It is believed that the estuary was named after Midshipman Moreau who was on the exploratory party (Richards, 1991), although other records claim that it was named after General Moreau of Hohenliden (Carden, 1968). They did not venture upstream but speculated that this would be an opening which would link Melville Water to the ocean. In March 1827, a small reconnaissance expedition lead by Stirling explored the Canning River. The river was named by Stirling after the influential and controversial British statesmen George Canning. Canning was Prime Minister for a brief period in 1827 and died in office. There is conjecture why the river named after Canning as no mention is made in either Stirling's or the botanist Charles Fraser's diaries (Richards, 1991). Two years later, Captain Fremantle explored the Canning River for about 30 kilometres upstream which proved to be a difficult journey involving dragging the boats through shallow water and avoiding fallen trees. He described the Canning as having 'many large trees spread all over the country some 30 feet (9 metres) in circumference, and the appearance generally very pretty and picturesque, particularly the river'.


PRECINCT 15
Significant Land Use Features
APPLECROSS
Canning Bridge
Apex Park
Various rowing clubs
CANNING HWY
THE ESPLANADE
Canning River
boat ramp
jetty
REYNOLDS RD
MOUNT PLEASANT
MANNING RD
CLOISTER AVE
Mt Henry Hospital
Murlali Lodge
Cloisters Reserve
Gracewood Nursing Home
EDGEWATER RD
Aquinas College
KWINANA FWY
jetty
Sea Scouts
Deep Water Point
Kiosk
Deep Water Point Reserve
boat ramp
COOGEE RD
BATEMAN ESPLANADE
SALTER POINT
CENTRAL AVE
REYNOLDS RD
THE RD
Mt Henry Spit
jetty
Mt Henry Point
Canning River
Mt Henry Bridge
jetty
Bull Creek
BRIAN AVE
Blue Gum Reserve
N
100 0 200 400
Metres

Thomas Peel, a cousin of the British Prime Minister of the time, was promised a grant of over 100 000 hectares which included all of the Canning River except the southern section of Bull Creek. The major condition of the grant was that Peel must land his four hundred settler families in the colony by 1 November 1829.

In May 1830, the first of Peel's settlers on the ship Rockingham, were wrecked on the beach at the site that now bears the ship's name. Those who survived were neither paid their wages nor given their farms. Peel's land grant was thrown open to other settlers a week after expiry date and within this precinct area the land holders were Waylen and Tanner (Lot 61), Hamilton (Lot 44 and 56), Collett (Lot 66) and Middleton (Lot 26). However in the early years only the upper reaches of the river beyond the present Nicholson Road Bridge were developed. There is no evidence that the land lower down the river was developed to any extent during the 19th century other than cutting timber for jarrah sleepers and poles, sheoak shingles and firewood, and cattle grazing (Richards, 1991). Owners below Nicholson Road noted that the land was only fertile adjacent to the river and much of this land was subject to inundation. The land owned by Susan Collett was willed to her children and then later sold to James Simpson in 1911. Simpson built a house known as 'The Castle on the Hill', due to its crenellated walls. Waylen did little with his land preferring his Alfred Cove property.

The Canning River was used to transport jarrah logs from the Darling Ranges. The timber was bought by bullock teams to Ben Mason's timber mill erected at Cannington in 1869. The timber was transported down by barge to the Fremantle. To improve access across the Canning River, the first Canning Bridge was constructed in 1849 at Hells Gate and remained for the next 60 years. A second Canning Bridge, built in 1892, was too low for the barges to pass beneath it so it was raised. The first Riverton Bridge was built in 1910; however its centre spans were also raised to allow loaded barges to pass beneath at high water.

A number of families were evicted from other parts of Perth during the Depression and several found shelter under the paperbarks south of Canning Bridge at Cloisters. Rudimentary housing was provided for these families by the service club called the Ugly Men's Association which provided practical assistance to the needy (City of South Perth, 1993). Aquinas College was built in the 1930s and its construction is covered in more detail in Precinct 33. There were two squatters' camps on the Cloisters Reserve up until the 1940s.

Mount Henry Point was resumed for freeway extensions and a public reserve in 1959. The Mount Henry Bridge was opened in1982 as the longest road bridge in Western Australia being 660 metres long and 11.5 metres above sea level. The Main Roads Department planted 101 varieties of native flora along the freeway reserve in this section. The trees were planted before the completion of construction and the plantings were aimed to 'blend with the existing native plant grouping and stabilise the sand embankments'. The value of the paperbark trees along the foreshore and the woodlands at Mount Henry was acknowledged and these areas were fenced off during construction (MRD, 1982).

Present Land Use and Social Patterns

Most of the land use in this area is residential. The houses and flats built in the 1960s along the Manning foreshore are quite modest in style. The Salter Point houses are larger and have a higher degree of urban pride. The Mount Pleasant residential area is only metres away from the river and the houses are generally well maintained. The majority of the gardens are eclectic and have a dominance of exotic species. The Mount Henry Hospital is situated on the Manning Ridge. It has been constructed in a red brick institutional design. The gardens contain only exotic species. Aquinas College is also visible from this precinct. It has a mixture of building styles; the main building was built in the late 1930s in an attractive style.

