

# Application form

Heritage

## Entry of a place in the Queensland Heritage Register

**Use this form** to apply to have a place considered for entry in the Queensland Heritage Register under the Queensland Heritage Act 1992.

### Before completing this application form:

- read the *Application Guide: Entering a State Heritage Place in the Queensland Heritage Register* available at [www.qld.gov.au/environment/land/heritage/](http://www.qld.gov.au/environment/land/heritage/)
- call 13 QGOV (13 74 68) and discuss this application with the Applications Coordinator, Heritage Branch

### 1. Applicant details

APPLICANT NAME/S [REDACTED]	TITLE [REDACTED]
ORGANISATION NAME (if applicable) CITY PARKLANDS SERVICES PTY LTD	
POSTAL ADDRESS GPO Box 2755, Brisbane	POSTCODE 4001
EMAIL ADDRESS [REDACTED]	
TELEPHONE (business hours) [REDACTED]	MOBILE [REDACTED]
TELEPHONE (after hours)	EMAIL

### 2. Applicant consent

Ticking YES in the box below means you give consent to the department to publicly disclose your name with this application. At no time (whether you tick YES or NO) will your personal contact details be made public during processing and assessment of this application. The department removes contact details (i.e. address, email and telephone numbers) from all copies of the application except those provided to the Queensland Heritage Council.

<b>Applicant consents to personal information being released</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
APPLICANT'S SIGNATURE [REDACTED]		

## Entry of a place in the Queensland Heritage Register

PRINT APPLICANT'S NAME  [REDACTED]	DATE SIGNED  08/01/2024
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### 3. Place details

NAME OF PLACE AND / OR FORMER NAME QHR 601995 Monier Ventilation Shaft 1 (Spring Hill) - Application for the entry of additional land to the Queensland Heritage Register	
STREET ADDRESS 500 Wickham Terrace, Brisbane City, 4000	
LOT/S ON PLAN/S 1 ROAD0 (Wickham Terrace, existing entry) 42 SP145686 (additional land)	LOCAL GOVERNMENT AREA/S Brisbane City Council
GPS COORDINATES (IF KNOWN)	

### 4. Consultation with the owner of the place

Do you own the place that is the subject of this application?      Yes       No

If you are not the owner of this place, have you consulted with the owner?      Yes       No

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### 5. History of the place

#### HISTORICAL SUMMARY

Two Monier sewer ventilation shafts (Monier vents) are located on Wickham Terrace in central Brisbane, on the traditional land of the Turrbal and Jagera peoples. The vents, which resemble tall, thin chimneys, are hexagonal in section, reinforced concrete structures (most likely pre-cast). One (c1904) is set into the footpath outside Roma Street Parkland, just north of Twine Street (currently entered on QHR 601995); while another (c1905) stands in a garden bed just inside the Parkland, west of Dark Street (this vent is the subject of this Application for the entry of additional land to the Queensland Heritage Register). The vents are associated with the first Spring Hill stormwater drainage systems, laid c1879-86.

At the time the vents were constructed, Brisbane's stormwater drains were called 'sewers', as they also carried household sullage (greywater), and this arrangement produced noxious gases which had to be vented from the highest points in the stormwater/sewerage system. The term 'Monier' refers to the reinforced concrete system patented by the French gardener Joseph Monier in 1867 and introduced into Australia in the early 1890s. The Monier vents, now decommissioned as Brisbane's stormwater drains no longer carry greywater, have always been rare in Queensland, and may be the oldest surviving pre-cast reinforced concrete structures in Queensland.[1] Two other Monier sewer vents are known to survive in 2023: one near the east end of the south side of Florence Street, Teneriffe (1904) [QHR 602068], and one on St Pauls Terrace, Spring Hill [QHR 602067], opposite Gloucester Street (1905).

