

Statement of Recommendation from the Executive Director, Heritage Victoria

Benalla Railway Signal Box

Corner of Mackellar Street and Nunn Street/Midland Highway,
Benalla, Benalla Rural City

Yorta Yorta Country



Executive Director recommendation

Under section 37 of the *Heritage Act 2017* (the Act) I recommend to the Heritage Council of Victoria (Heritage Council) that the Benalla Railway Signal Box, located at the corner of Mackellar Street and Nunn Street/Midland Highway, Benalla is not of State-level cultural heritage significance and should not be included in the Victorian Heritage Register (VHR).

I note that the place is already included in the Heritage Overlay of the local planning scheme.

I suggest that the Heritage Council determine that:

- the Benalla Railway Signal Box, corner of Mackellar Street and Nunn Street/Midland Highway, Benalla, is not of State-level cultural heritage significance and should not be included in the VHR in accordance with section 49(1)(b) of the Act



STEVEN AVERY
Executive Director, Heritage Victoria

Date of recommendation: 21 February 2024

Explanatory note to readers

The system of heritage protection in Victoria essentially operates at two levels.

Most heritage places in Victoria will be important at a local level to particular communities. These heritage places may be appropriate for protection by local government by means of a Heritage Overlay under the local planning scheme.

A much smaller percentage of places and objects will be important at a State level. This means that they tell an important story in the history of Victoria, rather than the history of their local area or region. Places and objects of State-level cultural heritage significance may be considered for inclusion in the VHR under the Act.

The very high benchmark or 'threshold' for inclusion in the VHR is demonstrated by the fact that as of November 2023, there were just over 2,350 places of State-level significance which were included in the VHR. This compares to over 19,000 places of local-level importance protected by Victoria's 79 councils in Heritage Overlays. In other words, roughly 10% of Victoria heritage places were protected at a State-level by inclusion in the VHR compared with 90% being protected by local government.

In the case of the Benalla Railway Signal Box, it has already been established by the Benalla Rural City Council that the place is of heritage significance at the local level as demonstrated by its inclusion in the Heritage Overlay of the Benalla Planning Scheme.

This current process under the Act has been initiated to establish whether the place or object is of cultural heritage significance to the State of Victoria. Any recommendation or finding of this current process does not in any way diminish the significance that the place or object may hold to the particular community, local government area or region.

More information about heritage protection in Victoria can be found on the [Heritage Council website](#).

The process from here

1. The Heritage Council publishes the Executive Director's recommendation (section 41)

The Heritage Council will publish the Executive Director's recommendation on its website for a period of 60 days.

2. Making a submission to the Heritage Council (section 44 and 45)

Within the 60-day publication period, any person or body may make a written submission to the Heritage Council. This submission can support the recommendation, or object to the recommendation and a hearing can be requested in relation to the submission. Information about making a submission and submission forms are available on the Heritage Council's website.

3. Heritage Council determination (sections 46, 46A and 49)

The Heritage Council is an independent statutory body. It is responsible for making the final determination to include or not include the place or object in the VHR or amend a place or object already in the VHR.

If no submissions are received the Heritage Council must make a determination within 40 days of the publication closing date.

If submissions are received, the Heritage Council may decide to hold a hearing in relation to the submission. The Heritage Council must conduct a hearing if the request is made by a submitter who is a person or body with a real or substantial interest in the place, object or land. If a hearing does take place, the Heritage Council must make a determination within 90 days after the completion of the hearing.

4. Obligations of owners of places and objects (sections 42, 42A, 42B, 42C, 42D and 43)

The owner of a place or object which is the subject of a recommendation to the Heritage Council has certain obligations under the Act. These relate to advising the Executive Director in writing of any works or activities that are being carried out, proposed or planned for the place, object, or land.

The owner also has an obligation to provide a copy of this statement of recommendation to any potential purchasers of the place or object before entering into a contract.

5. Further information

The relevant sections of the Act are provided at Appendix 1.

Description

The following is a description of the Benalla Railway Signal Box at the time of the site inspection by Heritage Victoria in January 2024.

The Benalla Railway Signal Box is located on the traditional lands of the Yorta Yorta people.

Setting and Context

The freestanding signal box is located at the Nunn Street level crossing in Benalla. It once formed part of a vast railway complex stretching to the east of the level crossing that accommodated both freight and passenger movements. The surviving structures include a polychromatic brick passenger building (constructed in 1874 but later modified), a corrugated metal goods shed (a later replacement for the original), and a disused railway turntable. The Broken River Railway Bridge (VHR H1043) is located directly to the west of the precinct.

Most of the tracks servicing the former goods yard and marshalling areas have been removed, including those to the goods shed and turntable. A freight line to Oaklands (via Yarrawonga) branches to the north at the Wodonga end of the former railway yards. The standard gauge line, completed in 1962 to standardise the interstate mainline between Melbourne and Sydney, runs directly south of the signal box and passenger building.

Signal Box

The surviving railway signal box at Benalla (named 'A' to distinguish it from box 'B', previously located further to the east, now demolished) is of a standard double storey design that was widely replicated across the State. The extensively glazed 'operating room' forms the upper floor of the structure and houses the levers and upper part of the McKenzie and Holland lever frame for working points and signals. The ground floor, known as the 'locking room', hosts the lower part of the lever frame (including the interlocking mechanism) and surviving pulleys, rodding and wires previously used to control the signals and points. Various electronic equipment (relays, wet cell batteries, transformers, ammeters) also used in the operation of signals and points, as well as safety mechanisms, is housed in timber lockers within the locking room.

A gable roof in corrugated metal with overhanging eaves covers the entire structure and there are timber bargeboards on the east and west elevations. A continuous strip of timber framed windows is present across the north elevation of the operating room. A corrugated metal sun hood supported by simple timber brackets protects this window strip and continues around to the west elevation. A solitary timber framed window is located on the upper level of the south elevation. Aluminium framed windows on the east and west elevations of the operating room have replaced the timber originals.

Access to the operating room is via a set of external metal stairs on the east elevation leading to a landing. A projecting external 'privy' style toilet, supported by timber posts, is located on the south elevation, and is accessed from the same landing servicing the operating room. The locking room is accessed by a door on the lower floor directly beneath the landing.

Materiality

The entire structure sits on a brick plinth and is of timber frame construction, with chamfered timber corner posts. Aluminium cladding covers all exterior surfaces, mimicking the original timber weatherboard finish. A portion of the original weatherboards survive in the operating room covered on the exterior by the aluminium cladding. The cladding of the locking room on the north elevation has largely been replaced with a temporary fabric covering following a recent vehicle strike.

Description images



2024, north and east elevations of Benalla Railway Signal Box with external stair accessing the operating room and external toilet. Source: Heritage Victoria



2024, north elevation of Benalla Railway Signal Box with temporary fabric covering to locking room following a vehicle strike. Source: Heritage Victoria



2024, south elevation of Benalla Railway Signal Box featuring external stair accessing the operating room and external toilet. Source: Heritage Victoria



2024, north and west elevations of Benalla Railway Signal Box with Nunn Street level crossing in foreground. Source: Heritage Victoria



2024, interior of operating room (upper level) with signal and points levers set in McKenzie and Holland lever frame. Source: Heritage Victoria



2024, underside of lever frame located in locking room (ground floor). Source: Heritage Victoria



2024, rods and pulleys at base of lever frame located in locking room. Source: Heritage Victoria



2024, wet cell battery located in locking room. Source: Heritage Victoria



2024, signal relay located in locking room. Source: Heritage Victoria



2024, electricity transformers and ammeters located in locking room. Source: Heritage Victoria

History

Establishment of Benalla township

The following information on the early settlement of Benalla has been adapted from *City of Benalla Conservation Study*.¹

European settlement of the area now occupied by Benalla 1839 with the establishment of a Border Police Post at the crossing place of the Broken River along the Melbourne to Sydney Road. The presence of Border Police encouraged pastoralists to settle along the river and take advantage of land previously considered marginal in terms of agricultural potential.

The crossing place soon proved unsuitable as a location for a permanent settlement due to the Broken River floodplain, and it was not until 1848 that a proper survey was undertaken. The town survey proposed two separate areas, to the west and east of the river, sufficiently set back from the floodplain and linked by the Melbourne to Sydney Road. The new township was named 'Benalla' in 1849 and allotments put up for sale.

The northeast gold rush of the early 1850s dramatically increased traffic across the Broken River crossing and helped to establish the township proper. Passing trade eventually declined with waning gold returns, eventually replaced by the more sustainable economic success enabled by the region's rich agricultural potential. The settlement grew steadily over the following decades. By 1869 the Shire of Benalla was established, and the township boasted an impressive collection of commercial and civic buildings including a brewery, flour mills, a newspaper, hotels, churches, courthouse, and telegraph office.

The arrival of the Melbourne to Wodonga railway in 1873 at the northern end of Benalla also had a profound impact on the future settlement pattern and economic prosperity of the township. Anticipation of the railway's arrival prompted a flurry of building activity in the area surrounding the future station precinct, with a dramatic increase in the number of private residences and shops in the area. Yards were also constructed for marshalling stock onto trains, and sheds built for the storage of grain destined for transport by rail.