There is commercial fishing predominantly at night or early morning by a few licensed craft. Worm digging for bait is allowed at Cloisters ramp with strict guidelines. There is a kiosk at Deep Water Point.

Recreation nodes

This section of the Canning River is a popular river and shore based recreation node due to its shallow and sheltered water. The water based recreational activities include boating, skiing, rowing, sailing, swimming, jet-skiing, fishing and prawning. Prawning is a popular activity in this area of water, however it is often common practice to leave rubbish and unwanted contents from the nets on the foreshore and damage natural vegetation along the river banks. Deep Water Point is a popular power boat area and the craft often generate quite high levels of noise.

The Swan River Rowing Club, Curtin University Rowing Club, Amateur Rowing Association of WA and the Penrhos College Rowing Club have their club houses on the southern banks of the foreshore. This section of the river was used for the 1962 Commonwealth and Empire Games rowing events due to its sheltered nature and relatively wide and straight section. The present rowing club was built on spoil from the Canning Bridge construction. The 1st Deep Water Point Sea Scouts have their club houses on the river beds. There are several public mooring

sections within the river precinct. The dual use path hugs the river foreshore of this precinct, providing valuable access for recreational users and bicyclists.

Public access

Public access to the eastern foreshore has been limited due to the presence of the Freeway. However to help provide some access to the foreshore a dual use path way runs adjacent to the Kwinana Freeway and parallel to The Esplanade. The Edgewater Point footbridge allows pedestrians access to the foreshore from the adjacent suburban area. A small road overpass allows access to a small informal boat launch area at Cloisters Park. Around the rowing clubs, people are unsure if the foreshore is private property and another issue is the congested parking often caused by rowing club activities. Erosion control programs could consider limiting access by recreational fishermen and prawners to the foreshore near fringing vegetation.

Sites of Nyungar & Wider Australian Community Significance

Nyungar Significance

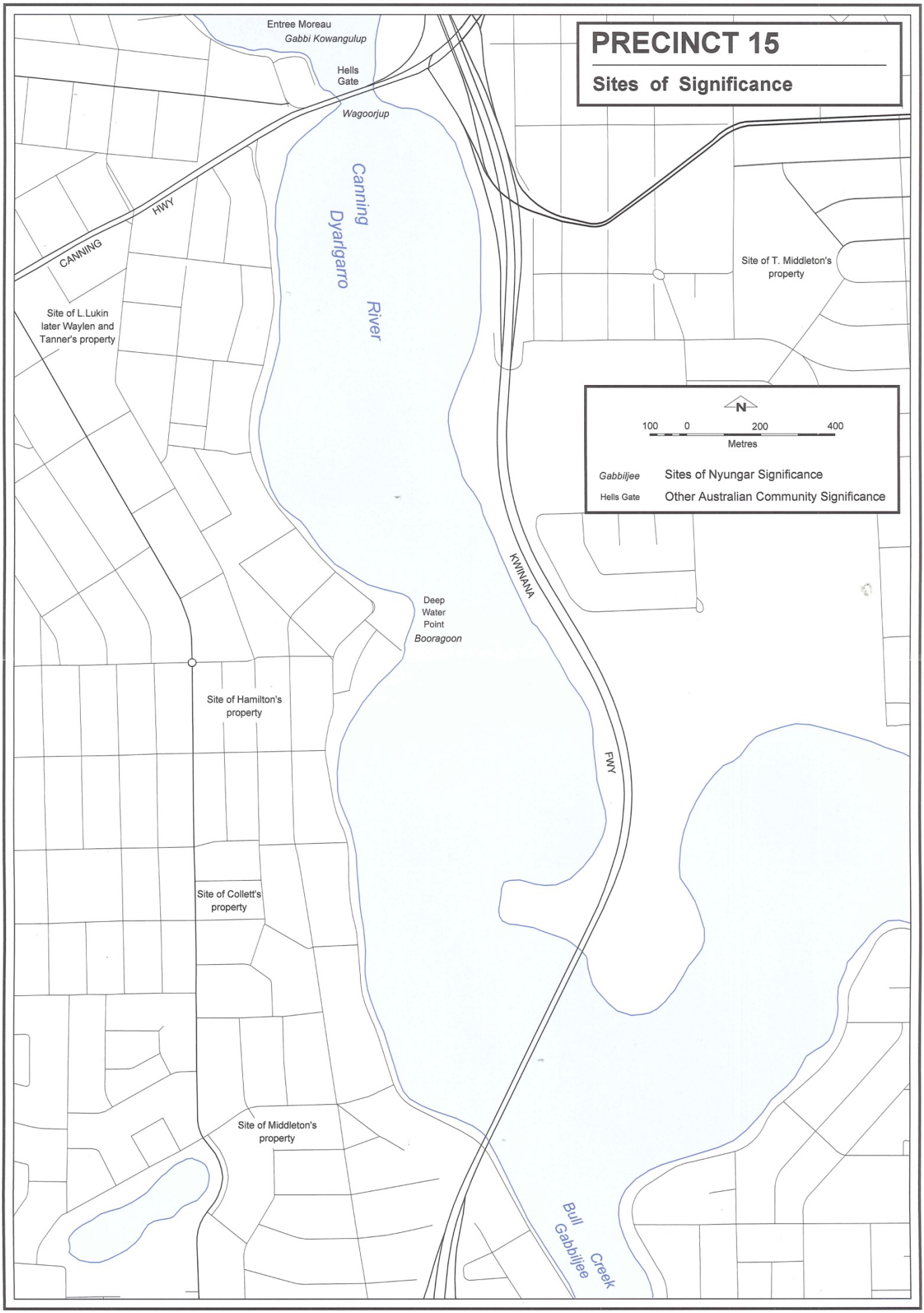
The wetlands of the Swan Coastal Plain provided an abundance of food and other resources. The density of the Nyungar population living in what is now the metropolitan area is considered to be one of the highest in Australia (Richards, 1991). A Nyungar family group could consist of several family units. Each Nyungar group had a favoured camping ground or *kaleep* which held special significance. Beyond this a wider hunting and gathering area could be used. At least six family groups are thought to have claimed territorial rights to the present metropolitan area (Richards, 1991). Two of the family groups which are believed to have been associated with the Canning River are the family of Munday in the Beeloo District and family of Midgegooroo in the Beeliar District. Nyungar leaders, Munday, Midgegooroo and Yagan are especially remembered for their confrontations with the white settlers. Yagan is recorded as being an impressive man who had a distinctive tribal tattoo on his right shoulder indicating his high stature in the Nyungar community. He had a wife and two children. Towards the end of 1831, a Nyungar was shot dead for stealing potatoes at Mr Butler's farm at Freshwater Bay. In October 1832, Yagan was arrested for killing Entwhistle, a servant of Butler whom he had earlier attacked in an act of reprisal for the murder of a member of his tribe (Carden, 1968). He was sent to Carnac Island, later escaped and remained at large for eight months. In April 1833, the two Velvick brothers (employed by John Randell Phillips) were killed near Bull Creek in retribution for the death of a Nyungar man shot by one of William Nairne's labourers.