The two Wickham Terrace Monier vents were located at the heads of two separate stormwater drainage systems for the early Brisbane suburb of Spring Hill. The vent on the footpath near Twine Street was at the head of the system for 'Hanley's Valley', located between Leichhardt Street and Wickham Terrace. The vent in the Parkland near Dark Street was at the head of the system for 'Spring Hollow', located between Leichhardt Street and Gregory Terrace.[2]

In February 1902, City Alderman (1901–04, North Ward) Richard Gailey (1834 – 1924), a well-known architect, stated that the City Engineer needed to report on providing ventilators 'at the upper or higher ends of all the existing storm and house sewage drains in the city, beginning with the drains behind Wickham Terrace, and in Spring Hollow, George Street, Merthyr Road, and Bowen Terrace and Clay Street, and afterwards the drains between Main Street and Wellington Road, and at the Woolloongabba railway station'.[3]

The Brisbane Municipal Council (Brisbane City Council from March 1903) responded to demands for sewer ventilation, and on 30 April 1903, the Works Committee recommended that the City Engineer be authorised to erect sewer ventilating shafts wherever they were urgently required, with an estimated cost of spend £1,537.[4]

It is likely that the Monier vent on Wickham Terrace near Twine Street dates from 1904. A Brisbane City Council key plan, 4 chains to an inch (undated), shows two 'Monier shafts' on Wickham Terrace, near Twine Street and Lilley Street (latter not extant in 2023), both venting the Hanley's Valley drainage system. The Monier vent at the head of the Spring Hollow system, inside the Roma Street Parkland near Dark Street, is not yet present on this plan.[5]

The Monier vent near Dark Street appears to postdate March 1905, when Richard Gailey blamed the absence of proper ventilation of the Spring Hollow sewer for cases of dengue fever (actually spread by mosquitos) in Spring Hill. He noted that sewer gases were escaping from gully-gratings along the sewer's route, and people were having to add ventilation pipes to above their houses, to draw off sewer gases from their connecting drains.[6]

In response to complaints about a lack of vents in the North Ward (Spring Hill) the City Council authorised £150 for the erection of sewer ventilation shafts in May 1905. In July 1905 authority was given for the erection of a ventilation shaft in Leichardt Street (now St Pauls Terrace in this location) near Gloucester Street.[7]

The Monier vent for Spring Hollow may have also resulted from the 1905 funding. It was extant by January 1907, when it was reported that 'the ventilating shaft erected at the upper end of this particular sewer [Spring Hollow] was devised to meet this evil [escape of sewer gas through back pressure through the water in traps]'.[8]

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In 2023, the four surviving Monier vents (of the six known to have been constructed) are decommissioned, and no longer appear to be connected to active stormwater drains. They survive as remnants of an important improvement to Brisbane's sanitary engineering in the early 20th century.

(For more detail on the establishment of Brisbane's stormwater drainage system, **see attachment 1** (existing entry for QHR 601995))

### REFERENCE LIST

[1] CAH Oliver, 1995, 'Historic stormwater drainage vents in inner Brisbane suburbs', paper presented to the Institution of Engineers, Australia – Queensland Division, Southern Engineering Conference, Ipswich 20-22 October 1995, p.1; National Trust of Queensland, c1997, BNE 1/457 'Monier Ventilation Shafts'.

[2] Plan of the Town & Environs of Brisbane, County of Stanley, NSW 1858; Brisbane City Council key plan, 4 chains to an inch (undated), cited in National Trust of Queensland, c1997, BNE 1/457 'Monier Ventilation Shafts'.

[3] 'City Council', *The Telegraph* (Brisbane), 4 February 1902, p.3; 'Richard Gailey', Kangaroo Point and Districts Historical Society, <https://kangaropointhistory.com.au/stories/people/richard-gailey/> (accessed 23 August 2023).

[4] Queensland State Archives, A10468, 'Brisbane City Council I'; Oliver, 'Historic stormwater drainage vents in inner Brisbane suburbs', p.5.

[5] Brisbane City Council key plan, 4 chains to an inch (undated), cited in National Trust of Queensland, c1997, BNE 1/457 'Monier Ventilation Shafts'.

[6] 'City Council', *The Telegraph* (Brisbane), 14 March 1905, p.3; 'Spring Hill Sewers', *Brisbane Courier*, 15 March 1905, p.3.

[7] 'City Council' *The Telegraph* (Brisbane), 9 May 1905, p.3 (£150) 'City Council', *The Telegraph* (Brisbane), 18 July 1905, p.3.

[8] 'Insanitary conditions. Serious reports. Sewers and Dairies', *Brisbane Courier*, 29 January 1907, p.3.

