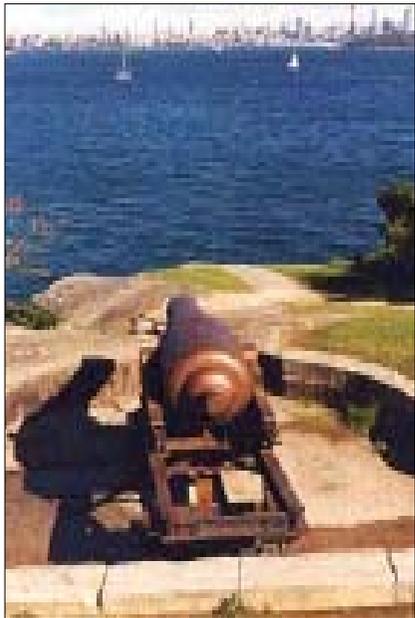
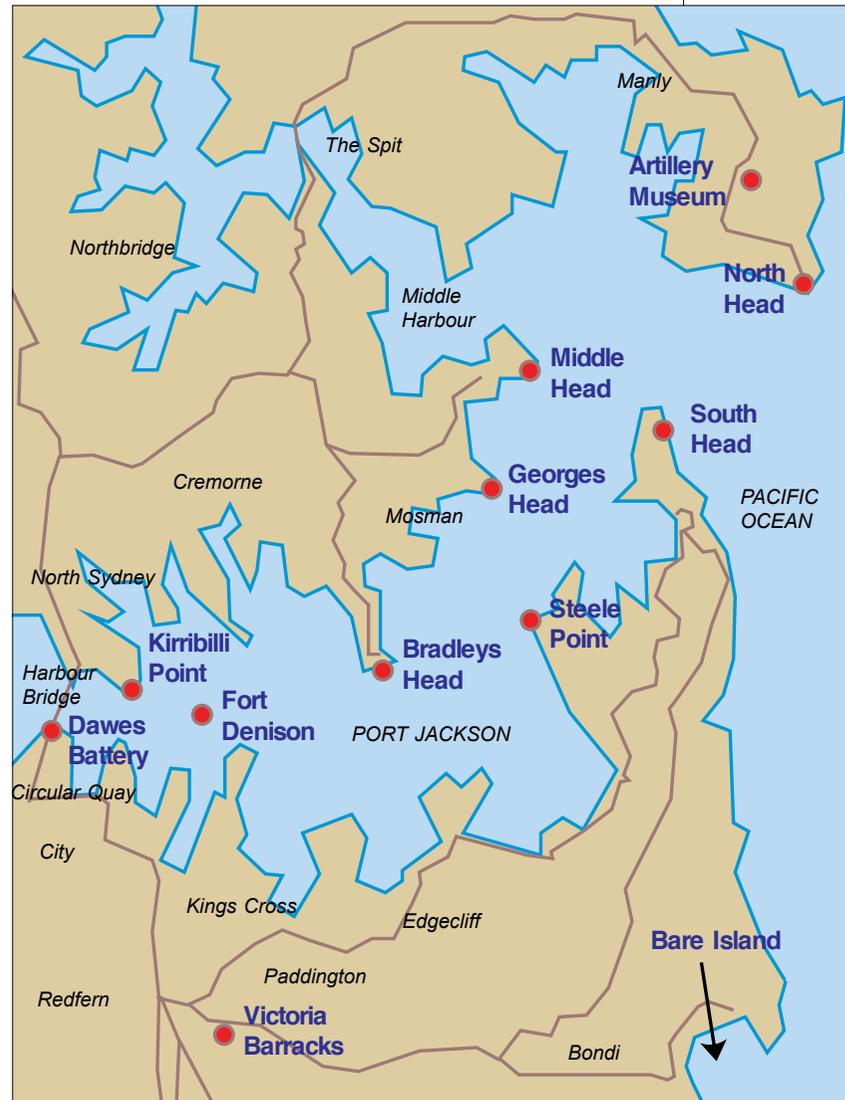


Sydney's Colonial Fortifications

This is a guide to short tours of some of Sydney's colonial fortifications. Although they were built to counter the threat of foreign raiding parties, none ever fired a shot in anger.



Self-guided tours



Historical review

Before Federation in 1901, the construction and maintenance of Australian defence installations and associated works were the responsibility of each colony.

Colonel George Barney, Royal Engineer, was responsible for many of Sydney's defensive works such as Victoria Barracks 1848 and Fort Denison 1857. With the

establishment of the Public Works Department in 1856, defence work became one of its functions. Then in 1901 defence throughout Australia became the responsibility of the Federal Government.

The colonial fortifications may be divided into two groups. The Inner Defences comprised Fort Phillip on Observatory Hill, Dawes Battery (partly restored), Kirribilli Point, Fort Denison, Fort Macquarie and Mrs Macquarie's Point (the last two now demolished). The Outer Defences comprised North Head, Middle Head, Georges Head, Bradley's Head, South Head, Steel Point, Bare Island at the entrance to Botany Bay and Victoria Barracks in the suburb of Paddington.