In May of that year Yagan's father, Midgegooroo, was executed by firing squad. He had earlier been accused of ambushing two settlers in reprisal for the killing of Yagan's brother Domjum at Fremantle. Munday, who was also accused of the murder of the Velvick brothers, later received a pardon (Carden, 1968).

As mentioned earlier Yagan died after he had been fatally shot by William Keates, an 18 year old who was a worker at Henry Bull's Upper Swan property. At Bull's property food had earlier been distributed to local Nyungars and there had been substantial trust between the two communities. At the time of the incident William and his 13 year old brother, James, were out kangaroo hunting. Keates was immediately speared to death by another Nyungar. However James managed to flee by jumping in the river. Before James escaped he shot Heegan, another Nyungar present at the scene. Settlers, who were alerted to the incident, removed Yagan's head and flayed his tribal tattoo from his shoulder. His body is reputed to have been buried at the site and is assumed to be close to Mr Bull's property (Dallas, 1986). Yagan's head was smoked and sent to England to be displayed in many museums. It was later buried in a Liverpool cemetery in 1964. The Australian High Commission is presently negotiating for his remains to be returned to the Swan Valley. It is believed that his body was not removed by Nyungars from the shallow grave made by the settlers. It is often recorded that the other Nyungar buried with Yagan was Domjum. This is unlikely as it is known that he was shot by Peter Chidlow in Fremantle and his body buried in the town (Dallas, 1986). After this, Beeliar Nyungars were lead by of two of Yagan's brothers (or possibly close relatives) and one of his sons.

P. Chauncy claims that *'some of the settlers on the Canning River and in the York district were at times dependent on the natives for food'* (Carden, 1968). An early shortage of labour prompted many colonists to employ local Nyungar as shepherds, guides, constables and servants. Young Nyungar women were often taught to be maids but were frequently taken back by the men to whom they were betrothed at birth (Carden, 1968).

The mouth of the Canning River was termed *Wagoorjup* (place of the Waugal) and the river itself is known as *Dyarlgarro.* The eastern shore of the Canning is named Beenabup and the flats south of the Canning River are called *Wadjup* (Collard *et al,* 1996; Glauert, 1950). The confluence of the Canning and Swan Rivers is known as *Gabbi Kowangulup*. The narrow section at Canning Bridge is known as *Wagoorjup* to Nyungars. Bull Creek is known as *Gabbiljee* (the watery place at the end of the river) and the open waters of the area referred to as *Booragoon.*


PRECINCT 15
Sites of Significance
Entree Moreau
Gabbi Kowangulup
Hells Gate
Wagoorjup
Canning Dyarlgarro River
HWY
CANNING
Site of L.Lukin later Waylen and Tanner's property
Site of T. Middleton's property
N
100 0 200 400
Metres
Gabbiljee Sites of Nyungar Significance
Hells Gate Other Australian Community Significance
KWINANA
Deep Water Point
Booragoon
Site of Hamilton's property
FWY
Site of Collett's property
Site of Middleton's property
Bull Creek
Gabbiljee

Other significance

Despite early favourable descriptions of the fertility of the lower Canning, early land holders complained that the land was useless for productive agriculture. As a result much of the lower Canning was slow to develop. One of the earliest significant land uses was the construction of Aquinas College by the Christian Brothers.
Details of this are given in the next precinct description. The area now has the Kwinana Freeway along its eastern shoreline and this is one of the main traffic routes for the Perth metropolitan area.