### LIST OF ATTACHMENTS

1: QHR 601995 'Monier Ventilation Shaft 1 (Spring Hill)'

2: Map 1, plan of proposed additional land for entry in the Queensland Heritage Register (DES, 2023).

## Entry of a place in the Queensland Heritage Register

### 6. Description of the place

#### WRITTEN DESCRIPTION

Two Monier sewer ventilation shafts (Monier vents) are located adjacent to Wickham Terrace in Brisbane City, just outside the boundary of the suburb of Spring Hill. The southernmost of these two vents (c1904) (currently entered on QHR 601995) is located on the footpath outside Roma Street Parkland within the Wickham Terrace road reserve, just north of Twine Street, while the northernmost vent (c1905) is located in a garden bed just inside one of the three Parkland property lots (Lot 42 SP145686), west of Dark Street (vent subject of this Application for the entry of additional land to QHR 601995). The vents were placed at the heads of two separate stormwater drainage systems for Spring Hill (Hanley's Valley and Spring Hollow respectively), to vent the sewer gases produced at a time when Brisbane's stormwater drains also carried household greywater.

Both ventilators are constructed of smooth reinforced concrete, cast in a hexagonal shape, with simple ornamentation. The vent set into the footpath near Twine Street, c1904, has a regular hexagonal shape, with base dimensions of approximately 65cm parallel to the road, from face to face (referred to as the 'height' of the hexagon); and about 75cm across the path, from point to point (referred to as the 'width' of the hexagon). Twin ornamental bands are set about halfway up the shaft, which has an estimated height above ground level of around 9m. There is a cornice just below the mouth of the shaft.

The vent in the Roma Street Parkland near Dark Street (currently excluded from the heritage boundary), c1905, has an irregular hexagonal shape, being approximately 55cm across the garden bed, face to face (height); and about 85cm parallel to the road, from point to point (width). It stands on a rough concrete base slab (160cm long parallel to the road), inside a garden bed retained by a low stone wall. Twin ornamental bands are set over halfway up the shaft, which has an estimated height above ground level of around 9m. There is a cornice just below the mouth of the shaft.

### 7. Statement of cultural heritage significance

Decide which criteria are relevant to your application and complete a response for each in the boxes below. Write 'not applicable' against the criteria that are not relevant to your application.

<p>CRITERION A the place is important in demonstrating the evolution or pattern of Queensland's history</p>	<p><u>Current entry:</u></p> <p><i>The Monier Ventilation Shafts, constructed c1904, are important in illustrating late 19<sup>th</sup>/early 20<sup>th</sup> century attitudes toward public health and sanitation, and survive as visible evidence of Brisbane's early and extensive stormwater drainage scheme and venting system. The three surviving concrete shafts are thought to be the first pre-cast reinforced concrete structures in Queensland, and examples of the earliest application of the Monier system of reinforced concrete construction in Queensland.</i></p> <p><u>Comment on proposed additional land:</u></p> <p>The proposed additional land in Roma Street Parkland contains a Monier Ventilation Shaft, contemporary with that included within the existing boundary, which also satisfies this criterion by illustrating past attitudes toward public health and sanitation, providing evidence of Brisbane's early stormwater drainage scheme, and being an example of the earliest application of the Monier system in Queensland.</p>
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<p>CRITERION B the place demonstrates rare, uncommon or endangered aspects of Queensland's cultural heritage</p>	<p><u>Current entry:</u></p> <p><i>They provide rare surviving evidence of this early use of true reinforced concrete and are significant as indicators of the technically advanced state of municipal engineering and construction in Brisbane at the turn of the 20th century.</i></p> <p><u>Comment on proposed additional land:</u></p> <p>The proposed additional land in Roma Street Parkland contains a Monier Ventilation Shaft, contemporary with that included within the existing boundary, which also satisfies this criterion by providing rare surviving evidence of the early use of reinforced concrete and an indication of the technically advanced state of municipal engineering in Brisbane at the time.</p>
<p>CRITERION C the place has potential to yield information that will contribute to an understanding of Queensland's history</p>	<p><u>Current entry:</u></p> <p><i>They have the potential to contribute further to our understanding of: i. community attitudes toward public health in the late 19th/early 20th centuries; ii. Brisbane's early stormwater drainage scheme; and iii. early pre-cast reinforced concrete technology in Queensland.</i></p> <p><u>Comment on proposed additional land:</u></p> <p>The proposed additional land in Roma Street Parkland contains a Monier Ventilation Shaft, contemporary with that included within the existing boundary, which also satisfies this criterion by having the potential to contribute further to our understanding of community attitudes toward public health, Brisbane's early stormwater drainage scheme, and early pre-cast reinforced concrete technology in Queensland</p>
<p>CRITERION D the place is important in demonstrating the principal characteristics of a particular class of cultural places</p>	<p><u>Current entry:</u></p> <p><i>They remain highly intact examples of their type and demonstrate engineering skill and involvement in creating aesthetically pleasing but functional structures.</i></p> <p><u>Comment on proposed additional land:</u></p> <p>The proposed additional land in Roma Street Parkland contains a Monier Ventilation Shaft, contemporary with that included within the existing boundary, which also satisfies this criterion by being a highly intact example of its type, demonstrating engineering skill and an aesthetically pleasing but functional structure.</p>
<p>CRITERION E the place is important because of its aesthetic significance</p>	<p><u>Current entry:</u></p> <p><i>They remain highly intact examples of their type and demonstrate engineering skill and involvement in creating aesthetically pleasing but functional structures.</i></p> <p><u>Comment on proposed additional land:</u></p> <p>The proposed additional land in Roma Street Parkland contains a Monier Ventilation Shaft, contemporary with that included within the existing boundary, which also satisfies this criterion by being a highly intact example of its type, demonstrating engineering skill and an aesthetically pleasing but functional structure.</p>
<p>CRITERION F the place is important in demonstrating a high degree of creative or technical achievement at a particular period</p>	<p><u>Current entry:</u></p> <p><i>They provide rare surviving evidence of this early use of true reinforced concrete and are significant as indicators of the technically advanced state of municipal engineering and construction in Brisbane at the turn of the 20th century.</i></p>

