

= Architecture of Fremantle Prison =

The architecture of Fremantle Prison includes the six @-@ hectare (15 @-@ acre) site of the former prison on The Terrace , Fremantle , in Western Australia . Limestone was quarried on @-@ site during construction , and the south @-@ western corner (the South Knoll) and eastern portion of the site are at a considerably higher ground level . The Fremantle Prison site includes the prison cell blocks , gatehouse , perimeter walls , cottages , tunnels , and related infrastructure .

The Main Cell Block is the longest and tallest cell range in Australia , and a dominating feature of the prison . New Division , constructed between 1904 and 1907 , continues the façade alignment of the main block . Service buildings were converted into the separate Women 's Prison . Fremantle Prison is surrounded by limestone perimeter walls , while a two storey limestone gatehouse , with a central clock , presents an imposing entrance . North and south of the gatehouse , on The Terrace , are several cottages and houses ? three of which are built in Victorian style in contrast to the Georgian style of the others .

A network of tunnels exists under the prison , built to provide the prison , and later the town of Fremantle , with a supply of fresh water . Other elements of the site include the hospital building , prisoner workshops , open spaces , and a limestone ramp on the axis of the gatehouse , heading down towards the port area of Fremantle . Archaeological zones and sub @-@ surface remains of varying levels of significance are found throughout the area of the convict grant .

= = Background = =

Fremantle Prison dates from the early years of European settlement , when it was constructed as the centre of the British Imperial Convict Establishment in Western Australia . While the colony was established as a " free settlement " in 1829 , by the 1840s the early reluctance to accept Britain 's convicts was overcome . Cheap convict labour could overcome the significant shortage of manpower in the colony . However , the arrival of the first convict ship Scindian on 2 June 1850 was unexpected . While a sailing ship had been sent ahead to inform of the pending arrival of seventy @-@ five convicts , it had been blown off course . The Round House was full to capacity , almost overflowing , so the convicts had to be left on the ship . There was also no prepared accommodation for the warders , pensioner guards , Captain Edward Walcott Henderson , Comptroller General of Convicts , or his clerk , James Manning . Rents for accommodation in Fremantle quickly rose due to the sudden increase in demand , leaving Henderson paying more for his basic lodgings in Fremantle than for his house in London . Eventually Henderson leased two properties in Essex Street for £ 250 per year , at the site of the modern @-@ day Esplanade Hotel . He used his convicts to convert the buildings into a temporary prison . Meanwhile , Henderson was looking for a site to build a permanent convict establishment . Whilst he favoured Mount Eliza (now known as Kings Park) due to its height , which gave it pleasing vistas and supposedly healthier air , Governor Charles Fitzgerald rejected that proposal . Henderson ultimately settled on the current site on a hill , in a raised and dominant position overlooking the port city of Fremantle .

= = Site = =

= = = Description = = =

Fremantle Prison was built on a land grant of about 36 acres (15 ha) from limestone quarried on @-@ site , and timber cut from Mount Eliza . The site exhibits considerable changes in ground level , natural and man @-@ made , as a result of its location and former use . The ground level is considerably higher in the south @-@ western corner of the site with what remains of the natural landform , formerly known as Church Hill , now referred to as the South Knoll . The eastern portion of the site is also considerably higher than the ground level established around the main cell block . It is a comparatively level terrace and is the highest part of the precinct .

Fremantle Prison comprises substantially intact convict era structures , including the limestone perimeter walls of exceptional heritage significance . Other structures , dating from the time the precinct was in use as a colonial and state prison , are also significant . The convict era complex includes the 1859 main cell block , chapel and wards , yards and refractory cells ; perimeter walls , gate house complex and prison officer residences on the Terrace ; service buildings and hospital ; south @-@ eastern workshops ; ramp access tramway (Fairbairn Street) and Henderson Street Warder 's Cottages . Other elements which contribute to the site 's overall heritage significance include the western workshops (1900) ; new division (1907) ; and conversion of service building to the female division and the addition of an eastern range (1889 ? 1909) .