Defence in the colonial era was mainly in the hands of the powerful British Royal Navy with a squadron stationed at Garden Island. Strategists reckoned that a large scale invasion by a European rival was unlikely, given the distance to Australia, hence the only serious threat was from raiding parties attacking key ports, which for NSW were Sydney and Newcastle. Also, the southern approach to Sydney from Botany Bay should be guarded.

However valid the concerns may have been, defensive works were expensive items of infrastructure, and history has always shown such technology becomes

outmoded; therefore it was difficult for colonial governments to sustain a continuous program of building and upgrading. Consequently, the Outer Defences developed intermittently depending on war scares involving England, patriotic fervour, local colonial rivalries and the supply of military hardware, particularly guns. The result was an inefficient patchwork of fortifications.

The remnants are of significant heritage value.

Dawes Battery

Dawes Battery was constructed in 1791 and upgraded several times to 1857. It was demolished to make way for the Sydney Harbour Bridge. As it is now well interpreted following part restoration, it is well worth a visit and will not be described further.

The Battery is off George Street North, under the southern approach to the Sydney Harbour Bridge.

Fort Denison

Situated conspicuously in the middle of Sydney Harbour, Fort Denison is the best known and best preserved example of Sydney's colonial defences. The photograph, taken from Sydney Harbour Bridge looking east, shows the significance of the site for defending the approach from the Heads. At the time of its completion in 1857 the coastal heights of Vaucluse were bushland and the population of Sydney Town was concentrated around Sydney Cove, well to the right of the foreground.

The fort is open for inspection on tours arranged through the office of the National Parks and Wildlife Service in Cadman's Cottage, near the Overseas Shipping Terminal on the western side of Sydney Cove, so only a summary of Fort Denison follows.



Fort Denison

Governor Phillip named the 25m high pinnacle Rock Island, soon after settlement in 1788. But it received the more enduring name of Pinchgut because convicts were sent to the barren island as punishment.

George Barney arrived in Sydney in 1835 as Commanding Royal Engineer. He immediately set about an assessment of the harbour defences and in 1836 proposed amongst other things, a battery on Pinchgut, which later became Fort Denison. The unobserved arrival of four American warships off Sydney Cove in 1839 fired public demand for harbour defences. During 1841 Pinchgut was cut down to about a metre above high tide and a battery of 10 x 24 pounder guns installed. Construction of a fort was not commenced until 1855. The dominant feature is the martello tower with its four metre thick stone walls and three guns inside. A Royal Artillery expert said the space was so restricted that only one shot could be fired from each gun at a passing ship. The locking of the stone blocks together is an interesting detail to be observed on a visit.

Bradleys Head

This is the tree-covered point of land on the north side of the harbour where the main shipping channel turns from north south to east west. Prominent on Bradleys Head is the observation tower from *HMAS Sydney*, which sank the German cruiser *Emden* at Cocos Island on 9 November 1914.



Guns could weigh between 12 and 18 tonnes. The roads were not much better than dirt tracks, so rather than risk bogged drays, lengths of timber rails were laid and the round guns rolled along.



A manned battery guarding the heads

The headland, which is part of Ashton Park, is easily reached by ferry to Taronga Zoo wharf, turning right and walking eastwards, or by car via Spit Junction and down Bradleys Head Road.

Bradleys Head was the first of the Outer Defences. Work began in 1841 with the building of a gun pit surrounded by a stone wall but construction was intermittent and not completed until 1857.

During the next 13 years the now self-governing colony was forced to take on more responsibility for its defences, particularly when British troops returned to England in 1870. There was a flurry of activity over the next six years which saw construction of new defences at Middle Head, Georges Head, South Head and Steel Point. It included augmentation of the earlier work at Bradleys Head with three guns, a connecting stone gallery, a powder magazine and barracks. Unfortunately, when the Australian Army abandoned the site after World War I they demolished the support buildings and other structures, but left remnants of the gun pits.

Despite these losses, Ashton Park, its picnic grounds and the harbour views are compensating attractions, and there is a bush walk north to Clifton Gardens. In summer time, Bradley's Head is a favourite place for watching sailing fleets racing on the weekends and as a vantage point for special events.

Georges Head

This site has the best collection of fortifications from the 1871-75 period. To reach it by bus, take the 244 bus (weekdays only) from Wynyard to the terminus at Balmoral Naval Depot. Then walk along the road with the Naval Depot on your left to a road junction, turn right and pause at the car parking area.

By car, proceed along Military Road keeping to the right at Spit Junction. After Raglan Street turn left, taking Middle Head Road as far as the car park area among trees on the right.



There is a date mark in one of the gun pits at Georges Head and in every pit there is a mark in feet giving the height above sea level, important for artillery.

After arriving by either method, walk through the car park and follow the wire fence on you left until the road is reached again, then turn right and walk to the open area at the fortifications.

The first feature that will catch your eye is the commanding view of the Heads; North Head on the left and South Head on the right. You will appreciate why this location was selected for a major grouping of gun pits, connecting trenches, powder magazines, shell rooms, storerooms, barracks and officers' quarters, all completed by 1877.

Most of the site has free access but underground sections are only accessible on tours conducted by the National Parks and Wildlife Service. Check with their office in Cadman's Cottage at Circular Quay.