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	<p><u>Comment on proposed additional land:</u></p> <p>The proposed additional land in Roma Street Parkland contains a Monier Ventilation Shaft, contemporary with that included within the existing boundary, which also satisfies this criterion by providing rare surviving evidence of the early use of reinforced concrete and an indication of the technically advanced state of municipal engineering in Brisbane at the time.</p>
<p>CRITERION G the place has a strong or special association with a particular community or cultural group for social, cultural or spiritual reasons</p>	NA
<p>CRITERION H the place has a special association with the life or work of a particular person, group or organisation of importance in Queensland's history</p>	NA

### 8. Site plan showing proposed boundary

Attach a site plan to this form. Tick to confirm:

- the site plan is drawn or sketched to scale
- all significant heritage elements of the place are shown and clearly labelled in their approximate locations
- the proposed heritage boundary is shown
- the cadastral (lot on plan) boundaries of the place are shown

### 9. Photographs

Attach photographs to this application that show the place in its current state. Number all photographs and complete the index table below adding more rows if needed.

If submitting an electronic application, submit the photographs in a digital file attached with the application form. Maximum file size for digital images attached to this form is 250kb each.

If submitting an application in hard copy, submit the photographs as an electronic file saved onto a CD or USB and attach one hardcopy print out of images to this application form.

<p>DATE AND TIME TAKEN 17 August 2023</p>	<p>PHOTOGRAPHER [REDACTED]</p>
<p>COPYRIGHT PERMISSIONS <i>By law copyright of material submitted is subject to conditions set out in the copyright licence for that material.</i></p> <p><i>Please enter licensing details in the metadata for each image/file requiring copyright.</i></p> <p><i>A copyright licence may be obtained free of charge from Creative Commons at <a href="http://www.creativecommons.org">www.creativecommons.org</a>. Creative Commons licence 'Creative Commons Attribution-Non-Commercial-No Derivative Works' is recommended. This licence</i></p>	

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<i>maintains author copyright but allows others to copy and distribute work provided the author is given credit (in a way specified by the author) and the work is not changed in any way and is not used commercially.</i>		
IMAGE NUMBER	FILE NAME	DESCRIPTION
1	601995_Twine Street_20230817 (5)	Vent near Twine street (already in QHR 601995) from east.
2	601995_Parklands_20230817 (10)	Vent inside Roma Street Parkland, near Dark Street (to be added to QHR 601995)
3	601995_Parklands_20230817 (6)	Vent inside Roma Street Parkland, near Dark Street (to be added to QHR 601995) shaft ornamentation detail

### 10. Lodgement

All sections of this form must be completed and attachments prepared (in particular the site plan showing the proposed heritage boundary and photographs of the place) before an application is lodged. Incomplete applications cannot be accepted.