= = = Layout = = =

A 15 @-@ foot (4 @.@ 6 m) tall boundary wall encloses the prison grounds , with a gatehouse in the centre of the western wall , facing The Terrace . Other roads bounding the site are Knutsford Street to the north , Hampton Road to the east , and Fothergill Street to the south . Cottages , which housed prison workers and officials , are located outside the wall either side of the gatehouse . Inside the walls , the parade ground is located east of the gatehouse . Beyond it is the Main Cell Block at the centre of the site , which contains two chapels . North of the main block is New Division , and west of that , in the north @-@ western corner , is the former Women 's Prison , previously the cookhouse , bakehouse and laundry . The hospital building stands in the north @-@ eastern corner , while the former workshops are located in the south @-@ eastern corner , as well as to the north of the gatehouse . A system of underground tunnels , constructed to provide fresh water from an aquifer , runs under the eastern edge of the site .

= = = Archaeology = = =

Archaeological zones and sub @-@ surface remains of varying levels of significance are found throughout the area of the convict grant . In particular , the sites of the three former cottages to the east of the perimeter wall in the Hampton Road reserve , the site of the former ' cage ' in the New Division courtyard and the features upon and under the knoll terraces . Other site features include those associated with the water supply system constructed in the 1890s : the brick @-@ vaulted underground reservoir , the associated pumping station , a complex series of rock cut shafts , drives , weirs and the one @-@ kilometre (0 @.@ 6 mi) underground tunnel network . Graffiti and a tablet records the progress of the excavators .

= = Walls and gatehouse = =

The prison is surrounded by limestone perimeter walls , which define the extent of the depot and its original topography to the south , east and north . The walls are of random rubble limestone and lime mortar and range in height from 1 @.@ 2 to 5 metres (3 ft 11 in to 16 ft 5 in) . The additional four courses added in 1898 are of dark stone with a coping . Attached piers occur at approximately 6 @-@ metre (20 ft) centres on the lee sides of the walls . There are a number of openings including both vehicular and pedestrian gates . The walls are of exceptional heritage significance being a vital part of the precinct defining its character . Sterile zones , inside the main perimeter walls and the walls encircling the female division and outside the prison wall , were standard prison practice for surveillance and contribute to the austere character of the prison .

The entry complex consists of a combined gate house and quarters , an entry court and military and civil guard houses with embrasures flanking the inner gate . The two storey limestone gatehouse , with a central clock , presents an imposing entry to the former prison . The gatehouse and associated entry complex was constructed between 1854 and 1855 using convict labour . It was designed by Royal Engineer Edmund Henderson , and constructed out of limestone . The gatehouse has two towers either side of a narrow gate , reminiscent of those found in 13th century English castles or walled cities . The gate was made from iron which had been scavenged from

shipwrecks , while the clock at the top of the structure was imported from England . The clock was made in London in 1854 , installed two years later , and as of 2004 , was still sounding every hour .

The gatehouse also has a smaller , second , inner gate , engraved with the names of three significant figures : H. Wray RE , who designed the gate ; J. Manning , clerk of works , who supervised its fabrication ; and Joseph Nelson , the Royal Sappers soldier that wrought the iron . The complex was expanded and altered successively throughout the use of the entry complex for prison 's functions . The entry complex was extended north to the female division as a workshop range , the western workshops , leaving a sterile zone beside the perimeter wall . The gatehouse has remained a significant feature and landmark since the closure of the prison , as the main entrance , and housing a café and office areas . Restoration was carried out in 2005 , preserving the original stone facade and removing non @-@ original rendering .

= = Cell blocks = =

= = = Main Cell Block = = =

Based on the English Pentonville Prison design model of Joshua Jebb , the site 's key feature , the Main Cell Block , was designed by the Comptroller of Convicts Captain Henderson , and completed in 1859 . Designed to hold up to 1000 prisoners , it is 145 metres (476 ft) long and four storeys high , the longest and tallest cell range in Australia . It was constructed by convicts in the 1850s , and there have been few changes since that time . The 1859 main cell block has an impressive facade and is built of limestone ashlar blocks quarried from the site . It is significant for the ways in which its scale , position in the precinct , simplicity , material and near pristine character ensures that it is the focal and dominating feature of the prison ; the evidence of its fabric , internal configuration and spaces reveals its functioning as a convict depot and subsequent prison and its atmosphere . It has come to symbolise the imperial convict era in colonial Western Australia .