In addition to the travel options now open to residents with the arrival of the railway, the impact on agricultural activity was especially dramatic. The arrival of the railway enabled high volumes of locally produced produce to be sold into markets in Melbourne and beyond for a range of commodities including wheat, beef, mutton, butter, and cheese. Timber for domestic and commercial use was also sourced from forested regions close to the town. Benalla emerged as an important regional centre, reflected in the steady growth of the railway precinct — exemplified by the large passenger station building, extensive railway yards, and associated facilities — through to the early decades of the twentieth century.

Development of the North-Eastern Line

The high engineering standards reached on earlier main and trunk railway lines from Melbourne to Bendigo, Echuca and Ballarat inevitably led to growing concern around the considerable expense associated with such large railway projects.² The outcome was that, when it came time to planning a new line from Melbourne to Wodonga (North-Eastern Line), reducing costs became a top priority. This period of railway building eventually led to what became known as the 'Light Line' era, and planning for the North-Eastern Line provided a template for later economical railway construction in the state. In particular, there was a focus on reducing expenditure on items such ballast and sidings, rolling stock, station buildings (timber and brick with corrugated metal sheeting rather than bluestone), the use of lighter rails, and the construction of iron bridges rather than stone across major river crossings.³

Planning and construction for the entire project was overseen by then engineer-in-chief for the Victorian Railways, Thomas Higinbotham. The eventual route to Wodonga closely followed that of the Sydney Road (later the Hume Highway), taking in both larger towns as well as smaller rural communities. Construction on the line commenced north of Essendon, reaching as far as Seymour by 1872 and finally Wodonga in November 1873. It represented the third main-trunk railway in Victoria after Ballarat (1862) and Echuca (1863), but eventually eclipsed the importance of both those lines when it was further extended across the Murray River to Albury in 1883, thereby becoming part of the nation's first inter-capital rail link between Melbourne and Sydney.⁴

¹ Trevor Budge & Associates, *City of Benalla Conservation Study – Volume 2: Benalla 1836-1991 An Environmental History* (undertaken by Judith Bassett)

² Andrew Ward and Associates, *Study of Historic Railway Buildings and Structures for V/Line*, Volume 1, 1988, p26

³ Ibid, Volume 1 pp27-31

⁴ Ibid, Volume 2 pp151

The line was required to navigate several major rivers, with large iron cylinder rail bridges with wrought iron girders erected at the Goulburn River in Seymour (1872), Broken River at Benalla (1875, VHR H1061), and Ovens River in Wangaratta (1874). Substantial cost savings were made elsewhere on the line by a reliance on level crossings rather than road or rail bridges⁵.

The pattern of cost-cutting on the line was repeated with the first iteration of station buildings, where a distinct pattern of design and construction was adopted depending on the relative importance of the town being serviced. Cheaper, lightweight timber stations were favoured at most locations, though in some cases these were only intended to serve as temporary structures until the construction of permanent facilities. In all cases the construction of stations followed that of goods sheds, and in the case of many smaller stations several years after the opening of the line.⁶

The permanent passenger buildings eventually constructed at Benalla, Seymour (1874, VHR H1591), Wangaratta (1874, VHR H1597), Chiltern (1875, VHR H1603) and Wodonga (1875), while still considered of economical design relative to similar structures on previous trunk and main lines, were a marked improvement on their earlier timber iterations. These larger stations featured impressive polychromatic brick station buildings and a variety of other matching structures. In addition, because of their location at junctions with important branch lines (or as the terminus of the line in the case of Wodonga), the complexes at Seymour, Benalla, Wangaratta, and Wodonga were provided with a combination of additional structures such as goods sheds and sidings, water towers, locomotive turntables, signal boxes, and engine sheds. Benalla was notable for elaborate additions to the passenger building in 1888 and its impressive refreshment rooms and tower. This is at odds with the cost-cutting approach taken during the original construction phase and probably an expression of the boom in rail traffic experienced along the North-Eastern Line towards the end of the nineteenth century.

Development of the Benalla railway precinct

The rail precinct at Benalla gradually developed into one of the largest complexes along the entire North-Eastern Line, perhaps only matched in scale as an intermediary station by Seymour. The construction of a temporary timber bridge across the substantial Broken River floodplain to the east of the township in 1873 marked the first phase in the development of the railway station at Benalla. Unlike the smaller stations that in some cases had to wait several years for permanent passenger facilities, Benalla was provided with its impressive brick passenger building (1874, replacing a temporary timber structure from 1873) not long after the goods shed (1873, a standard lightweight design used at other locations along the line such as Euroa) and locomotive depot (1872). Delays in sourcing metal girders from England meant that the permanent railway bridge across the Broken River was not completed until 1875.⁷ These early works established Benalla as a 'railway town' providing a hub for passengers, freight handling and servicing of locomotives.⁸

Benalla's development as a major rail hub accelerated with the opening of the line through to Sydney (via Albury) in 1883 and establishment of a junction to Yarrawonga in 1886. Both these events would have resulted in a rise in passenger and freight traffic through the station, though these numbers fell somewhat short of those originally forecast.⁹ Shortly after the opening of the new junction major upgrades to the main passenger building were undertaken. By 1888 a series of additions and alterations had been completed, including the distinctive three storey tower housing extensive refreshment rooms at the up end of the original passenger building.¹⁰ An iron footbridge across the rail yard was also constructed at this time, as well as a pair of matching signal boxes (both constructed 1890) to efficiently and safely manage the increasing volume and complexity of train movements through the precinct (see following section for further details).

Similarly, the original locomotive depot presumably struggled to keep up with the additional demands placed on the servicing of engines with the opening of the new lines, leading to the construction of a significantly larger 'roundhouse' shed with turntable in 1899.¹¹ The original locomotive shed became a more general repair workshop.

Further expansion of the complex occurred over subsequent decades, usually in response to increases in freight and passenger volumes. Of particular interest was the opening of a branch line to the timber town of Tatong, located in the heavily forested ranges to the south of Benalla, completed in 1914. This new junction had a significant impact on the

⁵ A Ward, *A Story of Stations: The Architecture of Victoria's Railways in the Nineteenth Century*, Australian Railway Historical Society Victorian Division, 2019, p128

⁶ Ibid, p128

⁷ Trevor Budge & Associates, *City of Benalla Conservation Study – Volume 3: Significant Areas, Buildings, Sites and Landscape Elements*, 1992, p104

⁸ Trevor Budge & Associates, *City of Benalla Conservation Study – Volume 2: Benalla 1836-1991 An Environmental History*, 1992, p63

⁹ Ibid, p36

¹⁰ Trevor Budge & Associates, *City of Benalla Conservation Study – Volume 3: Significant Areas, Buildings, Sites and Landscape Elements*, 1992, p100

¹¹ Ibid, p102

Benalla complex. A large island passenger platform was constructed in 1913 featuring a cantilevered verandah. The new platform required the demolition of the original 1873 goods shed, and a replacement shed was built on the far north side of the complex. An impressive array of sidings filled the land between the island platform and the new goods shed over subsequent decades, providing access to adjacent industrial facilities (including those for the oil and concrete industries) and the locomotive servicing areas of the site.

The opening of the Tatong branch line arguably marked the high point of the complex in terms of the number of ancillary structures, sidings, and marshalling yards, as well as passenger and freight volumes. Declining patronage saw the removal of the island platform (and presumably iron footbridge) in 1937.¹² The period following the World War II continued a gradual decline in the prominence of the station, a trend that was repeated across the state at other large railway complexes. The closure of the Tatong branch beyond the oil company siding in 1947 was the beginning of a shift in the focus of the complex towards the needs of industry and freight and away from servicing passengers. Another factor was the rise in private car ownership from the mid-1920s, accompanied by a consequent drop in rail patronage.

The opening of a standard gauge line in 1962, running directly to the south of the passenger building, brought with it further changes to the complex over the following decades. The new line required the partial demolition of the roundhouse, and by 1969 the turntable was out of commission. In 1974 the decision was made to dramatically reconfigure the passenger building, including the demolition of the 1888 refreshment rooms and tower. Technological and social change led to the loss of this unique structure, including the apparent need for a larger car park at the station.¹³ However, changing passenger habits ultimately played a much greater role. The introduction of snack bars on trains lessened the need for refreshments rooms at the station, effectively rendering such facilities obsolete.

Evolving technology also played a pivotal role. The move from steam to diesel ultimately led to the closure of the locomotive sheds and workshop in 1990 (the original 1872 locomotive depot shed was badly damaged in a storm in 1994 and eventually demolished). Similarly, increasing reliance on the transport of freight by road saw a decline in the transport of goods by rail, with the eventual closure of goods sidings including those servicing Concrete Industries (previously Monier, closed 1976) and BP and Mobil (closed 1988).

The current collection of structures at Benalla is a small fraction of the original complex and is restricted to the brick passenger building (significantly modified), surviving signal box (externally reclad), goods shed (later replacement), and locomotive turntable pit and bridge.

