

## Item Details

Name

Two Sandstone Culverts

Other/Former Names

Address

Old Glen Innes Road CHAMBIGNE NSW 2460

Local Govt Area

Clarence Valley

Item Classification

Item Type

Built

Item Group

Utilities - Drainage

Item Category

Road

Statement Of Significance

These sandstone culverts provide tangible evidence of road and drainage works as part of the historic development of the Old Glen Innes Road in a fairly remote rural location. They tell of early techniques of road and drainage work construction and use of materials available at the time. The two sandstone box culverts meet local heritage significance for their history, research and representative values. The sandstone box culverts as part of the historical, c.1860s Old Grafton Glen Innes Road are historically important to the area as part of the initial road from the country to the coast. The culverts have research potential as more information is needed to confirm their construction date, and also to establish, via a study, if all of the culverts along the Old Glen Innes Grafton Road are of the same box culvert type. The sandstone box culverts are representative of such structures associated with roads and drainage across New South Wales, dating from the early 19th and early 20th centuries. As historical elements, they will need to be retained and conserved and repaired sympathetically (not replaced) where required.

Assessed Significance Type

Local

Endorsed Significance

Local

Date Significance Updated

01/22/2024

File Number

Listings

Listing Name	Listing Date	Instrument Name	Instrument No.	Plan No.	Gazette Page	Gazette Number
Potential Heritage Item	23/0/2011	Clarence Valley Local Environmental Plan 2011	701			

GroupItemFlag

GroupItemFlag

Data retrieval failed for the subreport, 'GroupItems', located at: C:\home\site\wwwroot\bin\Reports\GroupItems.rdlc. Please check the log files for more information.

Heritage Item ID

6000705

Source

Local Government

## Location

GEOCORTEX

Boundary Description

The two culverts are within the road reserve of Old Glen Innes Road and are located approximately 385m-400m west of Bawdens Bridge over the Orara River

Addresses

Records Retrieved: 1

Street No	Street Name	Suburb/Town/Postcode	Local Govt. Area	LALC	Parish	County	Electorate	Address Type
	Old Glen Innes Road	CHAMBIGNE/NSW/2460	Clarence Valley					Primary Address

Title Information

Title Information Updated

Records Retrieved: 0

Lot/Volume Code	Lot/Volume Number	Section Number	Plan/Folio Code	Plan/Folio Number
No Results Found				

Aboriginal Area	Hectares	Latitude	Longitude
Gumbainggar		-29.727391	152.795811
Location Validity	Spatial Accuracy	Map Name	Scale
AMG Zone	Easting	Northing	Gis Datum

Description

Designer	Builder/Maker		
Construction Year Start & End	Circa	Period	
1870 - 1890	YES	1851 to 1900	
Physical Description			Updated 01/22/2024

A historic sandstone box culvert exists under the current road pavement which was discovered by Council when addressing repairs to a large pothole. The report by Virtus Heritage describes the two culverts as follows;

Culvert # 1 was located slightly lower in the valley than Culvert #2. It had five courses of stone on each side (the wing walls) of the drain. The culvert’s arrangement was a rectangular shape, with a flat base also composed of sandstone flat blocks and two wing walls of sandstone blocks measuring approximately 1.1m tall and 1.1m wide. The lintel appeared to be a large block of concrete and no roof timbers were visible externally. The timbers forming the roof of the culvert were partially visible internally. Some of these timber planks appeared termite damaged, refer to the photographs in this section. The culvert drain appeared clear throughout, and the pipe visible at the far southern end must have been partially cleared by the CVC road crew prior to Virtus Heritage inspection. However, it was hard to see past the spoil / earth pile, and therefore the material of the pipe is not identified herein.

**Culvert #2**  
Located further south under the old Grafton Glen Innes Road approximately 15 to 20 metres, distance from Culvert # 1 was another culvert which appeared very similar. At first this was thought to be the historical culvert previously identified by CVC, however, the coordinates provided had led Virtus Heritage to Culvert # 1. The decision was made to record this culvert due to the similarity with Culvert #1. This box culvert was three courses of sandstone blocks high internally on the eastern side wing wall and four courses – one comprising flat stones –on the western side wing wall. Internally, these sandstone courses appeared in good and sound condition. Externally, they were covered by vegetation and what appeared to be a concrete slab forming a lintel at the visible northern edge.