**Send one copy of the completed form and attachments to:**

**Email:**

heritage@des.qld.gov.au

**OR**

**Post:**

Applications Coordinator  
Heritage Branch  
Arts and Heritage  
Department of Environment and Science  
GPO Box 2454  
Brisbane Qld 4001

### Further information

- email [heritage@des.qld.gov.au](mailto:heritage@des.qld.gov.au)
- call 13 QGOV (13 74 68) and ask to speak to the Applications Coordinator, Heritage Branch
- visit [www.qld.gov.au/environment/land/heritage/](http://www.qld.gov.au/environment/land/heritage/)



# Entry in the Queensland Heritage Register

State Heritage Place

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Figure 1: Monier Ventilation Shaft 1 (Spring Hill) (1998)

<b>Place ID</b>	<b>601995</b>
<b>Place name</b>	<b>Monier Ventilation Shaft 1 (Spring Hill)</b>
<b>Address</b>	500 Wickham Terrace, SPRING HILL, 4000
<b>LGA</b>	BRISBANE CITY COUNCIL
<b>RPD</b>	1 ROAD0
<b>Boundary Description</b>	See attached map

## Statement of Significance

**Monier Ventilation Shaft 1 (Spring Hill)** is a place that satisfies one or more of the criteria specified in s.35(1) of the Queensland Heritage Act 1992 as evidenced by, but not exclusive to, the following statement of cultural heritage significance, based on criteria:

<p><b>Criterion A</b></p> <p>The place is important in demonstrating the evolution or pattern of Queensland's history</p>	<p>The Monier Ventilation Shafts, constructed c1904, are important in illustrating late 19th/early 20th century attitudes toward public health and sanitation, and survive as visible evidence of Brisbane's early and extensive stormwater drainage scheme and venting system. The three surviving concrete shafts are thought to be the first pre-cast reinforced concrete structures in Queensland, and examples of the earliest application of the Monier system of reinforced concrete construction in Queensland.</p>
<p><b>Criterion B</b></p> <p>The place demonstrates rare, uncommon or endangered aspects of Queensland's cultural heritage</p>	<p>They provide rare surviving evidence of this early use of true reinforced concrete, and are significant as indicators of the technically advanced state of municipal engineering and construction in Brisbane at the turn of the 20th century.</p>
<p><b>Criterion C</b></p> <p>The place has potential to yield information that will contribute to an understanding of Queensland's history</p>	<p>They have the potential to contribute further to our understanding of: i. community attitudes toward public health in the late 19th/early 20th centuries; ii. Brisbane's early stormwater drainage scheme; and iii. early pre-cast reinforced concrete technology in Queensland.</p>
<p><b>Criterion D</b></p> <p>The place is important in demonstrating the principal characteristics of a particular class of cultural places</p>	<p>They remain highly intact examples of their type and demonstrate engineering skill and involvement in creating aesthetically pleasing but functional structures.</p>
<p><b>Criterion E</b></p> <p>The place is important because of its aesthetic significance</p>	<p>They remain highly intact examples of their type and demonstrate engineering skill and involvement in creating aesthetically pleasing but functional structures.</p>
<p><b>Criterion F</b></p> <p>The place is important in demonstrating a high degree of creative or technical achievement at a particular period</p>	<p>They provide rare surviving evidence of this early use of true reinforced concrete, and are significant as indicators of the technically advanced state of municipal engineering and construction in Brisbane at the turn of the 20th century.</p>

## History

The Monier Ventilation Shafts are thought to have been constructed c1904, as part of a system of ventilation shafts [either concrete or steel/iron] located at intervals along some of Brisbane's inner city arterial stormwater drains. Three concrete shafts survive [of at least five erected] and may be the first pre-cast reinforced concrete structures in Queensland.