North Head

In the colonial period the populations of Manly and suburbs north were quite small so were considered not attractive to raiding parties. If they did land there, there was a long difficult trek overland west to North Sydney and then a crossing of the harbour to attack the more booty-rich Sydney Town. Had a raiding party entered the harbour, the Outer Defences would have provided formidable opposition. Consequently, North Head was not fortified during the colonial period, in fact not until World War II. However, an Artillery Base and Museum are there today.

The museum is open on Wednesdays and weekends from 12-4 pm. Take the ferry to Manly, then the 134 North Head bus outside the Manly wharf. By car, drive to Manly and take Darley Road up the hill past the hospital through a stone arch and along the North Scenic Drive. Either way, a visit to a lookout at the end of the road will reward you with great views of the harbour.

On the other side of the entrance to the harbour is inner South Head with its red and white striped Hornby Light, where there are more fortifications.

South Head

The fortifications at South Head are north of the 'village' of Watsons Bay, a walk of about 15-20 minutes. There are frequent bus services every day from the city, numbers 324 and 325. Both services pass through Double Bay and Rose Bay and pass the 1886 stone convent where there is a commanding view looking west down the harbour to the Harbour Bridge and the Opera House.



Gun at South Head

The bus routes diverge here. If on a 325 bus alight here for photographs and wait for a 324 bus. It continues up the hill through Vaucluse Heights with more views north to Manly and the Heads before plunging downhill to Watsons Bay. Leave the bus at the terminus and walk north towards the hotel then along Cliff Street to Camp Cove beach. Climb the set of wooden steps and follow the path to South Head.

The first attractions are the muzzle-loading gun, the rifle firing slits in a stone defence wall and the view back to the city. Once at the headland park, walk to the eastern side where the fortifications are. Do the loop walk past Hornby Light and two 1853 gun pits.



Installation at South Head

The rest of the South Head installations were built between 1871 and 1874 and are similar to those at Georges Head, but not as much is accessible to the public. There are many more colonial fortifications in the restricted naval area.

Victoria Barracks

These are the ‘jewels in the crown’ of the colonial defence works. Completed in 1848 and substantially intact, they are historically and architecturally significant and contain many features for the comfort and health of the resident garrisons. They were designed and supervised by Colonel George Barney, their purpose including command of the land approach to the colony from Botany Bay.

Two of the dominant buildings seen from the entrance are the Officers’ Quarters on the hill to the left and the Main Barracks straight ahead across the parade ground. And of course, there is the surrounding sandstone wall.



Victoria Barracks

The barracks are still in army use but are open for a ceremonial event and guided tours every Thursday from 10 am, also on Sundays for general viewing and for the museum from 11 am to 3 pm. The easiest access is by bus, the 380 North Bondi service or the 378 Bronte service, both stopping opposite the entrance, also 382 and L82 services.

When at the Museum, be sure to look down a shaft to see water running along Busby’s Bore, a tunnel which was Sydney’s first engineered water supply. It runs from Centennial Park to Hyde Park and was built by convict labour over 11 years with completion in 1837. It has a National Engineering Landmark plaque.



Bare Island Fort

Bare Island

This fort guarded the entrance to Botany Bay. Completed in 1885, it was one of the last colonial fortifications and is the furthest from Sydney Town. A feature is the disappearing gun on its hydraulic arms. It never fired a shot in anger.

Access by bus is on the 394 and L94 La Perouse services weekdays but only the 394 at weekends. By car, take Anzac Parade and follow it to its end. The fort is open for general inspection but the National Parks and Wildlife Service runs guided tours on the last Sunday of each month.

Despite the planning and money expended, the fort was poorly sited, too exposed to enemy fire and poorly constructed, so was never effectively used. It later became a museum giving visitors a good idea of the style of defences in colonial Australia.

ASHET self-guided tour brochures

This brochure is one of a series describing self-guided tours to places of engineering and technological interest in the Sydney area. All of the brochures are published in pdf form on the ASHET website www.ashet.org.au where they may be viewed and downloaded for printing on a desktop printer.

The full set of brochures is as follows:

The Sydney Harbour islands

Self-guided tours by ferry

Ryde to Tempe: discovering the history and industrial heritage of Rhodes, Concord, Canterbury and the Cooks River

Self-guided cycle tour

Sydney’s colonial fortifications

Self-guided tours

Sydney Harbour Bridge

Self-guided walk

The engineering heritage of Sydney’s maritime industries

Self-guided tour by ferry

Steam at the Powerhouse

Self-guided visit to the museum

Parramatta River bridges

Self-guided tour by RiverCat

Sydney Water: A day tour of the water supply dams south of Sydney

Self-guided tour by car

Engineering and industry on three Sydney Harbour islands

Self-guided tours of Fort Denison, Cockatoo and Goat Islands

An engineering walk around the Sydney Opera House

Self-guided walk

ASHET, the Australian Society for History of Engineering and Technology, was formed in June 2003. Its objects are to encourage and promote community interest and education in the history of engineering and technology in Australia. For more about ASHET, visit the website www.ashet.org.au.