In summary, Culverts #1 and #2 appear to be similar in construction type and use of sandstone, timber and concrete. Both are box culverts, roughly square in shape. The sandstone headwalls and wing walls appear to represent original form and fabric, and are aesthetically pleasing, utilising local materials. Both culverts are capped along the visible western end by a concrete lintel. As can be seen for Culvert #2, this concrete lintel edges timber planks, which may be original or at the least are early timber road and culvert construction methods. The use of timber planks as well as the sandstone reflects the availability of both materials during the period of road construction.

**Physical Condition**

Updated 01/22/2024

- The condition of both culverts can be summarised as follows:
- ☑ They are both predominantly sandstone structures of a basic type referred to as a box culvert.
  - ☑ The road report referred to the road above sinking into the top of the culvert #1 via a pothole, and that this had obviously caused damage to the roof of the culvert. Apart from this problem, the condition of both culverts in relation to the sandstone blocks and concrete roof/lintel appears to be sound.
  - ☑ Both of the culverts have a partial timber deck /roof visible, supporting the road above. Some of the timbers appear in reasonable condition, others appear to be termite affected. Culvert #1 has fallen timbers at its southern end.
  - ☑ Each culvert roof has been replaced in part with a concrete slab which is visible from the northern side and forms part of the headwall (above the timber opening). The timber planks were visible in detail in Culvert #2 and while identification of the timbers was not possible, based on the viewing, hardwood local timber possibly Tallow wood would have been used.

**Physical Condition Summary**

Good

**Archaeological Potential**

Updated 10/09/2023

Tells of early road construction in the 19th Century.

**Archaeological Potential Summary**

High

**Modifications And Dates**

**Further Comments**

There is research potential to confirm the construction date of these sandstone box culverts, and also to establish, if this can be achieved, if all of the culverts along the Old Glen Innes Grafton Road are of the same box culvert type. Such a study would be of benefit to CVC and ensure that management of the items is comprehensive. Further research to establish the construction details and use of timber (which would apply more to road construction than to culvert construction) is also advised. Therefore, the subject box culverts meet the criteria for research potential at the local level for the Clarence Valley

**History**

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**First Nations History**

Gumbaingirr. There is general agreement that the Aboriginal people who occupied and/or made use of the area on the southern side of the Clarence River were the Gumbaingirr. At the time of first European settlement, the Gumbaingirr domain appears to have extended from South Grafton to North Nambucca Heads, and from the coast in the east, to the eastern fall of the Great Dividing Range in the west. Within this major language group, there were at least four dialectic divisions and a range of sub-groups including extended family clans. Several of these sub-groups were referred to as tribes by early European settlers and were named after the areas where they most commonly resided. Historical records attest to a number of Gumbaingirr sub-groups including the Bellingen, Nimboy and Woolgoolga.

This sandstone culvert is estimated to have been constructed between 1865-73 during the Gold Rush years as part of the Old Glen Innes Road link between the Tablelands and Grafton. The following extract is taken from the Thematic History of the Heritage Study for this area From the Tablelands to the Sea - Dan Tuck.

**Roads Across the Ranges: Grafton to Glen Innes**

Access to the New England Region from the Pacific Coast has always been a difficult enterprise. In the 1830s for example, Grafton had already been established as a cedar getting port and was the main port servicing the grazing lands of the interior. In the 1840s, New England Pastoralists desired a route to the coast for their wool to be sent to market. Initial tracks or 'roads' often followed Aboriginal pathways. One of the early routes followed Cunglebung Creek to the north of Dalmorton; another followed the ridgeline above the Little River. The Little River Valley was a much better gradient, but it did require significant construction work. As Laws, a historian of the Clarence region recalled in the 1930s:

Before the cutting was made on the Glen Innes Road up the Little River, the road went from Buccarumbi by way of the Blacksmith's Shop along the top of the range.

This route returned to the river at Newton Boyd via Barney's Hill. The initial construction of the route along the river from Buccarumbi to Newtown Boyd is unclear. After several alternatives were mooted the Commissioner and Engineer for Roads in New South Wales visited the district and decided in favour of the Little River route. It was upgraded to the status of a government road in 1865 and reported as open and '... used by a large proportion of the traffic' in 1870. An earlier route north of the Little River Valley through Copmanhurst was in use by 1851. In 1866 the tender for construction of the road over the 'Big Hill' was granted to H P Wiseman with David Houison the Chief Engineer.