The Wickham Terrace shaft, on the footpath at the eastern end of Albert Park, opposite Twine Street, was one of a pair, the other having been erected just inside the park, opposite Lilley Street, but since removed. A concrete shaft of identical dimensions exists on the footpath of St Paul's Terrace, opposite Gloucester Street. Both the Wickham Terrace and St Paul's Terrace shafts appear to have been associated with the first Spring Hill stormwater drainage system, laid in the 1880s. A third shaft, of similar but smaller dimensions, exists on the footpath near the former Queensland Primary Producers' Woolstore No.8, in Florence Street, Teneriffe. Stormwater drains were laid in Florence and Ethel streets in mid-1904, and the concrete ventilation shaft at the east end of the Florence Street drain may have been constructed shortly afterwards.

In the 19th century, the distinction between drainage and sewerage was not well defined. Drains were described as sewers and they received a combination of sullage, roof and surface run-off. They relied on rainwater for flushing, and discharged to the nearest watercourse.

When Brisbane acquired municipal status in late 1859, there was no system of drainage or sewerage in the town. Most people dumped refuse in the creeks and channels, trusting that stormwater would carry it away to the river, and for some years the Municipal Council considered drainage and sewerage as one and the same thing. However, from about 1868 the Council adopted the policy of 'rainfall to the river' and 'sewerage to the land', developing a city drainage scheme to carry off stormwater and an earth closet sanitary service.

The Brisbane Drainage Act of 1875, under which the colonial government agreed to set aside crown land for sale to finance Brisbane's drainage scheme, provided the impetus for construction of Brisbane's early arterial stormwater drains. The systems were designed by the colonial government's Engineer for Harbours and Rivers, WD Nisbet, and carried out by government contractors under government supervision. Upon completion they became the property and responsibility of the Brisbane Municipal Council, which was responsible also for laying branch drains.

By 1878, the inner city was drained by three separate systems: the Frog's Hollow system - a main drain down Albert and Margaret Streets with branches laid by the Brisbane Municipal Council; the Adelaide-Creek Street system, which drained the centre of the town from Makerston Street to Queen Street and the lower sections of Elizabeth and Charlotte Streets; and the Makerston Street system, which served the area between Makerston Street and Petrie Terrace, and between Wickham Terrace and College Road and the Brisbane River.

Between 1879 and 1886 the Brisbane Municipal Council, with government loans, developed an arterial drainage system for the densely populated suburbs of Spring Hill and Fortitude Valley [even though the Valley lay outside the Brisbane town boundary]. Much of this work comprised open drains, which were covered in the late 1890s. South Brisbane and Kangaroo Point drainage systems were constructed in 1885-86. In the late 1880s, the Brisbane Municipal Council drained parts of New Farm, and a drainage system for Petrie Terrace, begun in 1883, was completed in the late 1880s. By 1890, the Brisbane Municipal Council had completed an arterial drainage scheme for the city core, at a total cost of nearly £130,000.

The densely populated Division of Booradabin was annexed to the Municipality of Brisbane

in 1903, and in 1908 a loan was secured to enable the Council to complete the drainage of Merthyr, New Farm, Teneriffe, Bowen Hills, Mayne and Newstead by the end of 1909.

Without a proper sewerage system, Brisbane residents still tended to dispose of household and trade waste into the stormwater drainage systems. This led to the chronic pollution of local creeks, and foul smells emanating from the stormwater drains. Prior to bacterial theory being widely accepted, such miasma was thought to cause disease.

The situation was compounded in 1900 with the arrival of bubonic plague in Australia, carried by rats aboard ships arriving from foreign ports. The first case of human plague in Sydney was reported in January 1900, and in Brisbane [a day and a half away by steamer] on 27 April 1900. Between 1900 and 1909, plague broke out in most of Queensland's ports, galvanising the State into developing tighter controls over public health and sanitation.

In the early 20th century, the Commissioner of Public Health, using the strong coercive powers given to him under the provisions of the Health Act of 1900, required the Brisbane Municipal Council to erect ventilators in city streets to remove foul and unhealthy smells from the drainage systems. In 1900, the Council called tenders for the construction and erection of a ventilating shaft at Thorn Street, Kangaroo Point. No trace remains of this vent, except for its design, which was in the Monier system of re-inforced concrete, and identical with that of the vents that have survived on Wickham Terrace and St Paul's Terrace.