The central , four @-@ storey high cell block is flanked on either end by large dormitory wards , called the Association Rooms . Here , as many as 80 men slept in hammocks , either as a reward for good behaviour or because they would soon receive their Ticket of Leave . In contrast , the cells were a confining space measuring just seven by four feet (2 @.@ 1 by 1 @.@ 2 m) . While each cell initially had a basin connected to running water , the installation was before the advent of S @-@ bends ; the smells coming up the pipes lead to their removal by the 1860s . Following a Royal Commission , the cells were made larger by removing a dividing wall from between two cells . Electric lighting was installed in the 1920s , but there were never any toilets ? buckets were for the duration of the prison 's operation . Since the prison 's closure , six cells have been restored to represent the varying living conditions at different times in the prison 's history . The main block also houses the gallows , solitary confinement cells , and two chapels .

The single storey 1855 refractory block is on the same axis as the main cell block to its east . It consists of twelve punishment cells and six dark cells with no light . The gallows chamber , built in 1888 , is between this and the main cell block and relates to the colonial use of the prison . The gallows operated via a rope tied around a beam , over a trap door , on the upper level . Opening the trap door would cause the condemned prisoner fall , and thus be hanged .

At the centre of the Main Cell Block is the Anglican Chapel , whose windows were the only ones without bars . It occupies a prominent position in the projecting wing in the centre of the facade . It retains its original painted and stencilled wall patterns beneath later paint layers and is the most intact early prison chapel in Australia . Its interior features include an early and substantial example of a laminated arch construction in the colonies and the first in WA , handsome decalogue boards and some original and elegant joinery . Behind the Anglican chapel altar , there is a painted representation of the Ten Commandments . The words to the sixth commandment use the unusual translation of " thou shalt do no murder " rather than " thou shalt not kill , " the more common interpretation in the Church of England . Given that the gallows were still in regular use , it was felt that " thou shalt not kill " would have been hypocritical . The Catholic Chapel was put into the upper

northern Association Ward in 1861 . The floor has evidence of its former use for communal prisoner accommodation , in the form of mortices for hammock rails and a convict painted mural which decorates its wall .

== = New Division == =

Fremantle Prison 's New Division was constructed between 1904 and 1907 , as a response to overcrowding . The division continues the façade alignment of the main block . The building , L shaped in plan , is three storeys high of regular coursed pale ashlar limestone blocks with rock @-@ face . Openings are set in brick and freestone and it has a handsome lantern range above the main atrium . The building is visually significant as it complements the main cell block and completes the northern zone of the prison . The interior configuration and cells are significant as an example of an attempt to introduce the separate system to Western Australia , whereby prisoners were completely isolated for the first three months of their sentence . The division 's exercise yard initially used a panopticon to facilitate this concept during the prisoners ' hour of exercise each day . The system was not successful , and considered a dated prisoner management strategy , leading its removal within five years .

The New Division was the first to have electricity , with underground wiring . During World War Two , the Australian Army appropriated the New Division , to keep prisoners separate from the main population , and for those condemned to death . In 1994 the building was retrofitted to cater for offices , small business premises , and meeting rooms .

== = Women 's Prison == =

The north @-@ western complex was originally a service area with a cookhouse , bakehouse and laundry , built in the 1850s . A place for women prisoners was needed following the closure of Perth Gaol and the transfer of prisoners to Fremantle . The buildings were converted to a prison , and a wall built around them , creating Western Australia 's first separate prison for women ? a gaol within a gaol . Population and crime growth led to them being extended in the 1890s and 1910s . The single storey limestone building , also known as the female division , has a distinctive monitor roof and an upper storey addition to part of the eastern range in red brick . The construction of Bandyup Women 's Prison saw Fremantle 's Women 's Prison close in 1970 . The space was used for education and assessment until the main prison 's closure in 1991 , and has since been adapted for TAFE use as a visual arts facility .

== = Staff accommodation == =

A flat area , to the immediate west of the prison , is called The Terrace and was formed from rubble resulting from the levelling of the prison site . Adjoining the western perimeter wall , but outside the prison on the northern side of the terrace compound , is staff accommodation . Three adjoining residences were built in the 1890s as quarters for prison staff .