The Clarence and Richmond Examiner reported favourably on its construction and the difficulties of working the numerous cuttings and a tunnel of '... 66 yards long through the mountain'. This tunnel has since been widely known in the district as the Convict Tunnel: more from its primitive construction than any historical evidence. Contractors blasted and hand-hew this tunnel in 1866-67, but the road between Glen Innes and Grafton did not fully open until 1873.

Virtus Heritage also provides a good contextual history of the Old Glen Innes Road in its report dated January 2024. Access to the New England Region from the Pacific Coast was originally rather difficult. In the 1830s for example, Grafton had already been established as a cedar getting port and was the main port servicing the grazing lands of the interior. In the 1840s, New England Pastoralists desired a route to the coast for their wool to be sent to market. Initial tracks or 'roads' often followed the Aboriginal pathways. One of those early routes followed Cunglebung Creek to the north of Dalmorton; and another followed the ridgeline above Little River. The Little River Valley was a much better gradient for a road for vehicles, but it did require significant construction work. After several alternatives were raised, the Commissioner and Engineer for Roads in New South Wales visited the district and decided in favour of the Little River route. It was upgraded to the status of a government road in 1865 and reported as open and '... used by a large proportion of the traffic' in 1870. The initial construction of the route along the river from Buccarumbi through Dalmorton to Newtown Boyd is unclear. An earlier route north of the



Little River Valley through Copmanhurst was in use by 1851. In 1866 the tender for construction of the road over the 'Big Hill' was granted to H P Wiseman and David Houison was appointed as the Chief Engineer (Cosmos Archaeology, 2018).

A stagecoach service operated by Cobb and Co., ran between Grafton and Glen Innes along this route. The journey originally took three days with stopovers at Buccarumbi and Newton Boyd. By the turn of the century, there were two hostels at the Buccarumbi location, one on either side of the Nymboida River to cater for travellers when the river could not be crossed. In the early 1900's, this route was also used by bullock teams hauling timber through to the wharves at South Grafton, and the road was used for transporting wool from the highlands to the wharves on the Clarence River (Cosmos Archaeology, 2018).

There were two notable bridges along the route (refer to Figure 18 and Figure 19) as well as the tunnel at Dalmorton. At Buccarumbi, a high-level bridge was completed in 1875 after seven years of building. The bridge with its huge cylinders was 754 feet (230m) long and 45 feet (13.7m) high. However, it collapsed in a March 1946 flood, when the Nymboida River rose to a record height of 52 feet (16m) (Cosmos Archaeology, 2018). Today there are remains of the old bridge pillars visible in the river waters and on the southern bank.

The second historical bridge was the Bawden Bridge (named after Thomas Bawden the local Parliamentary Member), constructed over the Orara River in 1874. It is one of the oldest lattice truss design bridges in NSW, 77 metres long with timber beam approaches (Cosmos Archaeology, 2018). It is a decorative structure which can only be appreciated from below the road surface. Crossing a deep gorge, it is supported by three tall piers made from pairs of tubes fabricated from curved and shaped wrought iron plates riveted together, and with cross ties shaped to form a vertical set of elliptical holes. At one stage there was a hotel (The Urara Hotel) sited adjacent to the bridge crossing and operated by a Mr Thomas Aish (Clarence and Richmond Examiner and New England Advertiser Saturday 2 October 1880).

A traveller's report from February 1873 describes travelling via horse from South Grafton to Buccarumbi on what he called the Little River Road via the gold claims / gold lines south and west of Chambigne. He noted the bridge across the Nymboida at Buccarumbi but had no mention of general road conditions:

"From Chambigne I made across to the Little River Road and after doing a few stiff hills, and pushing through scrub, I reached the main line, within one mile of Small's Inn, at Buccarumbi. I found the bridge across the Nymboida progressing very slowly and the punt quite inadequate to the traffic requirements of the road" (The Herald's special reporter, 1873: 5)

In August 1888, a traveller reported that the eastern part of the road from Grafton was so much better than that portion from Newton Boyd to Glen Innes (Clarence and Richmond Examiner, 1898: 3) In December 1921, road conditions were reported by a traveller who took four passengers in an (unidentified) demonstrator model car from Grafton to the Glen Innes railway station, a distance of 110 miles driven in five hours. The report stated that: "Mr. C. M. Carder, manager of the White Car Company reports that the portions of the South Grafton-Glen Innes Road within the Nymboida Shire are in excellent condition, that within Severn Shire very bad. ....The Big Hill, which means a rise of 2500 feet in seven miles, is, he continues, very washed out in places. No repairs have been effected on it since the flood. Concrete sub-ways were put in, but insufficient cement was used, and the bottoms are worn away already. From the top of the Hill to Glen Innes the surface is good." (Grafton Argus and Clarence River General Advertiser, 1921: 3).

