



## REGISTER OF HERITAGE PLACES - ASSESSMENT DOCUMENTATION

### 11. ASSESSMENT OF CULTURAL HERITAGE SIGNIFICANCE

The criteria adopted by the Heritage Council in November 1996 have been used to determine the cultural heritage significance of the place.

The documentation for this place is based on the heritage assessment completed by Irene Sauman, Historian and Alan Kelsall, Architect, in January 2004, with amendments and/or additions by HCWA staff and the Register Committee.

#### PRINCIPAL AUSTRALIAN HISTORIC THEME(S)

- 3.3 Surveying the continent
- 3.8.1 Shipping to and from Australian ports
- 3.11.1 Regulating waterways

#### HERITAGE COUNCIL OF WESTERN AUSTRALIA THEME(S)

- 201 River & sea transport
- 507 Water, power, major transport routes

#### 11.1 AESTHETIC VALUE\*

*Channel Marker and Trigonometric Beacon, Munster* has pleasing aesthetic characteristics that derive from it being a prominently located, simple, unadorned cultural feature within a rugged natural bush setting. (Criterion 1.1)

*Channel Marker and Trigonometric Beacon, Munster* is a landmark, being conspicuously sited on a ridge to enable it to function as a trig point and navigational marker. (Criterion 1.3)

*Channel Marker and Trigonometric Beacon, Munster* combines with Woodman Point Lighthouse as a pair of significant navigational elements, which occupy a prominent location and contribute to the aesthetic qualities

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\* For consistency, all references to architectural style are taken from Apperly, R., Irving, R., Reynolds, P. *A Pictorial Guide to Identifying Australian Architecture: Styles and Terms from 1788 to the Present*, Angus and Robertson, North Ryde, 1989.  
For consistency, all references to garden and landscape types and styles are taken from Richards, O. *Theoretical Framework for Designed Landscapes in WA*, unpublished report, 1997.

of the native vegetation that edges the maritime environment of that part of Cockburn Sound. (Criteria 1.3 and 1.4)

## **11.2 HISTORIC VALUE**

*Channel Marker and Trigonometric Beacon, Munster* has historical significance for its association in the 1870s with the hydrographic survey of Gage Roads and Cockburn Sound, which was an attempt to find a safe passage and anchorage to facilitate access to Fremantle by the P & O Mail Steamers. (Criterion 2.1)

*Channel Marker and Trigonometric Beacon, Munster* is illustrative of the reliance of the Swan River Colony on communication by sea in the nineteenth century. (Criterion 2.1)

*Channel Marker and Trigonometric Beacon, Munster* functioned as a seamount for entry to Cockburn Sound through the Challenger Passage in the latter part of the nineteenth century and intermittently since that time, particularly for pleasure craft in recent years. (Criterion 2.2)

## **11.3 SCIENTIFIC VALUE**

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## **11.4 SOCIAL VALUE**

*Channel Marker and Trigonometric Beacon, Munster* is valued by the local and wider community for its associations with early shipping, with sailing for pleasure and for its landmark qualities. (Criterion 4.1 & 4.2)

## **12. DEGREE OF SIGNIFICANCE**

### **12.1 RARITY**

*Channel Marker and Trigonometric Beacon, Munster* is a rare example of a limestone obelisk navigational marker along the coast of Western Australia. (Criterion 5.1)

### **12.2 REPRESENTATIVENESS**

*Channel Marker and Trigonometric Beacon, Munster* demonstrates the principal characteristics of limestone obelisk navigational markers erected along the Western Australian coastline in the Victorian period. (Criterion 6.1)

### **12.3 CONDITION**

*Channel Marker and Trigonometric Beacon, Munster* is in good condition. There are some areas of inappropriate render repairs and isolated small areas around its base where the limestone has lost its render.

### **12.4 INTEGRITY**

*Channel Marker and Trigonometric Beacon, Munster* is of high integrity. The place continues to fulfil the function of a navigational marker and could at any time fulfil the function of a trig point if required.

## **12.5 AUTHENTICITY**

*Channel Marker and Trigonometric Beacon, Munster* is of high authenticity. The place, including its setting, appears to be unchanged.