The cottages at 2 , 4 , and 6 The Terrace , at the northern end of the street , were built in a Victorian style , in contrast to the Georgian style of the other houses . Number 2 incorporates parts of an 1857 guard room and was converted in the 1890s to quarters , when Numbers 4 and 6 were built alongside as a duplex . Number 2 is a single storey house with random rubble limestone walls and corrugated iron roof separated from the perimeter wall by a rear yard . Numbers 4 and 6 are a pair of single duplex units with random rubble limestone walls , corrugated iron roofs and front verandahs , separated from the perimeter wall by a rear yard .

Four two storey residences , Numbers 8 , 10 , 16 and 18 The Terrace , were built during the 1850s for officer accommodation . Number 8 , also known as the Chaplain 's House , is a two storey house with rendered and painted limestone walls . The plan is roughly square with verandahs and balconies along the west and south sides . A single storey building connects the south @-@ east side of the house to the main prison wall .

Number 10 , also known as the Superintendent 's House , is a two storey house with rendered limestone walls and a corrugated iron roof behind parapet walls . It is connected to the gatehouse with limestone walled buildings . The plan is roughly square and there is a door from the house into the prison from the north @-@ east room of the ground floor . The house was initially built in 1853 for the Chaplain , but was taken over by the superintendent in 1878 and was later used by the prison administration .

Number 16 is a house is two storey building , roughly square in plan , with painted limestone walls and a corrugated sheet metal roof behind a parapet . It accommodated first the superintendent , later on the resident magistrate , and remained in @-@ use as housing for prison officers until the 1970s . Number 18 , also known as the Surgeon 's House , is a two storey structure with limestone walls . It is the southernmost house on The Terrace . Numbers 18 and 8 , the northernmost of the initial buildings , both featured two sitting rooms , three bedrooms , and two dressing rooms , as well as a kitchen , water closet and shed , but with mirrored layouts . Number 18 was expanded with additions built in the 1890s . A single storey limestone structure (former stables) is located to the south of Number 18 .

= = Other buildings = =

= = = Hospital = = =

The hospital , built between 1857 and 1859 , was a crucial component of Fremantle Prison . Public works during the convict era relied on convict labour , which could only be provided if the convicts were healthy . Located in the north @-@ eastern corner of the prison compound , the building is H @-@ shaped in plan , single storey with rendered and painted limestone walls . It features a wide verandah with timber posts . From 1886 to 1903 , medical services were relocated to the main cell block , with the former building used to keep invalids and female prisoners . The hospital was refurbished , and reopened in 1904 . It subsequently remained in continuous operation until the prison 's closure in 1991 .

Adjacent to the hospital building is the east reservoir . The brick vaulted reservoir and reticulation system , constructed in 1890 and about 1895 , appear as a low brick structure . The reservoir roof consists of with five rendered vaults each side of a central vault raised 600 millimetres (24 in) above those each side . The centre of the eastern terrace contains the subsurface remains of the 1850s bathhouse and well .

= = = Workshops = = =

The prison 's workshops provided activities and training for the prisoners . They also reduced the cost of maintenance , repairs , and construction by providing an in @-@ house service . The original workshop was a blacksmith 's shop , one of the first buildings to be constructed on the prison site . Later known as the East Workshops , other workshops included carpenter 's , plumber 's and painter 's , a printing office , and from the 1850s , a metal shop . The West Workshops were built at the start of the twentieth century , providing more work for prisoners through a paint shop , mat maker , shoe maker , book binder and tailor shop . The five western workshops are a single storey squared limestone rubble building with openings dressed in brick , with an open saw @-@ tooth roof with southern skylights , concealed behind a parapet wall . In 1993 the western workshops were adapted for use as TAFE art workshops .

Buildings in the area south of the east workshops were used for a shower block , helmet workshop and associated sheds . The structures are recent and , with the exception of some terrace walling , are the last of a series that have been erected and dismantled since World War I.

= = Tunnels = =

At the south eastern corner of the eastern terrace is the former pumping station , associated tunnels and a set of 1850s workshops within an enclosing wall . Underneath parts of the eastern terrace , the adjacent Hampton Road , the pumping station and the workshops there are a complex series of shafts , drives and weirs cut from the rock during the 1890s and early twentieth century . The east workshops is a single storey limestone building on the western side with an enclosed area to the east . The entire workshops yard was roofed using a light steel truss on steel supports in 1960 .