A 1927 parish map shows the alignment of the road through Chambigne, refer to Figure 20 and compare this with the current map of the road, refer to Figure 21. It is defined here as a 'T.S.R.' (Travelling Stock Reserve) and a road 500 links wide. The date of notification for the road in this location is 25 November 1927. It is interesting that two earlier parish maps, 1903 and 1918 do not show the road at all.

Historic Themes

Records Retrieved: 2

National Theme	State Theme	Local Theme
4. Settlement	Utilities	Technologies of road building
3. Economy	Transport	

Uses

Current Use

Part of Old Glen Innes Road- under the current pavement.

Former Use/s

Culverts

Thematic Listings Program  
Theme

Assessment

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Criteria a)

Historical Significance

The sandstone box culverts as part of the c.1860s Old Grafton Glen Innes Road are historically important to the area. The culverts have historical significance due to their links to the road, rather than as standalone historical items, as they are utility structures to cope with drainage on the slopes of the road in this location, using local materials and in a standard and simple design. These two sandstone box culverts contribute to the history of the road and can provide further information on the construction dates of the road. They meet local heritage significance for their historical values. (Their specific details were not documented in the research undertaken for this study and therefore they are dated as part of the road itself. This proves difficult with historical sources noting the road was constructed during the 1860s and 1870s. Later additions to ensure the culverts remain roadworthy have not been documented by CVC.)

Criteria b)

Historical Association  
Significance

The sandstone culverts will have links to the road builders and engineers of the late 19th or early 20th century who constructed the road and its culverts. However, they will not have a strong or special association as they are standard items of road construction.

Criteria c)

Aesthetic/Technical Significance

The sandstone culverts do not demonstrate important aesthetic characteristics and/or a high degree of creative or technical achievement. These culverts are a basic shape and design, well-constructed for their purpose and using local materials such as the sandstone blocks and stones and thick, hardwood timbers. While they have a historical appearance and some aesthetic values in this bushland setting, there are more elaborate and better designed culverts listed as local heritage items across the State. They are not considered to have significance for this criterion.

Criteria d)

Social/Cultural Significance

There is no social significance identified for these sandstone box culverts.

Criteria e)

Research Potential

There is research potential to confirm the construction date of these sandstone box culverts, and also to establish, if this can be achieved, if all of the culverts along the Old Glen Innes Grafton Road are of the same box culvert type. Such a study would be of benefit to CVC and ensure that management of the items is comprehensive.

Further research to establish the construction details and use of timber (which would apply more to road construction than to culvert construction) is also advised.

Therefore, the subject box culverts meet the criteria for research potential at the local level for the Clarence Valley

#### **Criteria f)**

##### **Rarity**

The sandstone box culverts have not been identified as rare items, and they are not in danger of removal. However, as historical elements, they will need to be retained and conserved and repaired where required. The exact number of such culverts for roads across the State is not certain, however, historical information dating to c.1899 show that there were 36,158 culverts constructed on Department of Public Works roads. Currently, there are a total of 59 culverts which are listed as local heritage items on the NSW SHI. Therefore, they are not considered to have significance for this criterion.

#### **Criteria g)**

##### **Representative**

The sandstone box culverts demonstrate the principal characteristics of this type of culvert, and are representative of such structures associated with roads and drainage across New South Wales. This type of culvert dates from the early 19th to the early 20th centuries. This type of culvert was used in the convict built c.1820s Great North Road heading north from Sydney and in fact the sandstone culverts were constructed on many roads, as referenced in the 1976 NSW Department of Main Roads history.

The two box culverts meet local heritage significance for this criterion.

##### **Integrity/Intactness**

The condition of both culverts can be summarised as follows:

- ☑ They are both predominantly sandstone structures of a basic type referred to as a box culvert.
- ☑ The road report referred to the road above sinking into the top of the culvert #1 via a pothole, and that this had obviously caused damage to the roof of the culvert. Apart from this problem, the condition of both culverts in relation to the sandstone blocks and concrete roof/lintel appears to be sound.
- ☑ Both of the culverts have a partial timber deck /roof visible, supporting the road above. Some of the timbers appear in reasonable condition, others appear to be termite affected. Culvert #1 has fallen timbers at its southern end.
- ☑ Each culvert roof has been replaced in part with a concrete slab which is visible from the northern side and forms part of the headwall (above the timber opening). The timber planks were visible in detail in Culvert #2 and while identification of the timbers was not possible, based on the viewing, hardwood local timber possibly Tallow wood would have been used.