### 13. SUPPORTING EVIDENCE

The documentary evidence has been compiled by Irene Sauman, Historian. The physical evidence has been compiled by Alan Kelsall, Architect.

#### 13.1 DOCUMENTARY EVIDENCE

*Channel Marker and Trigonometric Beacon, Munster* is a rendered limestone rubble obelisk located above Jervoise Bay in Cockburn Sound. The place was constructed between 1872 and 1874 as a trig point for the hydrographic survey of Gage Roads and Cockburn Sound, and was subsequently used as a seamark for the Challenger Passage into Cockburn Sound between Carnac and Garden islands. *Channel Marker and Trigonometric Beacon, Munster* is located at Latitude 32° 09' South and Longitude 115° 46' East.<sup>1</sup>

Seamarks are the landmarks of the coast and offshore waters and there is a close link between surveying and seamarks in the history of ports and shipping. Beacons or buoys were used to mark safe shipping channels into ports and along rivers. The word beacon derives from the German word *bake*, which in some parts of Germany means a signal pole or construction placed in or near the water, and *bake* most likely comes from the early practice of marking channels with birch branches. The plural of *bake* is *baken*, which in English became 'beacon'. The adoption of the plural form appears to have come about from the use by surveyors of two poles for the purpose of triangulation.<sup>2</sup> The poles were known as trigonometric stations, or points, which over the years has been shortened to trig points.

The most dangerous part of sailing was when approaching land, where there were hidden rocks, reefs, shoals and sandbanks and shallow waters, to which the many wrecks along the West Australian coast testify. Large sailing ships, with their lack of manoeuvrability, were especially vulnerable close to shore. Early charts were not always reliable and in the absence of a detailed survey and channel markers, vessels sailing in close to land took regular depth soundings and kept a close watch on their passage.

In 1827, when Captain James Stirling undertook his survey expedition, he charted a passage into Cockburn Sound, which was a relatively well-protected anchorage. In 1829, the first ships arrived from England to establish the Swan River Colony. H. M. S. *Challenger*, under Captain C. H. Fremantle, was the first vessel to make landfall. After spending the night of 25 April anchored off Garden Island, Captain Fremantle sent the master of the *Challenger* ahead to sound the passage into Cockburn Sound, using Stirling's chart. The master marked the intricate passage with buoys, but reported that Stirling's chart was inaccurate and the passage rocky. Because it was the only passage known, however, the entry was attempted. The *Challenger* struck a rock midway between Carnac and Garden Islands

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<sup>1</sup> *Australia Pilot*, Vol. 5, 4th ed, Hydrographic Department, Admiralty, London, 1948, p. 342.

<sup>2</sup> Naish, John, *Seamarks: Their history and development*, Stanford Maritime, London, 1985, p. 37.

but after five minutes she moved off and floated. Captain Fremantle was furious with the master for the way he navigated the passage.<sup>3</sup>

He placed a buoy on a rock and then steered for the buoy and ran the ship immediately on it. It was a thousand chances [to one] that we escaped being knocked to pieces, which must have been the case had it not been beautiful weather.<sup>4</sup>

Repairs had later to be made to the bottom of the vessel when she began taking water.

Captain Stirling, in the *Parmelia*, arrived off Garden Island on 31 May. A heavy swell was running and it was not possible to enter the passage to Cockburn Sound in those conditions. The *Parmelia* anchored off Rottnest Island, but Stirling was impatient to get ashore and he took the ship across to the mainland and then south past the mouth of the Swan River toward Cockburn Sound. Captain Mark Currie was sent ahead to sound a passage into the Sound. Captain Fremantle was concerned about the *Parmelia*'s safety and sent his master over in a cutter to warn that there was no passage into the Sound from the north, but Stirling believed he knew the waters well and that the *Parmelia* could proceed safely, despite the fact that she drew 18 feet when loaded and the soundings showed only 15 feet of water.<sup>5</sup>

The *Parmelia* ran aground on the sandbank between Carnac Island and Woodman's Point. The vessel was unloaded to lighten her and she came clear of the sandbank, bumped across the reef near Woodman's Point and finally entered clear water early the next morning. The damage to the *Parmelia* was greater than that to the *Challenger*, but she was able to be repaired. The rock which the *Challenger* struck was named Challenger Rock and the passage into the Sound became Challenger Passage or Pass, while the sandbank was named Parmelia Bank.<sup>6</sup> On 28 November 1829, the *Success* was stranded on the sandbank that bears its name, and was not refloated for several months. It was later wrecked in Cockburn Sound.<sup>7</sup>