The Monier system of reinforced concrete [invented by Frenchman Joseph Monier and patented in 1867] was introduced to Australia in the early 1890s by WJ Baltzer, a New South Wales engineer. Monier's was the first true reinforced concrete, based on calculations which ensured that the steel was dispersed so as to take tension and shear forces. Baltzer, in association with contracting engineers Carter Gummow and Co. of Sydney, gained the Australian rights to this innovative fabric. The company constructed the first Monier system structure [a small arch for a storm water culvert] in Burwood, New South Wales, in 1894 and a sewer aqueduct linking the Sydney suburbs of Annandale and Balmain in 1895. The first use of the Monier system in Victoria was in 1897 with the Anderson Street Bridge over the Yarra, designed and constructed by Carter Gummow & Co.

Carter Gummow and Co. began manufacture of Monier pipes in Sydney in 1897, and John Monash's Reinforced Concrete & Monier Pipe Construction Co. commenced production in Melbourne in 1903.

During the financial year 1903-04, the Brisbane Municipal Council authorised the spending of £1,537 on erecting sewer [drain] ventilating shafts wherever they were urgently needed. It is thought that the surviving concrete ventilation shafts were constructed in consequence.

## Description

The three surviving concrete ventilation shafts are located in Brisbane's inner city suburbs of Spring Hill and Teneriffe. Two are in Spring Hill - one at the eastern end of Albert Park, on the footpath on Wickham Terrace opposite Twine Street; another on the footpath on St Paul's Terrace, opposite Gloucester Street. A third is located on the footpath in Florence Street, Teneriffe, west of the intersection with Macquarie Street. They ventilate stormwater drains rather than sewers.

The Spring Hill ventilators are located on ridges, but the Teneriffe ventilator is on low ground near the Brisbane River. It is not known what rationale was adopted in deciding where the vents were to be placed.

The ventilators are constructed of reinforced concrete, hexagonal in shape, with simple ornamentation at half height and apex. The Spring Hill ventilators are 30 feet tall

[approximately 9 metres] with a base width of 21 inches [about 52cm]. They have a wall thickness of 4.5 inches [11.5cm] at the base, tapering to 3 inches [7.8cm] at the top. The Teneriffe ventilator is of slightly smaller dimensions.

All three ventilators are thought to have been constructed in accordance with the patented Monier ventilation system for venting public sewers and drains, and probably pre-cast in an hexagonal mould, with the top face open.

## Illustrations



Figure 2: Monier Ventilation Shaft 1 (Spring Hill) (2008)



Figure 3: Monier Ventilation Shaft 1 (Spring Hill) (1998)

## Heritage register boundary



Figure 4: Monier Ventilation Shaft 1 (Spring Hill) - boundary map (2006)