Evolution of signalling technology

Signalling performs an essential role in the safe and efficient operation of railways. Modern railway signalling originated in the United Kingdom in the mid-nineteenth century and rapidly evolved from simple handheld signals to a finely tuned and complex system reliant on precision machinery. The first railway signals were based around the principle of mechanical 'interlocking' between signals and points to virtually eliminate the possibility of conflicting information being communicated to train drivers; that is, avoiding a situation where a signal incorrectly advises that a particular route through a set of points was safe to traverse. Rather than each individual set of points and signals being individually manned, the entire signalling system for a given section of line (the 'signal block') was instead brought together into a single apparatus – the mechanical interlocking machine, invented by John Saxby in the United Kingdom in 1856.¹⁴

Saxby is also credited with the invention of the first recognisable 'signal boxes', the standard building typology that was used to house the interlocking machinery and other mechanism required for signalling operations. Typically, an elevated, largely glazed room hosting the levers (the operating room) sat above a room at ground level that housed the locking apparatus (the locking room). The operating room offered a mostly unobstructed view of the running lines, sidings, and marshalling yards and allowed for the operation of signals, points, safety systems, and crossing gates controlled via a set of levers set within a 'lever frame'. The levers in turn directly controlled the interlocking machine set directly underneath the lever frame within the locking room, and a set of rods led to ground level and then directly out, via wires or more rodding, to individual signals or points. A wheel or capstan (no longer present) was used to open and close the railway gates at the Nunn Street level crossing.

This fundamental signal box typology remained largely unchanged until well into the second half of the twentieth century. The highly practical and pragmatic two or three storey box, extensively glazed on its uppermost level, and topped with a simple gable roof became irrevocably aligned with railway design. Similarly, the underlying technology proved surprisingly

¹² Ibid p100

¹³ Trevor Budge & Associates, *City of Benalla Conservation Study – Volume 2: Benalla 1836-1991 An Environmental History*, 1992, p61

¹⁴ John Minnis, *Railway Signal Boxes: A Review*, English Heritage, 2012, p57

robust, with only relatively minor changes to the design of the lever frame and interlocking mechanism over most of the next century. The greatest technological changes occurred in the interface between the signal box and the actual signals and points. Signals themselves evolved from simple semaphores (a swinging arm set on a tall post) to electronically controlled illuminated designs that could be clearly read in a wide range of weather and light conditions such as the now ubiquitous ‘spotlight’ signal.

Signalling systems originally relied on a purely mechanical system consisting of linking rods and wires directly driving the mechanisms involved in changing signals and switching track points, relying on the physical force applied by the lever operator. The limitations of relying on a mechanical system (for example, there was a maximum distance beyond which signals and points could not be easily operated from the box) were eventually overcome by the switch to a system whereby the interlocking machine would be connected by electrical wiring to individual motors responsible for the operation of the signals and points.

Another notable shift, at least in an Australian context, was the simplification of the signal box at stations with limited signalling requirements. This included locations only required to perform a single task (such as the operation of level crossing gates) or a small range of low-risk operations (such as moving trains into stabling yards). In these situations, the lever frame was usually installed within the main passenger building, either as a ‘signal panel’ in an office within the station building, or a ‘signal bay’ that projected onto the passenger platform and allowed for unobstructed views of approaching trains.

Signalling on the North-Eastern Line¹⁵

The highly specialised nature of the technology meant that, when it came to installing signalling systems on Australian railways, virtually all the early mechanisms were imported from the United Kingdom and housed in signal boxes closely modelled on Saxby’s basic design.¹⁶ It was only later that established signalling firms from the United Kingdom set up manufacturing bases in Australia. McKenzie & Holland was one such firm who established factories in Melbourne (1899) and Brisbane (1890) to manufacture a variety of signalling equipment including signals, lever frames, and interlocking mechanisms.¹⁷

The obvious advantages of mechanical interlocking saw the technology widely employed across the Victorian rail network, with virtually all stations or junctions requiring at least a basic level of signalling. The North-Eastern Line once featured a large number of signal boxes and signal bays at stations and junction locations. Freestanding boxes were located at all major station complexes (Seymour, Benalla, Wangaratta, Wodonga) as well as important intermediate stations (including Craigieburn, Avenel, Locksley, Mangalore, Tallarook). Only Wangaratta (VHR H1597) and Benalla retain their original freestanding signal boxes.

Signal bays were also widespread, and a much larger number of these survive within station buildings compared to signal boxes. Locations include Chiltern (VHR H1603), Seymour (VHR H1591), Violet Town, Euroa, Kilmore East, Donnybrook, and Wallan.

Benalla was relatively unusual on the North-Eastern Line in that it originally featured two signal boxes, highlighting the complex signalling requirements of this busy station at the peak of its freight and passenger operations. Wodonga and Seymour also featured two signal boxes each which no longer survive. The two boxes installed at Benalla in 1890 were almost identical in appearance and design but differed slightly in their respective functions. ‘A’ box, the subject of this recommendation, is located at the Nunn Street level crossing and was the smaller of the two boxes. It controlled both the crossing gates and the signalling at the western end of the complex via 35 levers. The larger ‘B’ box was located within the station yard, to the east of the main station building, and had responsibility for controlling train movements throughout the yard (including the locomotive depot) and, later, the Tatong branch line via 65 levers.¹⁸

Both Benalla signal boxes featured McKenzie & Holland levers, lever frames, and interlocking mechanisms. Both were upgraded in 1914 to accommodate the additional signalling requirements of the new Tatong line (both passenger and freight).¹⁹ ‘B’ box was upgraded to a 118-lever frame, while ‘A’ box was extended to a 51-lever frame. The modification of

¹⁵ The Vicsig website (Vicsig.net) provides a useful overview of signalling arrangements at a number of stations in Victoria including Benalla

¹⁶ Standard lever frames were adapted to the individual signalling and interlocking requirements of the stations in which they were installed, meaning that no two signal boxes had the same arrangement of levers and interlocking machine.

¹⁷ *Hobsons Bay Heritage Study Amended 2017 – Volume 3 – Heritage Precinct and Place Citations*, pp951-955

¹⁸ Trevor Budge & Associates, *City of Benalla Conservation Study – Volume 3: Significant Areas, Buildings, Sites and Landscape Elements*, 1992, pp105-106 and pp113-114

¹⁹ *Interlocking Register*, accessed 16 February 2023, http://www.victorianrailways.net/signaling/interlocking_register.pdf

the lever frame in 'A' box required the enlargement of the structure, with an extra bay added to the eastern end in a matching style and the reconstruction of the access stairs and gable end decorative elements (since removed).

Benalla 'B' was closed in 1991 and demolished at an unknown date post-2000. Benalla 'A' continued to operate until the late 1990s, with all signalling operations for Benalla now controlled via the Australian Rail Track Corporation (ARTC) Network Control Centre South (NCCS) in Junee, NSW.

Decline of the railway

Although the amalgamation of the North-Eastern Line into the main Melbourne to Sydney route ensured the survival of the main rail infrastructure — particularly bridges — the increasing competition from road freight and diminishing passenger numbers saw a slow decline in the importance of many stations on the line during the latter half of the twentieth century.

Redundant assets such as goods sheds, engines sheds, and signal boxes have suffered a similar fate to those located on other parts of the network. In many cases, these buildings have been demolished, replaced, or highly modified. Even large stations such as Benalla have suffered, with the loss of many of the important structures forming the complex (engine shed, locomotive roundhouse) and the detrimental demolition of large sections of the main station building.

Signalling equipment has had a similarly mixed fate, with the notable survival of the signal boxes at Benalla and Wangaratta, and signal bays at Chiltern, Seymour, and a number of other smaller stations.

Historical images



c1925-1940, Benalla railway complex with roundhouse at bottom, Source: State Library Victoria Picture Collection (Airsy)



c1905-1928, Benalla railway complex with original goods shed, iron pedestrian bridge, water tower, and main passenger building with refreshment rooms, Source: State Library of Victoria Picture Collection



c1880s, Benalla locomotive depot (built 1872), Source: Public Records Office of Victoria



1974, Benalla railway refreshment rooms and tower undergoing demolition, Source: State Library of Victoria Picture Collection

Selected bibliography

Trevor Budge & Associates, *City of Benalla Conservation Study – Volume 2: Benalla 1836-1991 An Environmental History*, 1992

Trevor Budge & Associates, *City of Benalla Conservation Study – Volume 3: Significant Areas, Buildings, Sites and Landscape Elements*, 1992

City of Hobsons Bay, *Hobsons Bay Heritage Study Amended 2017 – Volume 3 – Heritage Precinct and Place Citations*, 2017

John Minnis, *Railway Signal Boxes: A Review*, English Heritage, 2012

A Ward and A Donnelly, *Victoria's Railway Stations: An Architectural Survey – Volume 2: The Formative Years: 1954-1880*, 1982

Andrew Ward and Associates, *Study of Historic Railway Buildings and Structures for V/Line*, Volumes 1 & 2, 1988

A Ward, *A Story of Stations: The Architecture of Victoria's Railways in the Nineteenth Century*, Australian Railway Historical Society Victorian Division, 2019

Further information

Traditional Owner Information

The Benalla Railway Signal Box is located on the traditional land of the Yorta Yorta people. Under the *Aboriginal Heritage Act 2006*, the Registered Aboriginal Party for this land is the Yorta Yorta National Aboriginal Corporation.

Victorian Aboriginal Heritage Register

The Benalla Railway Signal Box is not included in the Victorian Aboriginal Heritage Register. However, Aboriginal cultural heritage has been recorded in the vicinity of the place.

Integrity

The integrity of the Benalla Railway Signal Box is good. The cultural heritage values of the Benalla Railway Goods Shed can be easily read in the extant fabric.

The key elements and features of the signal box that illustrate its former use are still present. These include the signal and points levers, lever frame, interlocking mechanism, rods, pulleys, and electronic signalling equipment.

(January 2024)

Intactness

The intactness of the Benalla Railway Signal Box is fair.

The building appears to retain much of its original fabric, specifically the brick base, timber framing (including chamfered corner posts), timber weatherboarding to some sections of the operating room (now covered by aluminium cladding), timber framed windows to the operating room, and corrugated metal gable roof and window hood.