In 1830, the Cockburn Sound area was the site of the ill-fated Peel settlement. Thomas Peel had been granted land along the Canning River for four hundred settler families he was bringing out from England. To qualify for the grant, he had to land his party in the colony by 1 November 1829. He did not arrive until May 1830, and was instead granted land at Cockburn Sound at a surveyed settlement called Clarence, where there was little water and the ground was unsuitable for farming. The settlement was abandoned within a few years.<sup>8</sup>

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<sup>3</sup> Henderson, G. *Unfinished Voyages: 1622-1850*, UWA Press, Nedlands, 1980, pp. 77-78.

<sup>4</sup> *Diary and Letters of Admiral Sir C. H. Fremantle*, facsimile ed., Perth, 1979, p. 33 quoted in Henderson, G. op cit, p. 77.

<sup>5</sup> Henderson, G. op cit, pp. 79-81.

<sup>6</sup> Henderson, G. op cit, pp. 79-81.

<sup>7</sup> Maslin, John, *An illustrated map and brief history of shipwrecks along the West Australian coastline*, Fremantle Charts, Fremantle, 1980, p. 34.

<sup>8</sup> Berson, Michael, *Cockburn: The making of a community*, Town of Cockburn, 1978. pp. 1-10.

Safe passages and anchorages in the Fremantle area continued to be of considerable importance and concern over ensuing years, as the only means of communication and transport was by sea and rivers. Channels were marked with buoys and beacons by the Harbour Master, and a Pilot was appointed to guide ships into safe anchorage. Getting ships safely in to Cockburn Sound was one matter, but getting them out seems to have been just as difficult. The Harbour Master's journals record many failed attempts to take ships out due to unfavourable winds and many ships were wrecked in the Sound, driven onto rocks during storms.<sup>9</sup>

The work of laying buoys and erecting beacons was an expense for the meagre resources of the Colony, and proceeded slowly. The Colony continued to rely on reports from ship captains as to the best anchorages at various times of the year, and the Government Gazette carried a number of these reports and notices to mariners. In July 1838, Captain W. C. Wickham of H. M. S. *Beagle*, reported on the safety of Owen's Anchorage during winter gales from the northwest. Another report in the same issue of the Gazette contained information from Lieutenant Belches of the *Champion* as to a safe channel into Warnbro Sound.<sup>10</sup>

In 1840, an obelisk navigation marker was erected on Rottnest Island.

Rottnest Island... may now be distinguished from the mainland and Garden Island by a white obelisk, 15ft in height, with a pole in the middle, of the same length, which has recently been erected on its highest part near the centre of the island. This sea-mark, being elevated about 157ft above sea level may be seen from a ship's deck in clear weather at the distance of 7 or 8 leagues, and will shortly give place to a lighthouse of greater elevation.<sup>11</sup>

The Rottnest Lighthouse was commissioned in July 1851.

Buoys and beacons did not always withstand the heavy seas. In April 1842, the Colonial Secretary issued the following notice regarding Cockburn Sound:

Mariners are hereby apprised that the buoys and beacons which have at various times been placed between Garden Island and Carnac, for pointing out the channel into Cockburn Sound, have been washed away, and that, in the absence of means for replacing the pilots have been instructed not to attempt the passage.

A good and perfectly safe route into the summer anchorage of Gage's Roads, off Swan River, will be found either to the north of Rottnest Island, or near its Southern Shore; and to the secure winter resort of Owen's Anchorage by passing through Gage's Roads, - on approaching which all vessels will be boarded by a pilot.<sup>12</sup>

In 1849 and 1850, the Gazette carried reports from Henry Trigg, Superintendent of Public Works, as to his progress in fixing a beacon to

<sup>9</sup> Fremantle Harbour Master, Journals, 6 March 1860-20 Sep 1867, SROWA, WAS 1615 CONS 1056 Item 49; Maslin, John, op cit, notes that there have been some 75 vessels wrecked in the Sound, due largely to lack of space to manoeuvre in a storm.