It is believed that there are two wrecks at Coffee Point, the Lady Ord (built 1878) and Helena Hardy (1897).

Conservation Areas

Wetlands

The Cloisters Reserve was instigated by a gift of land from a Mr Manning of Peppermint Grove on behalf of his mother. The land was registered in the name of Francis Augusta Hall and Florence Juanita Holmes. It has been given an A class reserve status at the request of the bequestors.

System 6

66 Mount Henry Manning
The recommended area comprises the whole of the Mount Henry peninsula including the freehold land owned by the Christian Brothers and the foreshore reserve. The area occupies a prominent limestone outcrop headland. It is covered by open woodland of tuart, marri, jarrah and Christmas tree with a very varied understorey including woollybush *(Adriana quadripartita)* and *Daviesia juncea.* At the base of the hill there is a small stand of swamp cypress. Along the river (Precinct 32) there is *Juncus kraussii, Scipus nodosus* and *Suaeda australis.* The area supports over a hundred native species in all. The area is significant for its value for educational studies and landscape feature and because of its high conservation and recreational value. The area has been recommended for Regional Park status.

Landscape Description

Precinct Description

Waterform

The Canning River from its narrow mouth at Canning Bridge swells into a wide channel which curves around the convex form of Deep Water Point. From Deep Water Point the western bank takes a relatively linear form to Mount Henry Bridge, while the eastern bank curves into Mount Henry Spit forming a sheltered bay to the north of the spit. The southern section of water is wider and open to more prevailing winds due to it curve around Mount Henry and confluence with Bull Creek.

Natural riparian zone

On the eastern bank the foreshore has been allowed to take a natural form and slope from Cloisters to Mount Henry Bridge. The foreshore is very flat and subject to inundation during high water periods. The result is that fringing vegetation is partly submerged and the narrow sandy beaches that are prevalent in summer are not evident. During winter, the land at Cloisters and Mount Henry Spit becomes rather swampy as pools of water form within the depressions of the fringing paperbark communities. On the western bank there are narrow beaches up to the lawn of the Rowing Club foreshores. These beaches continue to Deep Water Point and are held in place by a narrow line of fringing vegetation. At Deep Water Point the lawn grows right to the white sandy beaches of the spit. From the point to Mount Henry Bridge a similar narrow beach with a line of fringing vegetation occurs where in the winter months the fringing vegetation is partly inundated.

Landform

The eastern bank of the Canning River has a relatively topographically flat foreshore. The gentle rise to the low undulating hills behind have been severed by the Kwinana Freeway construction of which involved levelling the land. From the freeway reserve, the land rises quite steeply to a gently curved hill crest which reaches a maximum height of 15 metres at Mount Henry (which is described in the next precinct). The original slope would have decreased quite rapidly from the Mount Henry cliff face to the flat Mount Henry Spit. The spit forms a tapered promontory and rises to low sandy slopes before the ridge. The height of the ridge gives depth to the scene and the gently undulating Mount Henry is visually consistent with the gentle curves of the waterform beneath the ridge.

On the opposite side to Mount Henry, a steep bank rising from the foreshore to the bridge was created by landfill for the bridge construction. The adjacent land has a gentle gradient which slowly rises to the low sandy undulating plain of the ancient coastal dune system. The rise of the hills is in some places very close to the narrow foreshore and road area. However at Deep Water Point the rise of land is joined to the foreshore by the sandy isthmus which is triangular in shape and relatively flat before the ridge. The height of the ridge gives depth to the scene and the gently undulating Mount Henry is visually consistent with the gentle curves of the waterform beneath the ridge.

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Vegetation

The fringing vegetation at Cloisters consists of a paperbark community and shorerush sedge fringe along the water's edge. The paperbark trees are particularly attractive to the pedestrian. They are mature and have a pleasing pale bark with dark streaks and soft dusty canopy. In winter, the estuary usually inundates the fringing sedge community which lines the foreshore. This gives a pleasing continuity of the land and water elements. The understorey is made up of mainly exotic grasses which detract from the community's appearance. A fire in the reserve has recently burnt all the paperbark and rush communities. There are signs of regeneration. It will take many years to return to an aesthetically pleasing vegetation strip. It must also be noted that in the unburnt areas the trees are showing signs of stress as there are no new paperbark saplings or endemic understorey communities. The area south of Cloisters was infilled by the Main Roads Department and the original high water mark was where the present freeway exists. The Main Roads Department planted some endemic and some exotic species and consequently these communities are not as attractive as the mature stands at Cloisters. In this new foreshore section, the vegetation is sparse and the fringing reed community is only present in a few clumps. The vegetation at Mount Henry Spit shows a transgression from fringing rushes to a heath community. The fringing vegetation includes paperbark which overhangs the water and sedge communities. As the slope increases the sheoaks, Christmas trees and spearwood provide a dusty soft green grey appearance. There is also quite a dense mat of understorey some of which is the result of the removal of tree cover. A segment of ridge vegetation occurs before the Mount Henry Bridge and is dominated by the rough textured banksias and prickly forms of the parrot bushes.