There have also been several modifications to the original design and materiality of the signal box. Aluminium cladding has replaced the original timber weatherboards. The original timber stairs have been replaced by a more modern metal frame structure and the timber framed windows to the east and west elevations of the operating room are now aluminium-framed.

Several elements have also been completely removed. The timber framed windows to the northern elevation of the locking room have been replaced by the aluminium cladding. Decorative detailing to the roof structure, including finials and potentially a king-post gable element, has also been removed at an unknown date.

(January 2024)

Condition

The condition of Benalla Railway Signal Box is variable

The overall condition of the building is fair to good. The roof and window hood is in good condition with all corrugated sheeting appearing to be fully intact. Likewise, the timber framing appears to be largely sound, with the corner posts in good to excellent condition.

There are some notable elements that are in poor condition. The timber flooring to the operating room is unsound. A recent vehicle strike to the locking room on the north elevation has caused considerable damage to the aluminium cladding (the section is now clad by a temporary fabric covering), though the degree to which this has impacted the overall structural integrity of the signal box is unknown.

(January 2024)

Note: The condition of a place or object does not influence the assessment of its cultural heritage significance. A place or object may be in very poor condition and still be of very high cultural heritage significance. Alternatively, a place or object may be in excellent condition but be of low cultural heritage significance.

Intactness/ Integrity/ Condition images



2024, detail of chamfered corner timber post. Source: Heritage Victoria



2024, fabric covering the exterior to the locking room (ground floor) following vehicle strike



2024, detail of corner post supported on a brick and concrete base, with aluminium cladding, Source: Heritage Victoria

Heritage Overlay	A Heritage Overlay (HO63 – <i>Signal Boxes [Signal Boxes A & B]</i>) of the City of Benalla planning scheme applies to the place
Other Overlays	A Specific Controls Overlay (SCO18 – <i>Inland Rail – Beveridge to Albury, December 2021</i>) applies to the place
Other Listings	There are no other listings for the place
Other Names	Benalla Signal Box 'A'
Date of construction/creation	c1890
Architect//Builder/Designer/Maker	There is no known architect for the place
Architectural style	Victorian Period (1851-1901)

Statutory requirements under section 40

Terms of the recommendation (section 40 (3)(a))

The Executive Director recommends that the Benalla Railway Signal Box is not included in the VHR.

Information to identify the place or object (section 40(3)(b))

Name: Benalla Railway Signal Box

Location: Corner of Mackellar Street and Nunn Street/Midland Highway, Benalla

Location diagram



2023, location of Benalla Railway Signal Box (red line) at Nunn Street level crossing. Source: VicPlan

Reasons for the recommendation, including an assessment of the State-level cultural heritage significance of the place(section 40(3)(c))

Following is the Executive Director's assessment of Place or object name against the tests set out in [The Victorian Heritage Register Criteria and Thresholds Guidelines \(2022\)](#). A place or object must be found by the Heritage Council to meet Step 2 of at least one criterion to meet the State level threshold for inclusion in the VHR.

CRITERION A: Importance to the course, or pattern, of Victoria's cultural history.

Step 1 Test for Criterion A

No.	Test	Yes/No	Reason
A1)	Does the place/object have a clear association with an event, phase, period, process, function, movement, custom or way of life in Victoria's cultural history?	Yes	The place has a clear association with the historical theme of linking Victorians by rail.
A2)	Is the event, phase, period, process, function, movement, custom or way of life of historical importance, having made a strong or influential contribution to Victoria?	Yes	<p>The linking of Victorians by rail is of historical importance having made a strong and influential contribution to Victoria.</p> <p>Victoria was the first of the colonies to develop passenger rail transport in 1854 with the opening of a railway from Melbourne to Port Melbourne.</p> <p>From that time, the railway network expanded across both the metropolitan area and regional Victoria to become one of the most extensive rail freight and passenger systems in Australia.</p> <p>The completion of the North-Eastern Line between Melbourne and Wodonga in 1873 played a major part in encouraging wider trade and settlement activity across large parts of Victoria as part of the 'Light Lines' era.</p> <p>The extension of the line to Albury in 1883 was the final stage in the Melbourne to Sydney railway, consolidating the importance of the region to the State's economic growth and allowing for fast intercolonial travel and communication.</p>
A3)	Is there evidence of the association to the event, phase, period, process, function, movement, custom or way of life in Victoria's cultural history?	Yes	<p>There is evidence of the association between the place and this historical phase:</p> <p>The place has a direct association with the operation of the North-Eastern Line in the late-nineteenth century. The signal box provides evidence for technological improvements that were introduced as the line developed into a major transport route, specifically the need for improved signalling systems to ensure the safe and efficient operation of the railway network.</p>

If A1, A2 and A3 are all satisfied, then Criterion A is likely to be relevant (but not necessarily at the State level)

Executive Director's Response:	Yes	Criterion A is likely to be relevant.
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Step 2 State-level test for Criterion A

No.	Test	Yes/No	Reason
SA1)	Does the place/object allow the clear association with the event, phase, period, process, function, movement, custom or way of life of historical importance to be understood better than most other places or objects in Victoria with substantially the same association?	No	<p>The place does not allow the association with the historical theme of linking Victorians by rail to be better understood than most other similar places.</p> <p>There are a large number of railway signal boxes and associated rail infrastructure which demonstrate the development of the railway network across Victoria. Signal boxes were a common feature of many railway stations, where they were essential to the safe and efficient operation of both passenger and freight movements, as well as a wide range of other places associated with the network such as goods sidings, spur lines, and line junctions.</p> <p>The majority of signal boxes recognised for their historical importance form part of more substantial railway complexes. It is this collection of diverse railway functions that is generally recognised rather than the individual importance of signal boxes in isolation.</p> <p>There is no railway feature or historical aspect which elevates the Benalla Railway Signal Box or the wider station complex to a position where it demonstrates the historical phase better than other examples in the state.</p>

If SA1 is satisfied, then Criterion A is likely to be relevant at the State level

Executive Director's Response:	No	Criterion A is not likely to be relevant at the State level.
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CRITERION B: Possession of uncommon, rare or endangered aspects of Victoria's cultural history.

Step 1 Test for Criterion B

No.	Test	Yes/No	Reason
B1)	Does the place/object have a clear association with an event, phase, period, process, function, movement, custom or way of life of importance in Victoria's cultural history?	Yes	The place has a clear association with the historical phase of linking Victorians by rail, as explored above.
B2)	Is there evidence of the association to the historical phases etc identified at B1)?	Yes	There is evidence of these historical associations as discussed above.
B3)	Is there evidence that place/object is rare or uncommon, <u>or</u> has rare or uncommon features?	No	B3(i) There is no evidence that the place is rare or uncommon.

There are many places associated with the development of the railway network across the state, including large numbers of railway signal boxes.

B3(ii) There is no evidence that the place has rare or uncommon features.

There are numerous examples of railway signal boxes, usually forming an element of larger railway complexes, across the state with similar features to that exhibited at Benalla. Much of the technology used in signal boxes was of a standard design and, consequently, was widely installed across Victoria's rail network. This is especially true in relation to the highly specialised equipment crucial to the operation of block signalling such as the lever frame and interlocking mechanism, and electronically controlled safety systems.

If B1, B2 AND B3 are satisfied, then Criterion B is likely to be relevant (but not necessarily at the State level)

Executive Director's Response:	No	Criterion B is not likely to be relevant.
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CRITERION C: Potential to yield information that will contribute to an understanding of Victoria's cultural history.

Step 1 Test for Criterion C

No.	Test	Yes/No	Reason
C1)	Does physical fabric and/or documentary evidence and/or associated oral history or cultural narratives relating to the place/object indicate a likelihood that the place/object contains evidence of cultural heritage significance that is not currently visible and/or well understood or available from other sources?	No	<p>The:</p> <ol style="list-style-type: none">1) physical fabric and2) documentary evidence and3) associated oral history or cultural narratives <p>relating to the Benalla Railway Signal Box do not indicate a likelihood that the place contains evidence of cultural heritage significance that is not currently visible and/or well understood or available from other sources.</p> <p>There is the potential for remnants of other activities associated with the Benalla Railway Signal Box to exist at other locations within the station precinct, including the second signal box (now demolished) and signalling infrastructure associated with the former goods and marshalling areas. However, these elements are not unusual. They survive intact in other railway locations. In the case of the Benalla Railway Signal Box, these features are also recorded in historic photographs, plans and diagrams such that the features can be understood.</p>
C2)	And, from what we know of the place/object, is the physical evidence likely to be of an integrity and/or condition that it could yield	No	<p>The integrity and condition of the place is good, but unlikely to yield information through investigation that is not currently visible and/or well understood or available from other sources (see C1).</p>

information through detailed investigation?