<sup>10</sup> *West Australian Government Gazette*, 14 July 1838, pp. 1-2.

<sup>11</sup> *West Australian Government Gazette*, 23 October 1840, quoted in Moynihan, John, *All The News in a Flash: Rottnest communications 1829-1979*, Telecom Australia & The Institution of Engineers, Australia (WA Division), Perth, 1988, pp. 3-4.

<sup>12</sup> *West Australian Government Gazette*, 15 April 1842, p. 2.

Challenger Rock. The work required four boats and twelve men and the boring equipment was washed away in the first attempt.<sup>13</sup>

In September 1860, the Fremantle Harbour Master, James Harding, requested construction of a more suitable seamark at Fremantle:

...that the pile of stones on the Hill behind the Convict Establishment now in use as a Sea Mark, may be built into a pillar or Pyramid. At present the stones are only loosely piled, and children are constantly knocking them down by climbing up the beacon... The only requirements for its erection will be lime and prison labour. 20 or 30 feet in height I consider will be sufficient...<sup>14</sup>

This obelisk stood on Monument Hill.

No detailed survey of Cockburn Sound or Gage Roads waters had been undertaken. Information on hazards to shipping was provided by ship captains and cursory surveys and the charts were considered as not entirely accurate. Because of a lack of safe deep anchorage in any weather at Fremantle, Albany, with its natural deep water harbour, continued to be the main port for the Colony. There was a long-held belief that Fremantle should be the main port of the Colony, and in 1872, possibly encouraged by the granting of responsible Government two years earlier, moves were made to establish a safe anchorage for the P & O mail steamers in Cockburn Sound. The Colonial Secretary, Fred Barlee, wrote to various local sailing men with a series of questions regarding the establishment of a port for P & O steamers at Rottnest, the marking of the Challenger Passage for access by mail steamers at night, the depth of water in the Passage and the feasibility of using explosives to remove some of the hazards.<sup>15</sup>

The letters were received by W. Jackson, Superintendent at Rottnest and a former harbour pilot, G. Newman, Captain J. S. Roe of the Royal Navy, Walter Bickley, J. M. Ferguson and Lieutenant J. N. Croke. From their replies, the Harbour Master and Colonial Secretary recommended a series of buoys and lighted beacons for the Challenger Passage for the use of Cockburn Sound by the steamers. Governor Weld responded:

I have read these opinions - until the passage can be accurately surveyed and reported upon it is impossible to conclude with certainty whether there is depth of water for the largest mail steamers in any weather - but the replies are conclusion that it is worth while making careful surveys and that if there be depth of water the difficulty will not be great in removing or marking the isolated obstacles.

I think that it might be well also to go to some small expense in any case in the interest of ships that frequent Fremantle and have to go to Garden Island in bad weather but the very heavy expense contemplated in some of these opinions would only be warranted at present by the certainty that if we incurred this we should secure the P & O Mail Steamers calling at our port for some years. There would be no difficulty in communication by small steamers with Fremantle and Perth if the P & O boats lay at Garden Island or Cockburn Sound and this plan would I think give a better communication, be safer and avoid several inconveniences incidental to

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<sup>13</sup> *West Australian Government Gazette*, 29 May 1849, p. 1 & 2 April 1850, pp. 2-3.

<sup>14</sup> Colonial Secretary's Office Records, 19 September 1860, SROWA, ACC 36, Vol. 452 Fol. 342. This obelisk has been referred to in some histories as having been constructed as a trig point, but it was clearly initially built as a seamark. It was used as a trig point for many years, including in the surveys of Gage Roads and Cockburn Sound in 1872-74.