A narrow band of this banksia woodland occurs on the ridge in front of Aquinas College and Mount Henry Hospital. It has the appearance of a healthy and dense community; however a closer inspection reveals many understorey weeds. Originally, the community would have supported jarrah which would have given a more vertical element to the landscape.

The vegetation planted on the freeway reserve is mainly Australian bushes and although the flora is not necessarily endemic to the area, they are ideal for the harsh roadside conditions and their forms and colours are indicative of native vegetation. At Deep Water Point the recreation reserve has been planted with eucalypts which are not endemic to the area as well as a number of exotic species and lawn. The plantings are too sparse to be attractive or provide adequate shade. Adjacent to the rowing clubs there are several Norfolk pines which add a strong vertical element to the foreshore landscape.

Riparian land use

The Canning Bridge is an attractive structure with wide round wooden piles and a white painted superstructure. The bridge acts as a visual delineation between Canning and Melville Waters and the foreshore viewer cannot easily see the water through the dense piles. The foreshore adjacent to the Canning Highway interchange has been retained with a limestone wall and there are lawn and planted bushes behind this area.

The Cloisters foreshore has an informal boat ramp which is a white oyster shell beach. The parking is informal with dirt bays surrounded by vertical log piles and limestone blocks to retain the raised banks adjacent to the freeway. The Cloisters Avenue overpass allows one lane of traffic to enter the small parking area. The pedestrian, once on the riverside of the freeway, has unrestricted access to the river and can either view the river through the vegetation or can walk through the vegetation using various paths to the water.

The dual use pathway runs very close to the water's edge along most of the foreshore within this area. At Cloisters the path runs through the paperbark stand which is a pleasing experience for the pedestrian as the canopy is light and feathery and the bark particularly attractive. At Mount Henry, the pedestrian experiences different vegetation as the path goes through the scrub - woodland communities. This is contrasted by the pedestrian underpass within the superstructure of Mount Henry Bridge which is a grey concrete c-shape with an open side from which the user can view the river. In some areas the dual use pathway is extremely close to the high water mark and not only inappropriately placed physically, but visually this reduces the foreshore area a small bank of fringing vegetation or a narrow sandy beach. A pedestrian overpass allows access from Edgewater Road to the foreshore. It is painted white rather than green like the Cloisters car access bridge.

The Mount Henry Bridge is long with a relatively narrow depth superstructure compared with its height. The bridge from most vantage points around the precinct appears in line with the adjacent land, and does not intrude on the water or skyline. Considering that the freeway cuts across most of the foreshore regardless of the landform, the bridge does accentuate the curve of the water form along the Mount Henry spit. The design is modern and has thick piles and caps which are a v-shape. The bridge is less intrusive on the landscape than the Narrows Bridge which does not nest into the curve of Mount Eliza. There is parking beneath the bridge at Mount Henry Bridge Reserve from where the pedestrian and driver can see the wide piles, the first of which has been graffitied. Here the large size of the bridge is apparent and it becomes the dominant element within the landscape. In sharp contrast, there is a small wooden jetty adjacent to the reserve which has weathered and is quite attractive against the paperbark and reed vegetation.

The Deep Water Point recreation reserve has been cleared and all native vegetation been replaced with non indigenous trees and lawn. The trees are mainly mature and are sparsely placed around the reserve.

The parking is nested into a bank and is a very wide area due to the need for ski boat parking. The kiosk is painted neutral colours, however due to the lack of vegetation, is quite prominent. The 1st Deep Water Point Sea Scouts club house is an inappropriate design due to the flat nature of the point. Its two storey box shape, blue and white paint and lack of vegetation make the building an obtrusive feature. During periods of erosion, sediment is removed from the boat ramp.