If **both** C1 AND C2 are satisfied, then Criterion C is likely to be relevant (but not necessarily at the State level)

Executive Director's Response:	No	Criterion C is not likely to be relevant.
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CRITERION D: Importance in demonstrating the principal characteristics of a class of cultural places and objects

Step 1 Test for Criterion D

No.	Test	Yes/No	Reason
D1)	Is the place/object one of a class of places/objects that has a clear association with an event, phase, period, process, function, movement, custom or way of life in Victoria's history?	Yes	The Benalla Railway Signal Box belongs to the class of signal boxes. This class has a clear association with the phase of linking Victorians by rail.
D2)	Is the event, phase, period, process, function, movement, custom or way of life of historical importance, having made a strong or influential contribution to Victoria?	Yes	The linking of Victorians by rail is a historical phase which has made a strong and influential contribution to Victoria. The establishment of railways in Victoria in 1854 had a profound influence on the economic and social development of the State by facilitating the efficient movement of goods and passengers
D3)	Are the principal characteristics of the class evident in the physical fabric of the place/object?	Yes	The principal characteristics of the class are evident in the physical fabric of the place. The Benalla Railway Signal Box expresses the main characteristics expected of a signal box that serviced the rail network over an extended period of time, evident in the standard arrangement of the operating room, housing the operating levers for the control of signals, points, and level crossing gates, sitting above a lower locking room housing the bulk of the lever frame, interlocking mechanism, rods and electronic control systems.

If D1, D2 AND D3 are satisfied, then Criterion D is likely to be relevant (but not necessarily at the State level)

Executive Director's Response:	Yes	Criterion D is likely to be relevant.
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Step 2 State-level test for Criterion D

No.	Test	Yes/No	Reason
SD1)	Is the place/object a notable (fine, influential or pivotal) example of the class in Victoria?	No	The Benalla Railway Signal Box is not a notable example of the class of signal boxes. Although the place is a reasonably early and intact example of the first phase of signal box design used in Victoria, its form, design, and materiality are of a standard design that was widely replicated across the rail network.

The principal characteristics of the signal box are no finer than other examples across Victoria and the Benalla Signal Box was not influential or pivotal in the roll-out of signal boxes and signalling across the Victorian railways network.

If SD1 is satisfied, then Criterion D is likely to be relevant at the State level

Executive Director's Response:	No	Criterion D is not likely to be relevant at the State level.
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CRITERION E: Importance in exhibiting particular aesthetic characteristics.

Step 1 Test for Criterion E

No.	Test	Yes/No	Reason
E1)	Does the physical fabric of the place/object clearly exhibit particular aesthetic characteristics?	No	<p>The physical fabric of the place type clearly exhibits aesthetic characteristics particular to signal boxes</p> <p>The restrained aesthetic characteristics of the Benalla Railway Signal Box is typical of much rail infrastructure from the 1870s onwards. It honestly and simply expresses the practical purpose of the place through the use of utilitarian materials and a design approach favouring function over decoration. The use of minimal applied decoration was typical for signal boxes, and the overall Victorian appearance of boxes was a standard design widely replicated across the rail network.</p>

If E1 is satisfied, then Criterion E is likely to be relevant (but not necessarily at the State level)

Executive Director's Response:	No	Criterion E is not likely to be relevant.
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CRITERION F: Importance in demonstrating a high degree of creative or technical achievement at a particular period.

Step 1 Test for Criterion F

No.	Test	Yes/No	Reason
F1)	Does the place/object contain physical evidence that clearly demonstrates creative or technical achievement for the time in which it was created?	Yes	<p>The Benalla Railway Signal Box contains physical evidence that clearly demonstrates creative or technical achievement for the time in which it was created.</p> <p>Signal boxes constructed during the late-nineteenth century arguably represented a high point in railway technology for the time. Housing signal, track and safety controls within a single structure required a sophisticated approach to engineering using finely tuned instrumentation. This is best illustrated by the complex McKenzie & Holland interlocking machine used to control signal and points that enabled safe and efficient movement of trains through the station precinct.</p>

F2)	Does the physical evidence demonstrate a high degree of integrity?	Yes	<p>The physical evidence at the place demonstrates a high degree of integrity.</p> <p>Most of the technology used to control signalling, track, and safety systems within the Benalla Railway Signal Box is still present. This includes the levers, lever frame, interlocking machine, rods, pulleys, and various electronic equipment used to control signal and safety systems including relays, wet cell batteries, transformers, and ammeters.</p>
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If **both** F1 and F2 are satisfied, then Criterion F is likely to be relevant (but not necessarily at the State level)

Executive Director's Response:	Yes	Criterion F is likely to be relevant.
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Step 2 State-level test for Criterion F

No.	Test	Yes/No	Reason
SF1)	<p>Is the nature and/or scale of the achievement of a high degree or 'beyond the ordinary' for the period in which it was undertaken as demonstrated by one or more forms of evidence:</p> <ul style="list-style-type: none"> evidence from within the relevant creative or technological discipline that recognises the place/object as a breakthrough in terms of design, fabrication or construction techniques <u>and/or</u> as a successful solution to a technical problem that extended the limits of existing technology; critical acclaim of the place/object within the relevant creative or technological discipline as an outstanding example in Victoria; wide acknowledgement of exceptional merit in Victoria in media such as publications or print/digital media; recognition of the place/object as an outstanding example of the creative adaptation of available materials and technology of the period? 	No	<p>There is no evidence that the nature and/or scale of the achievement is of a high degree or 'beyond the ordinary' for the period in which it was undertaken.</p> <p>While the technology employed at the Benalla Railway Signal Box was highly sophisticated for the period in which it was installed, such technology was highly standardised and widely employed across the Victorian Railways Network in signal boxes or other signalling installations.</p> <p>In most cases the technology was purchased "off the shelf" from a limited number of manufacturers and then adapted to suit local track and signalling requirements. The high demand for this technology is evidenced by the fact that a local manufacturing industry was established in response to the increasing demands of the Victorian rail network, including the McKenzie & Holland manufacturing facility in Melbourne.</p> <p>Although the Benalla Railway Signal Box provides a useful example of the complexities involved in the control of signal, track, and safety systems in a rail context it does not represent an outstanding or notable example of innovation in the use of this technology.</p>

If SF1 is satisfied, then Criterion F is likely to be relevant at the State level

Executive Director's Response:	No	Criterion F is not likely to be relevant at the State level.
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CRITERION G: Strong or special association with a particular present-day community or cultural group for social, cultural or spiritual reasons

Step 1 Test for Criterion G

No.	Test	Yes/No	Reason
G1)	Does the place/object demonstrate social value to a community or cultural group in the present day in the context of its cultural heritage significance? Evidence must be provided for all three facets of social value listed here:		
i)	Existence of a community or cultural group; <u>and</u>	Yes	There is evidence that the place has social value in the present day to the Benalla community. Groups such as Better Benalla Rail and the Benalla Historical Society have an interest in historical landmarks and buildings in the local area.
ii)	Existence of a strong attachment of a community or cultural group to the place or object; <u>and</u>	Yes	There is evidence of a strong attachment of the local community to the Benalla Railway Signal Box. Community groups such as Better Benalla Rail and the Benalla Historical Society are strong advocates for the Benalla Railway Signal Box and have vocally supported its retention as a key part of Benalla's heritage.
iii)	Existence of a time depth to that attachment.	Yes	There is some evidence of the attachment dating to at least the early 1990s In 1992 Trevor Budge & Associates undertook the <i>City of Benalla Conservation Study</i> to identify the key surviving components of the Benalla's heritage. This study concluded that the Benalla Railway Signal Box (identified as Benalla 'A' Box) was of local significance and recommended its inclusion in the local planning scheme. In response to this study, both the Benalla Railway Signal Box (Benalla 'A' Box) and Benalla 'B' Box were included in the Schedule to the Heritage Overlay for the City of Benalla as HO63 – <i>Signal Boxes [Signal Boxes A & B]</i> . Benalla 'B' Box was subsequently demolished.

If all facets of G1 are satisfied, then Criterion G is likely to be relevant (but not necessarily at the State level)

Executive Director's Response:	Yes	Criterion G is likely to be relevant.
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Step 2 State-level test for Criterion G

No.	Test	Yes/No	Reason
SG1)	Is there evidence that the social value resonates across the broader Victorian community as part of a story that contributes to Victoria's identity?	No	SG1(i) The social value of the Benalla Railway Signal Box is not part of a story in Victoria that contributes to Victoria's identity. The social value of the Benalla Railway Signal Box does not resonate across the broader Victorian community. Although the wider Benalla railway precinct was once an important component of the North-Eastern Line and, later, an integral part the first inter-capital railway in the nation,

substantial changes over the later part of the twentieth century have greatly reduced the heritage significance of the complex and, consequently, its social value.

SG1(ii) There is no evidence that the social value of the Benalla Railway Signal Box to the community resonates across the broader Victorian community.

If **all facets** of SG1 are satisfied, then Criterion G is likely to be relevant at the State level

Executive Director's Response:	No	Criterion G is not likely to be relevant at the State level.
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CRITERION H: Special association with the life or works of a person, or group of persons, of importance in Victoria's history.

Step 1 Test for Criterion H

No.	Test	Yes/No	Reason
H1)	Does the place/object have a direct association with a person, or group of persons who has made a strong or influential contribution in their field of endeavour?	Yes	H1(i) There is a direct association between the Benalla Railway Signal Box and the Victorian Railways. H1(ii) The Victorian Railways has made a strong or influential contribution to the provision of rail infrastructure in the State.
H2)	Is there evidence of the association between the place/object and the person(s)?	Yes	There is evidence of the association between the Benalla Railway Signal Box and the Victorian Railways.
H3)	Does the association relate: • directly to achievements of the person(s); <u>and</u> • to an enduring and/or close interaction between the person(s) and the place/object?	Yes	H3(i) The association between the Benalla Railway Signal Box and the Victorian Railways relates directly to the achievements of the Victorian Railways. H3(ii) The association relates to an enduring interaction between the Victorian Railways and the Benalla Railway Signal Box.