<sup>15</sup> Colonial Secretary's Office Records, SROWA, ACC 36, Vol. 717 Fols. 101-123.

establishing the P & O depot at Rottnest with moorings for their ships in Bickley Bay. All these papers will be laid before the Legislature and their opinion invited.<sup>16</sup>

In the event, a detailed survey of Cockburn Sound and Gage Roads was undertaken between 1872 and 1874, by Staff Commander Archdeacon and Staff Commander J. E. Coghlan of the Royal Navy. *Channel Marker and Trigonometric Beacon, Munster* was constructed as a trig point for the survey as, it is believed, was the obelisk on Buckland Hill. *Channel Marker and Trigonometric Beacon, Munster* may have been constructed with convict labour, although no record of the construction of either obelisk has been found to date.<sup>17</sup>

The survey of the Challenger Passage showed that a vessel with a 16-foot draught was the greatest that could be taken through the channel safely. The P & O Steamers had a draught of 18 feet. Another passage known as the North Channel, which was nearer to Garden Island, had deeper water, but there were several limestone pinnacles with only 9 to 18 feet of water over them which made that passage particularly dangerous. Following these surveys, regulations were promulgated, which prohibited vessels of over 16 feet draught from passing through the Challenger Passage.<sup>18</sup>

In 1886, Staff Commander Coghlan undertook another examination of the approaches to Cockburn Sound, and *Channel Marker and Trigonometric Beacon, Munster* and the Buckland Hill obelisk were at that time in use as seamarks for the Challenger Passage and North Channel.

FIVE-FATHOM BANK - Hawley Shoal... From the centre of the shoal, Rottnest Island lighthouse bears N.N.W. \_ W., Buckland Hill obelisk open of west extreme of Carnac Island, N.E.; Haycock Hill on Garden Island, East, distant [2.7] miles....

Clearing mark - The obelisk over Jervoise Bay, in line with Entrance Rocks (north-west extreme of Garden Island) bearing E. \_ N., leads over the Five-Fathom Bank, between Casuarina and Hawley Shoals...

NORTH CHANNEL... Rowboat Rock just open northward of West Rock, bearing N. by E.  $\frac{3}{4}$  E; summit of conspicuous clump of trees north of Buckland Hill obelisk just open south of Flat Rock...

Bishop Rock, the shoalest head of a cluster of pinnacles... Rowboat Rock, in line with western extreme of Carnac Island, N. by E. \_ E.; and obelisk over Jervoise Bay, in line with northern of two conspicuous clumps of trees, E. \_ S.<sup>19</sup>

As the size of ships continued to grow, the restrictions placed on Challenger Passage soon precluded its use by anything other than the smallest vessels. The opening of the Fremantle Inner Harbour in 1897 provided the safe anchorage that had long been needed and Fremantle became the port of call in Western Australia for the P & O Mail Steamers.<sup>20</sup> Other large vessels also began to frequent Fremantle, now that they no longer had to stand alongside an exposed jetty to load and unload cargo. In 1902, the

<sup>16</sup> Memo by His Excellency the Governor on Letters 're' Challenger Passage, 20 July 1872, Colonial Secretary's Office Records, SROWA, ACC 36, Vol. 717, Fol. 119.

<sup>17</sup> The lighthouse at Cantonment Hill, which was under construction in 1876, was being built with convict labour, according to the Public Works Department *Annual Report* of that year.

<sup>18</sup> *West Australian Government Gazette*, 6 May 1886, p. 281.

<sup>19</sup> *West Australian Government Gazette*, 6 May 1886, p. 281-282.

<sup>20</sup> Wolfe, Adam, *The Albany Maritime Heritage Survey 1627-1994*, prepared for the Heritage Council of WA, Albany Port Authority & Albany Maritime Heritage Association, December 1994, pp. 43-47.



Woodman Point Lighthouse was opened, replacing the lighthouse at Arthur's Head. It provided light for ships entering Fairway and Gage Roads, and for ships in Cockburn Sound.<sup>21</sup>

In December 1924, permission was given to demolish the Fremantle seamark obelisk on Monument Hill, which was replaced by a war memorial. At the time of removal of the obelisk, the Surveyor General stated his intention of fixing the position of the war memorial so that it could continue to be used as a reference point.<sup>22</sup> In the *Australia Pilot*, landmarks on the approach to Gage Roads are given as:

A white obelisk on Buckland Hill ... is conspicuous; the hill is 70 m (230 ft) high.