A network of tunnels exists under the prison , including a one @-@ kilometre (0 @.@ 6 mi) connection to South Beach in South Fremantle . It was built by prisoners , but the purpose was not to enable escapes ; their labour was used to provide the prison , and later the town of Fremantle , with a supply of fresh water . Guards in a gun tower adjacent to the tunnel entrance prevented any attempted escapes .

In 1852 , during construction of the buildings , shafts were sunk into the limestone bedrock to provide the prison with fresh water from an aquifer . In 1874 , the Fremantle 's " Water House Well " , used to supply ships , suffered storm damage . This prompted a tank to be installed at the prison , behind the main cell block , to offer the town an alternative water supply . Prisoners worked a pump to fill the tank , which was connected to the jetties through gravity @-@ fed pipes .

Increasing demand led to the construction of a reservoir in 1876 , from which water was drawn , still pumped by prisoners . From 1888 to 1894 , additional wells were built , connected by a series of tunnels or horizontal drives 20 metres (66 ft) under the north @-@ east of the prison . A steam pump was implemented , which drew fifteen thousand imperial gallons (68 @,@ 000 L) per hour of water into the new East Reservoir . In 1896 , a town reservoir was constructed on Swanbourne Street , fed from the prison by a triple expansion steam @-@ driven pump which could take more than one million imperial gallons (4 @.@ 5 ML) per day from the prison tunnels . Prisoners , relieved of manual pumping , were employed to supply wood and stoke boilers .

The Metropolitan Sewerage & Water Supply authority took over control of the pumping station from 1901 until 1910 , when both the prison and town were connected to Perth 's metropolitan water supply . The tunnels were closed in 1910 , but the groundwater continued to be used for the prison 's gardens . In 1989 , oil leaking from nearby tanks contaminated the water . The pollution was eventually cleared by 1996 through bioremediation .

Since the prison 's closure the water supply system including the tunnels , were the subject of heritage studies , including a 2004 inspection by the Western Australia Maritime Museum . The tunnels were re @-@ opened in mid @-@ 2005 , and within one year the main shaft had been refurbished , including " installation of audio @-@ visual equipment , railings and lighting as well as the removal of debris from the access shaft and tunnels , the creation of new steel platforms and ladders and the addition of extra limestone rocks in the tunnels to help lift users out of the water . "

= = Open spaces and related elements = =

The open spaces of the precinct are significant as they provide impressive settings for the structures . They are also important spaces in their own right retaining the stark open character of a penal institution required for surveillance . The extensive forecourt of the main cell block , with its scale and secure location within the perimeter walls , is particularly impressive . Paths are bitumen with grassed garden beds delineated by raised brick edging . South Knoll comprises the remains of the high , natural ground level which at least by 1896 had been terraced to form flat , grassed areas . The former playing fields and tennis courts are still in evidence . There is a brick- vaulted reservoir located under the Knoll . The significant landscape presents an austere and formal quality within the perimeter walls . Generally the landscape is sparse and simple , comprising unobtrusive elements such as lawn , low plantings and pavement . Landscape elements outside the walls include the exotic almond and pine trees on the Terrace .

An inclined tramway , the ramp , was built from the front of the terrace , on the axis of the gatehouse , down towards the port area of Fremantle . The ramp , constructed between 1852 and 1853 , is of limestone rubble from the cut and fill activities required to create the prison site and the

terrace . The ramp is an integral part of the original design of the prison complex and is of exceptional heritage significance . It is now cut at its western end by a modern road which severs the historic visual link with Fremantle . On each side of the alignment of the ramp , where it intersects with Henderson Street , are three terrace houses for the accommodation of prison warders . These were erected between 1851 and 1858 and mark the boundary of the Convict Establishment at this point . The limestone used for the early prison and its associated housing was quarried on the site .

Other surviving elements of the early convict establishment include Henderson 's house , " The Knowle " , the three Henderson Street cottages (terrace housing) at numbers 7 ? 17 , 19 ? 29 , and 31 ? 41 Henderson Street , a range of terraces at 3 ? 9 Holdsworth Street , paths , roads and ramps , garden sites , walls , sub surface works and the more distant routes to the Asylum , the Commissariat Store and wharf site .

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