If **all facets** of H1, H2 AND H3 are satisfied, then Criterion H is likely to be relevant (but not necessarily at the State level)

Executive Director's Response:	Yes	Criterion H is not likely to be relevant.
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Step 2 State-level test for Criterion H

No.	Test	Yes/No	Reason
SH1)	Are the life or works of the person/persons important to Victoria's history?	Yes	The life or works of the Victorian Railways is important in Victoria's history.
SH2)	Does this place/object allow the association between the person or	No	The place does not allow the association between the Victorian Railways and their importance in Victoria's history

group of persons and their importance in Victoria's history to be readily appreciated better than most other places or objects in Victoria?

to be readily appreciated more than most other places or objects in Victoria.

There are a great many other places that serve as finer examples than the Benalla Railway Signal Box in demonstrating the achievement of the Victorian Railways throughout the nineteenth and twentieth centuries. Flinders Street Railway Station, as well as some major regional railway stations across the State including Wangaratta Railway Station, allow the influence and history of the Victorian Railways to be better appreciated.

If SH1 and SH2 are satisfied, then Criterion H is likely to be relevant at the State level

Executive Director's Response:	No	Criterion H is not likely to be relevant at the State level.
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Comparisons

The below places were selected as comparators to the Benalla Railway Signal Box because they represent signal boxes already in the VHR, usually as part of larger station complexes. Given the relatively large number of signal boxes currently in the VHR the comparison has been arranged based on the two main materials used in their construction: timber and brick.

A comparison has also been undertaken with places associated with the establishment of the North-Eastern Line from the 1870s onwards (Melbourne to Wodonga).

In the examples which follow, the signal box is often one element of a larger railway complex that will include a station building and other railway infrastructure. Only illustrations of the signal box are included, and not the wider railway context.

Railway Signal Boxes: Timber

SIGNAL BOX A AND SIGNAL POSTS

ARARAT RAILWAY COMPLEX, HIGH STREET ARARAT, ARARAT RURAL CITY

VHR H1094

Ararat Railway Station opened on 7 April 1875 and the main buildings were constructed by July 1875. Two large timber signal boxes were built in Ararat in 1891. Signal Box A was built with a 65-lever frame, a further 7 levers being added in 1921. Signal Box B was demolished in 1984.

Signal Box A at Ararat railway complex, the last remaining operative junction of its type in Victoria at the time of registration, is a rare example of a building type. It has 4 systems in a 5-point junction operating a semaphore signals system on a country to coast export line cross intersection with an inter-capital service and varied freight loading and through services. Its size and complexity demonstrate the importance that Ararat held as a junction in the interstate and port-hinterland rail systems.

Ararat was one of the last remaining parts of Victoria's railway system to retain semaphore and disc signals at the time of registration. The complex includes a range of rare post types, particularly Signal Post 1 which is the only post in Victoria with timber post, bracket and dolls.

Signal Box A was relocated from within the railway yards at Ararat to a location on the railway station platform in accordance with a heritage permit issued under the Heritage Act in the late 1990s.

A separate heritage registration applies to the Former Ararat Locomotive Depot and Turntable (VHR H1093).



2008, railway signal box 'A' at Ararat, Source: Victorian Heritage Database

BALLARAT RAILWAY COMPLEX

140 LYDIARD STREET, NORTH BALLARAT CENTRAL
AND 202 LYDIARD STREET NORTH AND NOLAN
STREET SOLDIERS HILL AND SCOTT PARADE AND
60 CORBETT STREET, BALLARAT EAST AND 75
HUMFFRAY STREET NORTH, BAKERY HILL,
BALLARAT CITY

VHR H0902

Together with the Sandhurst (Bendigo) line, the Geelong-Ballararat railway was the first of the colonial government's main trunk lines, opened in 1862, and built to the best British standards of construction. These standards were never to be repeated. Most of the present complex dates from this period. Ballarat is the largest complex to have been built at this time.

The signal boxes recall late nineteenth century safe working practices. Today, Ballarat retains the largest surviving interlocked installation in the state. The modified type 6 frame in Ballarat "B" Box is unique at the State level and compares with type 6 frames elsewhere. They were once commonplace.



2008, Lydiard Street signal box 'B' at Ballarat, Source: Victorian Heritage Database



2013, signal box 'A' at Ballarat, Source: Rail Geelong



2023, Humffray Street signal box at Ballarat East, Source: Heritage Victoria

CASTLEMAINE RAILWAY PRECINCT (MURRAY VALLEY RAILWAY, MELBOURNE TO ECHUCA)

KENNEDY STREET, CASTELMAINE, MOUNT ALEXANDER SHIRE

VHR H1664

The Castlemaine railway precinct (comprising the Midland Highway Rail-over bridge, Forest Creek viaduct, Forest Street rail-overbridge, Castlemaine Railway Station, and embankment) is historically and scientifically significant as an integral part of the railway line and is an important representative sample of one of the earliest and grandest capital works projects in Victorian history. The identified features comprising the precinct are all substantially intact and provide a crucial reminder of the adoption of English engineering and architectural standards and the role of the Victorian Railway Department in developing engineering expertise.



2008, signal box at Castlemaine, Source: Victorian Heritage Database

CLIFTON HILL RAILWAY STATION COMPLEX

1 HEIDELBERG ROAD, CLIFTON HILL, YARRA CITY

VHR H1668

The Clifton Hill Railway Station Complex was constructed between 1887 and 1901 in the late-Victorian Gothic style. Other features of the complex include two timber-framed gabled roofed signal boxes (built in 1888 and 1901), situated either side of the downside platform, and the original swinging railway gates (now not in use).



2023, signal box at Ramsden Street level crossing, Clifton Hill, Source: Heritage Victoria

GEELONG RAILWAY STATION

1 RAILWAY TERRACE, GEELONG, GEELONG CITY

VHR H1604

Geelong railway station is architecturally significant in that the train hall is the largest on the network and is unique, especially for the use of Gothic and classical detailing. Other elements which contribute to the architectural significance of the complex and the line, include the bluestone steps with former lamp frame and wrought iron palisade fence, the up and down end signal boxes and tunnel portal.



2008, signal box at Geelong, Source: Victorian Heritage Register

KYNETON RAILWAY STATION COMPLEX

1 MOLLISON STREET, KYNETON, MACEDON RANGES SHIRE

VHR H1602

Kyneton Railway Station complex is architecturally significant as the largest surviving example of basalt railway station facilities on the network. The complex comprises an upside basalt station building, the downside basalt building consists of a former refreshment room, passenger/office facilities and adjoining six door goods shed. The water tower structure consists of an iron water tank on a square basalt base with round arched openings with string course and quoining. Other structures include a timber signal box and basalt faced platforms.



2008, signal box at Kyneton, Source: Victorian Heritage Register

FORMER COBURG RAILWAY LINE

**WILSON AVENUE AND VICTORIA STREET,
BRUNSWICK AND CAMERON STREET AND VICTORIA
STREET, COBURG AND PARK STREET, PARKVILLE,
MORELAND CITY, MELBOURNE CITY**

VHR H0952

The place known as the Former Coburg Railway Line including nineteenth century station buildings and platforms, substations, signal boxes, gatekeepers cabins, remnant interlocking and safeworking equipment, levers and rodding, signals, gates and industrial sidings. The nineteenth century structures associated with the Former Coburg Railway Line such as gates, gatekeepers cabins, signals and signal boxes are now rare in Victoria and are evidence of activities and functions which are no longer common in Victoria.



2023, signal box at Union Street Coburg, Source: Heritage Victoria

RINGWOOD RAILWAY STATION

**130-136 MAROONDAH HIGHWAY, RINGWOOD,
MAROONDAH CITY**

VHR H1587

The Ringwood Railway Station which comprises the brick station building, a timber station building, a timber signal box, platforms, railway tracks and other railway-related structures.

Ringwood Railway Station is architecturally significant as an illustrative assemblage of nineteenth century and early twentieth century railway buildings. The upside building at Ringwood Railway Station is of architectural significance as a rare surviving example of the early modular style of station buildings. It is one of the most intact examples externally of its type surviving in metropolitan Melbourne. The downside building is a comparatively rare example of the Tudor style station. The signal box is a comparatively rare and intact example of a signal box of this size.

The 1926 signal box at Ringwood was relocated from the Melbourne bound platform at Ringwood to its current location in front of the railway station in accordance with a heritage permit issued under the Heritage Act in 2014.



2023, relocated signal box at Ringwood, Source: Heritage Victoria

WANGARATTA RAILWAY STATION COMPLEX

**37 NORTON STREET, WANGARATTA, WANGARATTA
RURAL CITY**

VHR H1597

The Wangaratta Railway Station Complex was constructed in 1874 by R Vincent on the Melbourne-Wodonga line for the Victorian Railways. It comprises a substantial, predominantly single storey, bi-chromatic brick station building with a two-storey section with hipped roofs. The station building is complemented by other structures within the complex such as the circular, four-level brick base to the cast iron water supply tank system, a water column, a crane, a timber signal box, a corrugated iron goods shed and a footbridge.