On the S side of Swan River, backing the city of Fremantle, a ridge of limestone hillocks, from 33 m to 62 m high, extends S nearly parallel with the coast; there is a conspicuous war memorial, 16 m high situated on the summit of Church Hill at an elevation of 62 m (204 ft), 1<sup>3</sup>/<sub>4</sub> miles E of the head of North Mole.<sup>23</sup>

In 1948, the *Australia Pilot* entry for Cockburn Sound informed that the Challenger Passage was closed to traffic, and only vessels of light draught with local knowledge should enter the Sound from north or south:

The best known passage is between Casuarina and Hawley shoals, with the obelisk, southward of Woodman Point lighthouse, in line with Entrance rocks of Entrance point, bearing 083<sup>0</sup>, which will lead through in a least charted depth of 4<sup>3</sup>/<sub>4</sub> fathoms.<sup>24</sup>

Channels were dredged across the Success and Parmelia Banks to allow access to the Sound from the north and in 1954, lights were installed in Cockburn Sound for navigation through the Parmelia and Success Channels, and two wind-power generators were erected to provide power for the batteries for the lights.<sup>25</sup> One windmill was located near *Channel Marker and Trigonometric Beacon, Munster* and because it was taller it was used as a seamark for vessels entering the Sound. Such prominent structures had always been used in pilotage. At Fremantle, structures other than the war memorial which were noted in *Australia Pilot*, together with their relative locations, were the belfry of the Grammar School, the Town Hall clock tower and a power station chimney.<sup>26</sup>

Information regarding the ongoing use of *Channel Marker and Trigonometric Beacon, Munster* as a trig point has not been located, and this function was probably overtaken in 1902 by the 37-metre high Woodman Point Lighthouse, 1.2 kilometres to the north. The Buckland Hill obelisk continued to be used as a survey mark until 1967.<sup>27</sup>

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<sup>21</sup> *West Australian*, 25 August 1902, quoted in HCWA assessment documentation, *Woodman Point Lighthouse & Keepers' Cottages*, Place 508.

<sup>22</sup> File on Monument Hill, Fremantle City Council, AN217/3, ACC 1377, Item 138 (1924-25), referenced in HCWA assessment documentation, *Monument Hill & War Memorials*, Fremantle, Place 3956.

<sup>23</sup> *Australia Pilot*, Vol. 5, 6th ed, Hydrographer of the Navy, London, 1972, p. 171.

<sup>24</sup> *Australia Pilot*, Vol. 5, 4th ed, op cit, p. 342.

<sup>25</sup> Job, Maureen R. *The History of Navigational Beacons of Western Australia*, typescript, Perth, 1958, p. 18, from information provided by Harbour Master Captain Humble.

<sup>26</sup> *Australia Pilot*, Vol. 5, 6th ed, op cit, p. 171.

<sup>27</sup> Town of Mosman Park, *Municipal Inventory of Heritage Places*, 1998, Place record 005, pp. 48-50.

In 1997, *Channel Marker and Trigonometric Beacon, Munster* was entered on the City of Cockburn Municipal Heritage Inventory with an 'A' category management rating.<sup>28</sup>

*Channel Marker and Trigonometric Beacon, Munster* is sited on a 405 square metre parcel of land, designated Lot 5, which is accessed by a right-of-way from Cockburn Road. The land is owned by the Fremantle Harbour Trust, now Fremantle Ports. The surrounding land is owned by the Water Corporation and is the site of a wastewater treatment plant.<sup>29</sup>

In the second half of the 20th century, the development of radar and radio navigational aids and shore control have meant that seamarks play a much lesser role for naval and commercial shipping, but they are still widely used by smaller working and pleasure craft. Since the removal of the windmill adjacent to *Channel Marker and Trigonometric Beacon, Munster* sometime in the 1990s, the place has again been used as a seamar.<sup>30</sup> In 2005, *Channel Marker and Trigonometric Beacon, Munster* continues to function as a seamar.

## 13.2 PHYSICAL EVIDENCE

*Channel Marker and Trigonometric Beacon, Munster* is a limestone obelisk that stands in a natural bushland setting on a ridge overlooking Cockburn Sound.