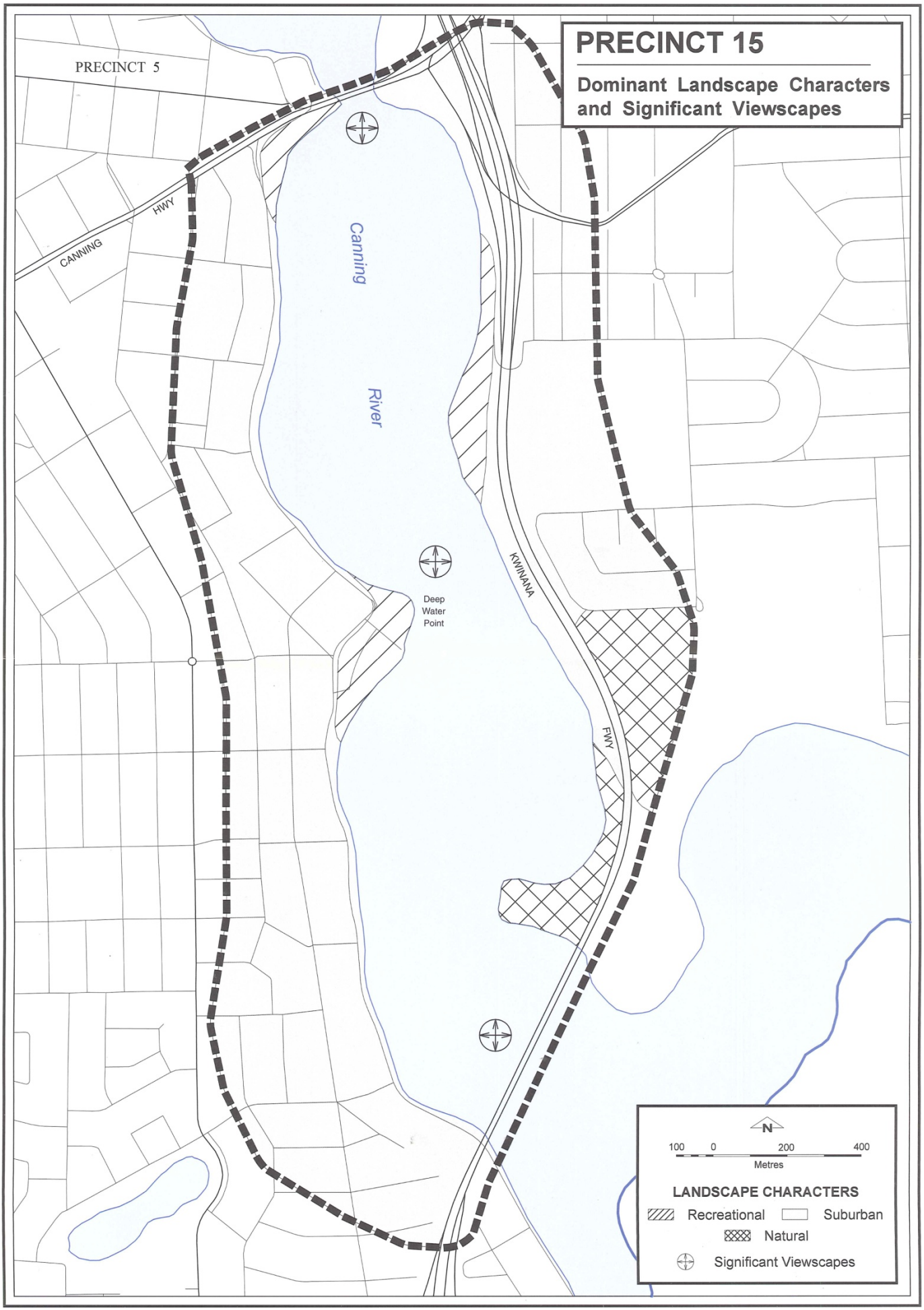
At Canning Bridge, the two rowing club buildings are in keeping with the riparian land use. The Penrhos club House being new and unweathered is attractive with its sympathetic design. The Amateur Rowing Association of Western Australia building was built for the 1962 Commonwealth and Empire Games and as a consequence its appearance is rather tired, however it is in keeping with its use and adjacent buildings.

There are a number of visually obtrusive drainage outlets around this section of the river. At Cloister's the drain is very prominent due to the flat nature of the beach and little surrounding riparian vegetation. The drain headwalls at Mount Pleasant and Deep Water Point stand out from the gently sloping beaches and minimal riparian vegetation.

Land use

The suburbs of Manning and Salter Point are on the eastern bank of the river. They are separated from the foreshore by the Kwinana Freeway which has seven lanes of traffic, two wide emergency strips and a wide central island. The freeway reserve is fenced and lined with planted shrubs and bushes. There are several large green traffic signs and the street lights are very tall and evenly spaced features. The road infrastructure is quite prominent on the landscape due to the low formed scrubland at Mount Henry. In contrast, at Canning Bridge due to the busy intersection and adjacent urban land uses the viewer does not notice the street lights.

The flats and houses of Manning are set back from the freeway and are hardly noticeable to the river user and driver. In contrast, there are several large houses at Salter Point which are prominent and have open gardens. The Mount Henry Hospital is red brick and mid nineteenth century institutional style. Only glimpses can be seen from the river due to the remnant banksia bushland in front of it. In contrast, the main Aquinas building is set in a clearing with a wide oval in front of it. The red brick and white painted belvedere is an impressive structure which stands out against the surrounding banksia bushland. The Mount Henry bush land is part of the Aquinas property, while the adjacent spit is under government management. The Mount Henry Bridge Reserve has a small play area, and public amenities which have been painted neutral colours. The Mount Pleasant residential area has large houses which take up most of their block. Most of the houses are modern designs and are often quite close to the road. All have a high degree of urban pride. The gardens are mainly eclectic with large lawns.