2002, signal box at Wangaratta, Source: Victorian Heritage Database

Railway Signal Boxes: Brick

FOOTSCRAY RAILWAY STATION COMPLEX

IRVING AND HYDE STREETS, FOOTSCRAY,
MARIBYRNONG CITY

VHR H1563

Footscray Railway Station Complex is of aesthetic and architectural importance as an excellent intact example of a substantial railway complex constructed at the turn of the century. Footscray Railway Station Complex consists of three red brick station buildings and four platforms. The central building has a V configuration and elaborate detailing at the entry. Common details of the buildings include, cantilevered platform canopies, cement banding, bluestone quoin work around doors, arched windows and stucco cornice bands. At the end of the central building is an empty signal box, also constructed of red brick with render banding.



2023, signal box at Footscray, Source: Heritage Victoria

CAULFIELD RAILWAY STATION COMPLEX

1 SIR JOHN MONASH DRIVE CAULFIELD EAST, GLEN
EIRA CITY

VHR H1665

The Caulfield Railway Station Complex is of architectural and aesthetic importance as an imposing Federation Free Style complex and is an important example of the work of Victorian Way and Works Architect JW Hardy. Details of note include, cement render banding terminating in a radiating design around the archways and an undulating parapet design.

The Caulfield Railway Complex consists of four passenger platforms, horse platform, subway, three principal station buildings, a former lamp/storeroom and a signal box. The signal box was constructed c.1920 and is also of red brick. It has a tiled hip roof and retains the fittings in the signal room.



2023, signal box at Caulfield, Source: Heritage Victoria

BRIGHTON BEACH RAILWAY STATION

1 ESPLANADE BRIGHTON, BAYSIDE CITY

VHR H1077

The Brighton Beach Railway Station complex is of architectural, historic and social significance to the State of Victoria. The imposing, unusually shaped station was built in the wedge shaped area between the converging tracks of the original terminus and the curved extension to Sandringham. It is the key building on the line, setting the tone for other stations at North Brighton and Prahran. Many of the architectural details are unique in railway design. In particular, the pedimented entrance porch, the patterned brickwork, the tiled frieze below the eaves cornice, the bluestone columns at the barriers, the tessellated paving to the entrance lobby, the round brick arches and the additional red brick banding at the entry demonstrate outstanding craftsmanship and decoration.



2023, signal box at Brighton Beach, Source: Heritage Victoria

North-Eastern Line Rail Infrastructure

SEYMOUR RAILWAY STATION

STATION STREET, SEYMOUR, MITCHELL SHIRE

VHR H1591

Seymour Railway Station was constructed in 1874 on the Melbourne-Wodonga line. It was built by Drew & Connell for the Victorian Railways, with additions in 1883 by R Taylor. It comprises a large, polychrome brick station building with substantial former refreshment rooms, and former residential quarters at first floor level. The down platform elevation formerly faced the roadside entrance, consisting of a single storeyed central pedimented section, with turreted corner pilasters marked by two storeyed pavilions. While numerous modifications have been made to the station, the key elements of the original design remain intact, including the basement cellar and kitchen. At the down end, there is a standard corrugated iron goods shed, separate brick toilet block, van goods store and crew rooms. There is also an engine turntable situated 500m down side of the station.



2002, main passenger building at Seymour, Source: Victorian Heritage Database

RAIL BRIDGE

OVER BROKEN RIVER, BENALLA, BENALLA RURAL CITY

VHR H1061

The Broken River Bridge was completed in March 1875 for the Victorian Railways' main north eastern trunk line, which connected Melbourne with Belvoir (Wodonga) in 1873, and which was extended to Albury in 1883. The ballasted single track bridge, comprising sixteen approach spans of 12.8m and one span of 36.9m, is supported on pairs of cylindrical iron piers. The main span has a riveted wrought iron plate girder, featuring flying lateral braces at the abutments supplied by the Landlands Foundry Co. The iron girders on the approach spans were replaced with steel girders in 1912.

The bridge is a significant element of the North Eastern railway, the Colony of Victoria's third main trunk line. The line is important as an expression of the importance of the north eastern goldfields, and of the priority given by the colonial government to build a railway to connect the goldfields, the New South Wales Riverina, and the Murray River trade with the Port of Melbourne. The line is significant as the nation's first inter-capital rail link, and in this respect eclipses the earlier trunk lines in its economic role.



2008, rail bridge across the Broken River at Benalla, Source: Victorian Heritage Database

WANGARATTA RAILWAY STATION COMPLEX

37 NORTON STREET, WANGARATTA, WANGARATTA RURAL CITY

VHR H1597

The Wangaratta Railway Station Complex was constructed in 1874 by R Vincent on the Melbourne-Wodonga line for the Victorian Railways. It comprises a substantial, predominantly single storey, bi-chromatic brick station building with a two-storey section with hipped roofs. The station building is complemented by other structures within the complex such as the circular, four-level brick base to the cast iron water supply tank system, a water column, a crane, a timber signal box, a corrugated iron goods shed and a footbridge.

Wangaratta Railway Station is architecturally significant as the only remaining intact example of a major bi-chromatic brick structure on the V-Line network.



2002, passenger building and signal box at Wangaratta, Source: Victorian Heritage Database

CHILTERN RAILWAY STATION AND GOODS SHED

RAILWAY ACCESS ROAD, CHILTERN, INDIGO SHIRE

VHR H1603

Chiltern Railway Station is historically significant as a reminder of the former pre-eminence of Chiltern and the north east of Victoria as a gold mining district, and for its associations with the development of the 'light lines' or 'cheap lines' era.

The architectural character of the station is enhanced by the goods shed, which is also noteworthy for its decorative arcading applied to each end. The station building, in conjunction with the goods shed, represents a unique combination of standard railway facilities.



2008, passenger building, lamp room, and brick railway goods shed at Chiltern, Source: Victorian Heritage Database

Summary of Comparisons

A substantial number of railway signal boxes, representing a broad range of designs, sizes, ages, and construction materials, are currently included in the VHR. This includes a limited number associated with the North-Eastern Line, with the signal box included as part of station complex at Wangaratta (VHR H1597) being the sole surviving freestanding example.

In general, signal boxes have only met the threshold for inclusion in the VHR when they form part of a large station complex. By contrast, the railway station complex at Benalla is much reduced from its peak at the turn of the twentieth century, having lost the original goods shed (the current shed constructed c1914), locomotive depot, roundhouse shed, island platform, iron pedestrian bridge, goods cranes, second signal box and virtually all siding and marshalling roadways. The Benalla station building has also been substantially altered, most notably with the loss of the railway refreshment rooms and three-storey tower in 1974.

The other surviving signal box on the North-Eastern Line at Wangaratta, in addition to being part of an impressive railway complex, replicates many of the main design features seen at Benalla. Wangaratta provides clear evidence of the same signalling equipment (including a similar interlocking mechanism and lever frame) while also expressing a greater level of integrity and is in noticeable better condition than the box at Benalla.

Although the Benalla Railway Signal Box undoubtedly provides a useful example of the standardised approach to the construction of signal boxes in the later part of the nineteenth century (including the use of McKenzie & Holland components), elevated signal boxes constructed in timber were widely replicated across the entire rail network. In addition to Wangaratta and Ararat, timber signal boxes of very similar design and scale are found at the following railway complexes on the VHR: Ballarat (VHR H0902), Geelong (VHR H1604), Castlemaine (VHR H1664), Clifton Hill (VHR H1668), Creswick (VHR H1669), Kyneton (VHR H1602), Ringwood (VHR H1587), and several locations along the Former Coburg Line (VHR H0952). Later brick signal boxes, mainly introduced after electrification of the rail network, are also located at Caulfield (VHR H1665), Footscray (VHR H1563), and Brighton Beach (VHR H1077).

The examples of signal boxes that are protected at State-level usually form part of an intact railway complex and survive alongside railway stations, goods sheds, carriage sheds, engine depots, water towers, and/or other items of railway infrastructure. The Ballarat Railway Complex, for example, includes the large Signal Box A, Signal Box B at Lydiard Street, and a smaller signal box at Ballarat East.

In addition to the examples included in the VHR there are several other fine examples of signal boxes which are of local-level significance and protected in Heritage Overlays. These include those at Sunshine, an 80-lever frame at the junction of the Ballarat and Bendigo railway lines (HO39 – Brimbank Planning Scheme); Frankston, a 79-lever frame which is still operational (HO48 – Frankston Planning Scheme); Fairfield, a 47-lever frame at the junction of the former Outer Circle railway line (HO315 – Darebin Planning Scheme); Kooyong (HO473 – Stonnington Planning Scheme); Riversdale (HO729 – Boroondara Planning Scheme); and Sandringham (HO360 – Bayside Planning Scheme). The heritage listed signal boxes at Kooyong and Riversdale have the additional important role of avoiding conflicts at points where the metropolitan rail system intersects with the electrified tram network.

Examples of signal boxes protected in regional areas include a fine example at Beaufort, which forms part of a significant nineteenth century complex including an intact railway station and goods shed (HO502 – Pyrenees Planning Scheme); and Sale (HO125 – Wellington Planning Scheme). Although the Sale signal box is no longer in an operating railway environment, it is protected alongside a set of railway gates and signals.

Lastly, the VHR currently includes several railway places located on the North-Eastern Line. In addition to the station complexes at Wangaratta, Seymour (VHR H1591), and Chiltern (VHR H1603), the rail bridge crossing the Broken River at Benalla is also included (VHR H1061). Taken as a whole, these places range across a wide range of building typologies – including station buildings, goods sheds, engine sheds, rail bridges, signal boxes, locomotive turntables, water towers, and lamp rooms – and collectively encapsulate all the main design features associated with the North-Eastern Line.