*Channel Marker and Trigonometric Beacon, Munster* is situated on the top of the ridge of Tamala limestone that is set back from the white calcareous sand dunes which edge Cockburn Sound. Cockburn Road runs beside Cockburn Sound generally at the interface between the dunes and the ridge. *Channel Marker and Trigonometric Beacon, Munster* is located about one and a half kilometres south of Woodman Point. The Woodman Point Lighthouse stands on the same ridgeline as the obelisk. *Channel Marker and Trigonometric Beacon, Munster* stands about 250 metres to the east of Cockburn Road.

*Channel Marker and Trigonometric Beacon, Munster* is set behind and above the massive industrial sheds that house Austal Shipyards in the Jervoise Bay Boat Harbour.

The high point of the ridge runs roughly along its centreline. The east side of the ridge descends to undulating landscape that, in the area of the *Channel Marker and Trigonometric Beacon, Munster*, borders Lake Coogee. The Water Corporation Woodman Point Wastewater Treatment Plant is situated the half kilometre wide strip of land between the base of the ridge and the Lake.

Woodman Point Wastewater Treatment Plant is approximately half a kilometre north of Russell Road and vehicular access is provided by a

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<sup>28</sup> City of Cockburn, *Municipal Heritage Inventory*, Place no 4.

<sup>29</sup> Certificate of Title Vol. 1272 No. 268, 23 May 1963 & Diagram 26741. Enquiries made to the Fremantle Ports Public Affairs Officer did not produce any information on *Obelisk Marker*. Staff appeared unaware that such a structure existed. Research by the Ports librarian failed to uncover any information on the place.

<sup>30</sup> Information provided during site inspection.

private road running off Russell Road. The track that leads to the obelisk is about half way along this private road. *Channel Marker and Trigonometric Beacon, Munster* stands within a secure area that is surrounded by a two and a half metre high chain-link fence. There is a very rough track against the inner edge of the fence line. The track serves as a fire break. There is no pathway or track leading to the obelisk which is surrounded by an area of dense thicket. The fenced off enclosure also contains a Telstra mobile phone tower and another communications tower.

*Channel Marker and Trigonometric Beacon, Munster* is around 8 to 9 metres high. In plan the base of the obelisk measures five metres by five metres.

The obelisk is set on a plinth about 750 mm high. It has a steeply splayed top measuring about 600 mm. The tapering shaft of the obelisk rises about six metres. The shaft is capped by a pyramidal top. The sides of the pyramid are less steep than those of the shaft. The pyramid is about a metre high

The obelisk is of rendered limestone rubble which, for the most part, appears to be a thin lime render. Areas of the lime render have been repaired using a cement rich mix. The render is now un-coated but there is evidence to suggest that at one time the obelisk had a lime wash finish.

*Channel Marker and Trigonometric Beacon, Munster* is in good condition. There are some areas of inappropriate render repairs and some isolated small areas where the limestone has lost its render.

### 13.3 COMPARATIVE INFORMATION

There are few remaining obelisks as trig points or seamarks in Western Australia.

*Two Obelisks & Commemorative Plaques* at Port Denison are entered on the State Register. The plaques commemorate vessels lost in the area. The first obelisk was erected c.1860s, and the second was added in 1896. The second obelisk had a blue beacon light attached. This obelisk stands 6.8 metres high and is of stone rubble construction on a square plinth. The c.1860 obelisk is in ruin.<sup>31</sup>

*The Obelisk*, at Buckland Hill, was almost certainly constructed as a trig point for the hydrographic surveys undertaken in 1872-1874. It continued to be used as a survey point until 1967, and was also used as a searmark. In 1934-35 a reservoir was built around *The Obelisk*. In 1983, *The Obelisk* was moved 48 metres southwest, outside the reservoir, and restored. During restoration it was placed on a large limestone base, possibly to raise the structure to its original height. The base is of such large dimensions that it diminishes the impact of the obelisk. The place is entered on the Town of Mosman Park Municipal Inventory.<sup>32</sup>

*Channel Marker and Trigonometric Beacon, Munster* is an excellent example of a limestone trig point and searmark and is in original condition.

<sup>31</sup> HCWA assessment documentation, Place 01242.

<sup>32</sup> Town of Mosman Park, *Municipal Inventory of Heritage Places*, 1998, Place record 005, pp. 48-50.

#### **13.4 KEY REFERENCES**

No key references.

#### **13.5 FURTHER RESEARCH**

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