PRECINCT 15
Dominant Landscape Characters and Significant Viewscapes
PRECINCT 5
CANNING HWY
Canning River
Deep Water Point
KWINANA FWY
N
100 0 200 400
Metres
LANDSCAPE CHARACTERS
Recreational
Suburban
Natural
Significant Viewscapes

Dominant Landscape Character

The original landscape would have been the natural landscape which would have been characterised by banksia - eucalyptus woodland on the sandy soils and on the moister soils samphires, sedges, casuarinas and melaleuca would have occurred. The landscape would have been relatively flat to gently undulating with the remnant paleo dunes dominating the landform.

At present, there is a section of vegetation which appears to be relatively natural at Mount Henry Spit. The vegetation ranges from samphire, sedges to an open woodland of paperbark and sheoak. The freeway separates the Mount Henry Spit from the remnant vegetation adjacent to Aquinas College.

There are several narrow recreational/parkland landscapes in this precinct. These sections have had the natural vegetation mainly cleared and replaced by lawn and non indigenous species. Recreational facilities such as boat launching ramps, club houses and kiosks are part of the landscape.

The suburban landscape character type is dominant in this precinct. Relatively high density housing extends to the foreshore on the western side of the precinct and the foreshore is so narrow that the suburban landscape extends to the water. On the eastern side of the precinct, the Kwinana Freeway is the dominant suburban land use and it separates the residential areas from the river.

Significant Viewscapes

The Canning River has three significant viewscapes at this precinct. From the Canning and Mount Henry Bridges, viewers are able to encompass the relatively straight and broad section of the river. Although the landform has been greatly altered with the construction of the freeway, the viewer is still able to see that on either side of the river the palaeo dunes run parallel to the water and frame the channel like view. From Deep Water Point, there is a panoramic view of the Canning River as the point juts out into the river. From the point, the remnant melaleucas and Aquinas College can be viewed.

Conforming and Non Conforming Elements in the Landscape

The riparian vegetation within this area is under pressure due to unrestricted pedestrian access, fires and adjacent pathways and roads. Due to the narrow nature of the vegetation and its importance as a visual element in the landscape, there is the opportunity to revegetate the understorey and ensure that the fire risk is reduced.

At present the vegetation and beach is restricted to a few metres and the beach is easily eroded by wave processes.

The unwalled areas around the river are particularly attractive as they give the impression of natural beaches subject to physical forming processes. Re-establishing the fringing vegetation is an aesthetically pleasing solution to eroding beaches and considering the sheltered nature of this stretch of river would be practicable.

There are opportunities to encourage and support the maintenance of the Mount Henry area by Aquinas College and South Perth Council. At present the vegetation appears attractive and is an important remnant which makes the freeway user aware of the type of community that once covered the entire ridge. This sense of identity is important for regional identity.

The 1st Deep Water Point Sea Scout club house is an inappropriate design for the recreation point at the area. At present it is painted bright blue and white which some may argue has become a local landmark. The issue needs to be raised as to whether the aesthetics of the area is more important than the tradition. Originally, the building was white and a soft grey which although marginally more neutral still stood out in the landscape. A possible compromise may be to plant trees to partly screen the building's box shaped form. Ideally a new club house could have been incorporated as part of the new kiosk development which is a single storey visually less intrusive structure. The park is rather bland and there needs to be an attempt to at least screen and plant shade trees within the car park. The whole park area could be planted with local species with sections of lawn to allow the riparian activities to continue in a less visually bland landscape.
The Aquinas College main building is a local feature which is important in the landscape and gives a local identity. Features such as the Mount Henry jetty are small features on the riverform which give a visual focus and interest to the river. The Canning and Mount Henry Bridges need to be maintained in excellent condition to ensure that they do not detract from the visual quality of the area.

Recommendations for Maintenance and Enhancement of the Present Landscape Character

- It would help if pedestrians stayed on the dual use paths and only certain sections of riparian vegetation were exposed to pedestrian use. The dual use paths along The Esplanade are very close to the river and do not allow the expansion of the fringing vegetation. Their location also allows ready access to sensitive communities. Moving the pathway closer to the road would mean that pedestrians are very close to the traffic which is not desirable.

The solution may be to inform the public of the sensitivity and importance of these remnant populations. Areas such as Cloisters reserve are ideal for a small community group to become involved in replanting. It is narrow and requires intensive revegetation and due to its small size results can be easily achieved.

- Consider appropriate designs, materials and colours for recreational buildings located on the foreshore.