The above comparators demonstrate that there are still fine examples of surviving signal boxes across the former Victorian Railways network, although the number has obviously declined since the peak of rail operations in the mid-twentieth century and along the North-Eastern Railway Line.

A note on the work of Andrew Ward

The late architect and railway historian, Andrew Ward, is often considered to be the authority on Victoria's railway heritage. Ward was responsible for the very wide ranging, comprehensive, and seminal studies of railway stations across Victoria in 1982 and 1988. Ward's work underpins the many railway stations and complexes that were included in the Register of Government Buildings and then transferred to the VHR in 1998.

Ward's work has provided invaluable insights for the current assessment at Benalla and the wider rail network. It is therefore noteworthy that Ward did not identify the Benalla Railway Station Precinct or Benalla Railway Signal Box as candidates for State-level heritage protection in either of his comprehensive studies of the 1980s, mainly due to the low integrity of the surviving built elements of the complex.

Andrew Ward was also a key contributor to the *Benalla Conservation Study*, by Trevor Budge and Associates, for the City of Benalla in 1992. Ward was essentially responsible for the assessment and documentation of buildings and places across the then municipality in Volume 3 of this study. Ward documented Signal Box A, Signal Box B, and the Benalla Railway Station. This was the basis for the subsequent inclusion of these buildings in the Heritage Overlay of the Benalla Planning Scheme. The Conservation Study did not conclude that Signal Box A or Signal Box B were of State-level significance.

Appendix 1

Heritage Council determination (section 49)

The Heritage Council is an independent statutory body that will make a determination on this recommendation under section 49 of the Act. It will consider the recommendation after a period of 60 days from the date the notice of recommendation is published on its website under section 41.

Making a submission to the Heritage Council (section 44)

Within the period of 60 days, any person or body with a real and substantial interest in the place or object may make a submission to the Heritage Council regarding the recommendation and request a hearing in relation to that submission. Information about making a submission and submission forms are available on the Heritage Council's website. The owner can also make a submission about proposed permit exemptions (Section 40(4)(d)).

Consideration of submissions to the Heritage Council (section 46)

- (1) The Heritage Council must consider—
 - (a) any written submission made to it under section 44; and
 - (b) any further information provided to the Heritage Council in response to a request under section 45.

Conduct of hearings by Heritage Council in relation to a recommendation (section 46A)

- (1) The Heritage Council may conduct a hearing in relation to a recommendation under section 37, 38 or 39 in any circumstances that the Heritage Council considers appropriate.
- (2) The Heritage Council must conduct a hearing if—
 - (a) a submission made to it under section 44 includes a request for a hearing before the Heritage Council; and
 - (b) the submission is made by a person or body with a real or substantial interest in the place, object or land that is the subject of the submission.

Determinations of the Heritage Council (section 49)

- (1) After considering a recommendation that a place, object or land should or should not be included in the Heritage Register and any submissions in respect of the recommendation and conducting any hearing, the Heritage Council may—
 - (a) determine that the place or object is of State-level cultural heritage significance and is to be included in the Heritage Register; or
 - (ab) in the case of a place, determine that—
 - (i) part of the place is of State level cultural heritage significance and is to be included in the Heritage Register; and
 - (ii) part of the place is not of State level cultural heritage significance and is not to be included in the Heritage Register; or
 - (ac) in the case of an object, determine that—
 - (i) part of the object is of State level cultural heritage significance and is to be included in the Heritage Register; and
 - (ii) part of the object is not of State level cultural heritage significance and is not to be included in the Heritage Register; or
 - (b) determine that the place or object is not of State-level cultural heritage significance and is not to be included in the Heritage Register; or

- (c) in the case of a recommendation in respect of a place, determine that the place or part of the place is not to be included in the Heritage Register but—
 - (i) refer the recommendation and any submissions to the relevant planning authority or the Minister administering the Planning and Environment Act 1987 to consider the inclusion of the place or part of the place in a planning scheme in accordance with the objectives set out in section 4(1)(d) of that Act; or
 - (ii) determine that it is more appropriate for steps to be taken under the Planning and Environment Act 1987 or by any other means to protect or conserve the place or part of the place; or
 - (ca) in the case of a recommendation in respect of an object nominated under section 27A, determine that the object, or part of the object, is to be included in the Heritage Register if it is integral to understanding the cultural heritage significance of a registered place or a place the Heritage Council has determined to be included in the Heritage Register; or
 - (d) in the case of a recommendation in respect of additional land nominated under section 27B, determine that the additional land, or any part of the additional land, is to be included in the Heritage Register if—
 - (i) the State level cultural heritage significance of the place, or part of the place, would be substantially less if the additional land or any part of the additional land which is or has been used in conjunction with the place were developed; or
 - (ii) the additional land or any part of the additional land surrounding the place, or part of the place, is important to the protection or conservation of the place or contributes to the understanding of the place.
- (2) The Heritage Council must make a determination under subsection (1)—
- (a) within 40 days after the date on which written submissions may be made under section 44; or
 - (b) if any hearing is conducted, within 90 days after the completion of the hearing.
- (3) A determination made under subsection (1)(a), (ab), (ac), (ca) or (d)—
- (a) may include categories of works or activities which may be carried out in relation to a place, object or land, or part of a place, object or land, for which a permit under this Act is not required, if the Heritage Council considers that the works or activities would not harm the cultural heritage significance of the place, object or land; and
 - (b) must include a statement of the reasons for the making of the determination.
- (4) If the Heritage Council determines to include a place, or part of a place, in the Heritage Register, the Heritage Council may also determine to include land that is not the subject of a nomination under section 27B in the Heritage Register as part of the place if—
- (a) the land is ancillary to the place; and
 - (b) the person who owns the place, or part of the place—
 - (i) is the owner of the land; and
 - (ii) consents to its inclusion.
- (5) If a member of the Heritage Council makes a submission under section 44 in respect of a recommendation, the member must not take part in the consideration or determination of the Heritage Council.
- (6) The Heritage Council must notify the Executive Director of any determination under this section as soon as practicable after the determination.

Obligations of owners (section 42, 42A, 42B, 42C, 42D)

42 Obligations of owners—to advise of works, permits etc. on foot when statement of recommendation given

- (1) The owner of a place, object or land to whom a statement of recommendation has been given must advise the Executive Director in writing of—
 - (a) any works or activities that are being carried out in relation to the place, object or land at the time the statement is given; and
 - (b) if the place, object or land is a place or additional land, any application for a planning permit or a building permit, or any application for an amendment to a planning permit or a building permit, that has been made in relation to the place or additional land but not determined at the time the statement is given; and
 - (c) any works or activities that are proposed to be carried out in relation to the place, object or land at the time the statement is given.
- (2) An advice under subsection (1) must be given within 10 days after the statement of recommendation is given under section 40.

42A Obligations of owners before determination or inclusion in the Heritage Register—to advise of permits

- (1) This section applies if—
 - (a) an owner of any of the following is given a statement of recommendation—
 - (i) a place or object nominated under section 27;
 - (ii) an object nominated under section 27A;
 - (iii) land nominated under section 27B; and
 - (b) any of the following occurs within the statement of recommendation period in relation to the place, object or land—
 - (i) the making of an application for a planning permit or a building permit;
 - (ii) the making of an application for an amendment to a planning permit or a building permit;
 - (iii) the grant of a planning permit or building permit;
 - (iv) the grant of an amendment to a planning permit or building permit.
- (2) The owner must advise the Executive Director in writing of—
 - (a) the making of an application referred to in subsection (1)(b)(i) or (ii), within 10 days of the making of the application; or
 - (b) a grant referred to in subsection (1)(b)(iii) or (iv), within 10 days of the owner becoming aware of the grant.

42B Obligations of owners before determination or inclusion in the Heritage Register—to advise of activities

- (1) This section applies if—
 - (a) an owner of a place, object or land is given a statement of recommendation; and
 - (b) within the statement of recommendation period it is proposed that activities that could harm the place, object or land be carried out.
- (2) The owner, not less than 10 days before carrying out the activities, must advise the Executive Director in writing of the proposal to do so.

42C Obligations of owners before determination or inclusion in the Heritage Register—to advise of proposal to dispose

- (1) This section applies if—
 - (a) an owner of a place, object or land is given a statement of recommendation; and
 - (b) within the statement of recommendation period a proposal is made to dispose of the whole or any part of the place, object or land.
- (2) The owner, within 10 days after entering into an agreement, arrangement or understanding for the disposal of the whole or any part of the place, object or land, must advise the Executive Director in writing of the proposal to do so.

42D Obligations of owners before determination or inclusion in the Heritage Register—requirement to give statement to purchaser

- (1) This section applies if—
 - (a) an owner of a place, object or land is given a statement of recommendation; and
 - (b) the owner proposes to dispose of the whole or any part of the place, object or land within the statement of recommendation period.
- (2) Before entering into an agreement, arrangement or understanding to dispose of the whole or any part of the place, object or land during the statement of recommendation period, the owner must give a copy of the statement of recommendation to the person who, under the proposed agreement, arrangement or understanding, is to acquire the place, object or land or part of the place, object or land.

Owners of places and objects must comply with obligations (section 43)

An owner of a place, object or land who is subject to an obligation under section 42, 42A, 42B, 42C or 42D must comply with that obligation.

Penalty: In the case of a natural person, 120 penalty units;
 In the case of a body corporate, 240 penalty units.