**Process Statement:**

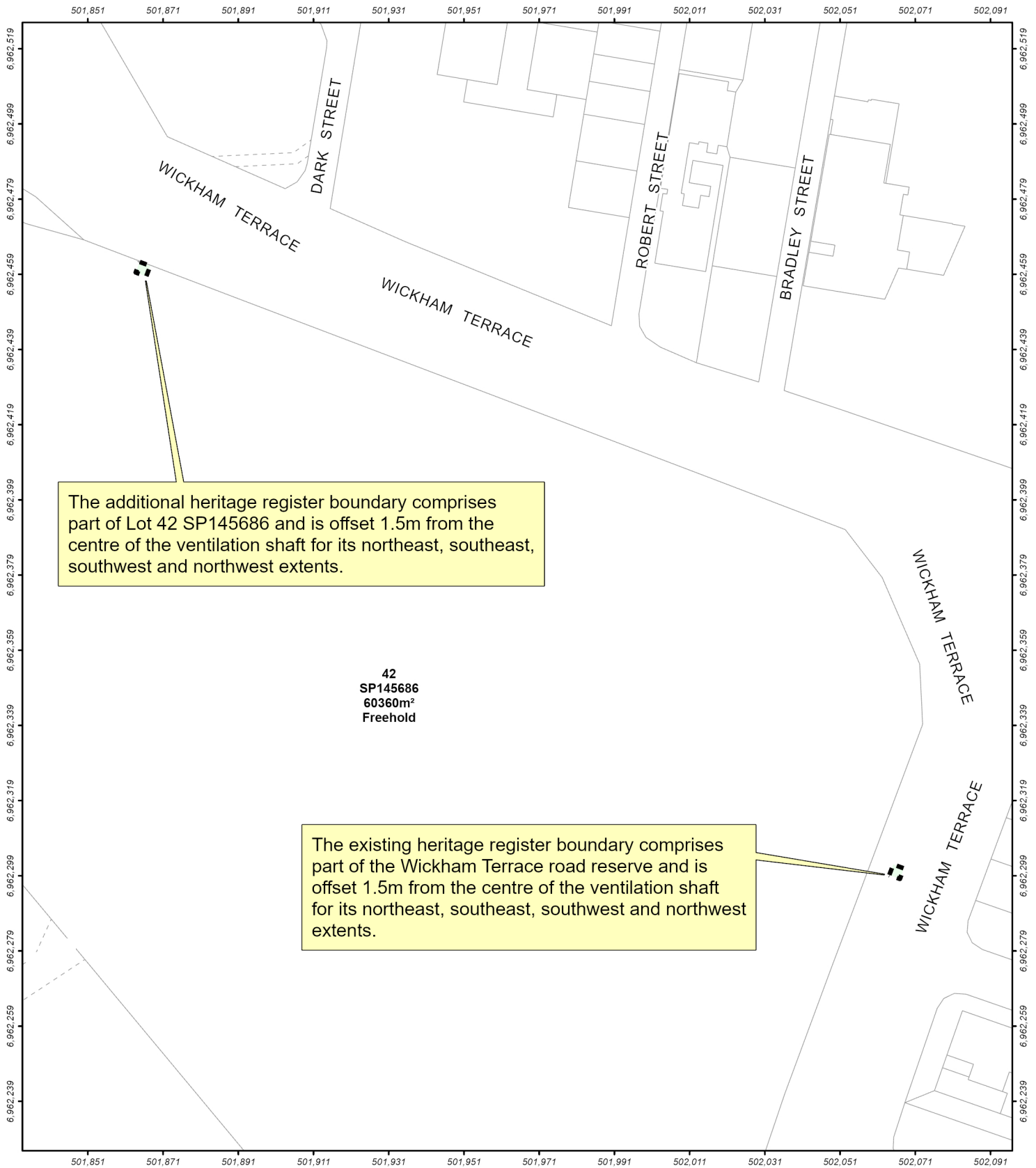
Pursuant to the provisions of the Queensland Heritage Act 1992, the Heritage Council has formed the opinion that these are places of cultural significance which satisfy one or more of the criteria for provisional entry in the Heritage Register and that it is possible for the cultural heritage significance of these places to be conserved. The decision of the Heritage Council is recorded in the minutes of the Council meeting of 26 June 1998.

The places were entered permanently in the Heritage Register on 4 August 1998.

**Note:** This document has been prepared on the basis of current information, and assessed under the criteria in the Queensland Heritage Act. This document may be reassessed if further evidence becomes available. The statement of significance specifies the most important heritage values of the place. The purpose of this document is to provide an informed evaluation for heritage registration. This does not negate the need for a thorough conservation study by a qualified practitioner, or Cultural Heritage Branch consultation, before any action is taken which may affect the significance of the place.







# Additional land proposed to add to existing heritage register boundary for 601995

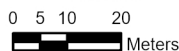
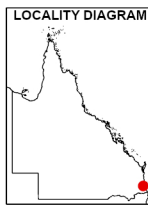


## Map 1

### Heritage register boundary overview

#### Legend

-  Heritage register boundary
-  Lot boundary
-  Lot Type Parcel
-  Easement



This product is projected into GDA2020 MGA Zone 56

Date created: 21/11/2023

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#### Disclaimer:

The data used to formulate the heritage boundary displayed on this map may have been derived from a variety of data sources and actual dimensions and the location of the heritage boundary is subject to formal survey.

All information displayed is current as of the date the map was created.

While every care is taken to ensure the accuracy of the information contained in this product, the Queensland Department of Environment and Science makes no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and disclaims all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages (including indirect or consequential damage) and costs which you might incur as a result of the product being inaccurate or incomplete in any way and for any reason.