Precinct Specific References

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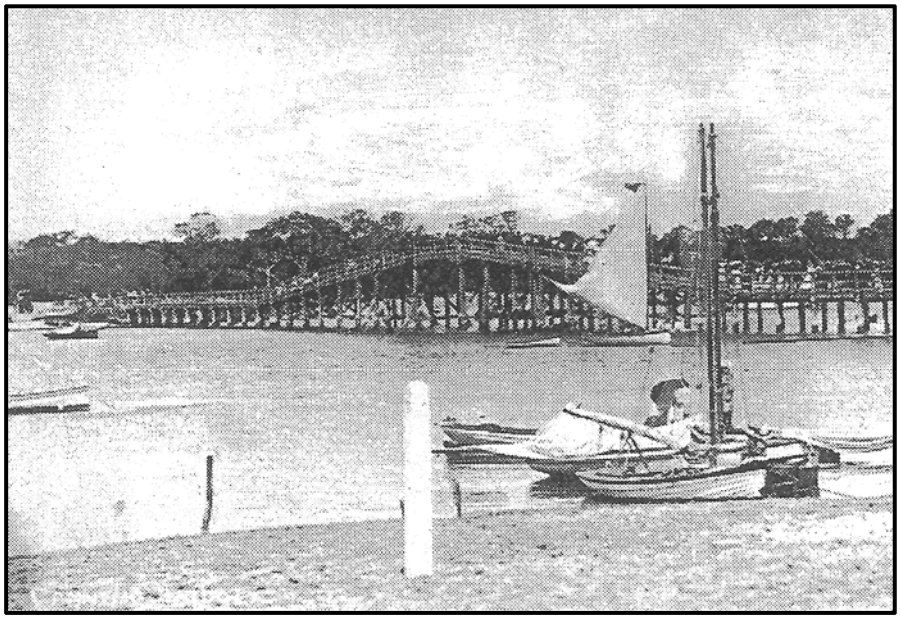
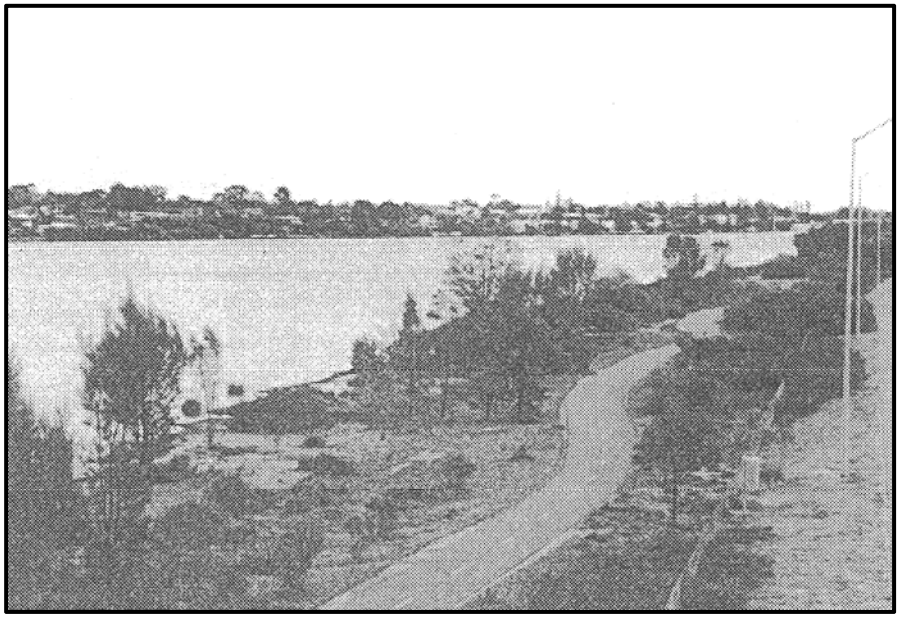
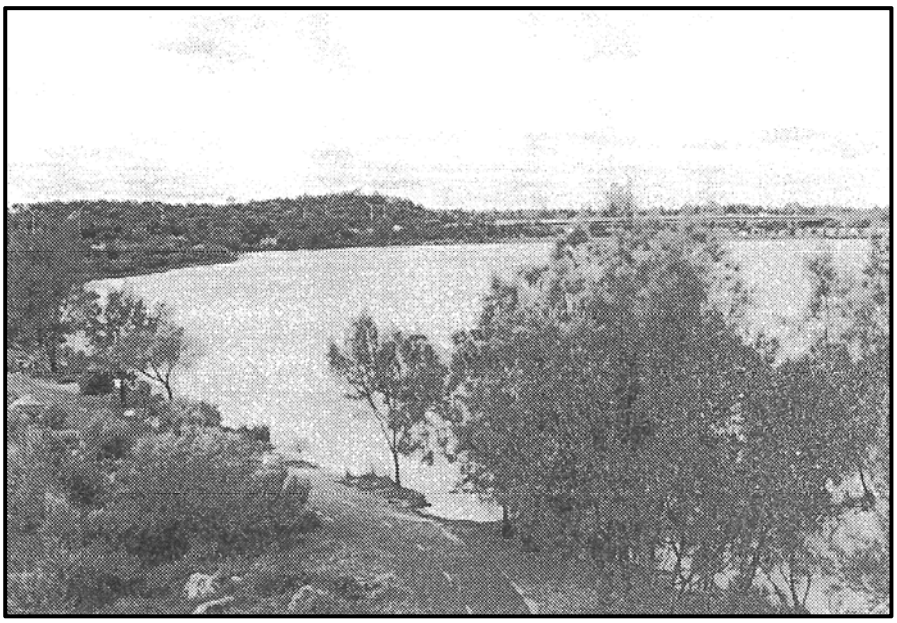


Canning Bridge, c1900.
Swan River Trust.



Kwinana Freeway and Mount Pleasant, 1996.
Swan River Trust.



Mount Henry Bridge. Canning River, 1996.
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