## **References**

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References

Records Retrieved: 2				
Title	Author	Year	Link	Type
Old Grafton-Glen Innes Road sandstone culverts Final Heritage Assessment Culvert 1 and Culvert 2 for CVC	Virtus Heritage	2024		Written
From the Tablelands to the Sea-A Contextual History	Dan Tuck for Cosmos Archaeology	2018		Written

Heritage Studies

Records Retrieved: 0					
Title	Year	Item Number	Author	Inspected By	Guidelines Used
No Results Found					

Recommended Management

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Management

Records Retrieved: 1		
Management Category	Management Name	Date Updated
		1/22/2024 10:15:39 AM

Management Summary

There is heritage significance identified in this assessment for both sandstone box culverts observed at Chambigne, under the Old Grafton Glen Innes Road. Their heritage significance relates to historical, research and representative values. All works should be in accordance with the heritage conservation principles of the ICOMOS Burra Charter 2013 with a precautionary approach and an understanding of the significance of the structure prior to planning of any works. A detailed assessment is required prior to any works. An archival record should be kept of any works. Staff induction is essential for personnel working at this site to be made aware of the significance of the structure. The historic structure should be carefully protected from impacts of heavy machinery for example, any spoil which fell through after the road works needs to be removed carefully/ manually to avoid damage to the structure by machinery.

- The principles stated below are relevant to these culverts and reflect best heritage management in NSW:
- ☐ Carry out all works with due regard to heritage issues;
  - ☐ Conserve original fabric wherever possible;
  - ☐ Repair original items rather than replace them;
  - ☐ Use sympathetic materials and construction techniques; and,
  - ☐ Minimize damage to the surrounding environment.
  - ☐ The local heritage significance supports heritage listing for Clarence Valley Council. A copy of this report needs to be retained by CVC and consulted for works.
  - ☐ Any proposed changes that are required to maintain the operations of the culverts needs to consider their heritage significance. This means that the existing configuration of the culverts are to be retained.
  - ☐ The culverts should be retained and repaired, so that they remain operational.
  - ☐ No replacement of sandstone is to take place.
  - ☐ Reinforcement of the road deck above the culverts, will need to follow the advice of suitable structural engineers.

Custom

Custom Field1	Custom Field2
Custom Field3	Custom Field4
Custom Field5	Custom Field6
Admin Code1	Admin Code2
Admin Code3	









Stakeholders

Records Retrieved: 0						
Stakeholder Category	Stakeholder Type	Stakeholder Name	Organisation	Position	Mobile	Email
No Results Found						

Images Table

Images

Records Retrieved: 8

Image	File Name	Image Type	Subject	Photographer/A uthor	Date	Display Sequence
	Culvert 2 northwest view.jpg		Culvert #2 northwest view	Virtus Heritage	8/20/2022 12:00:00 AM	8
	Culvert 2 view to NE top corner and lintel.jpg		Culvert #2 northeast view and lintel	Virtus Heritage	8/20/2022 12:00:00 AM	7
	Culvert 2 interior 2.jpg		Culvert #2	Virtus Heritage	8/20/2022 12:00:00 AM	6
	P1100629.J PG		Rock drainage on northern side of road	D.Wray	9/5/2022 12:00:00 AM	5
	P1100634.J PG		Location on Glen Innes Road Sandstone Kerb and Gutter	D.Wray	9/5/2022 12:00:00 AM	4
	P1100638.J PG		Sandstone Culvert #1 Old Glen Innes Road	D.Wray	9/5/2022 12:00:00 AM	3
	P1100639.J PG		Sandstone Culvert #1 Old Glen Innes Road	D.Wray	9/5/2022 12:00:00 AM	2
	P1100635.J PG		Sandstone Culvert #1 Old Glen Innes Road	D.Wray	9/5/2022 12:00:00 AM	1

Notes

Records Retrieved: 0

Application ID / Stakeholder ID	Type	Date	Added By	Notes	Attach ments
No Results Found					

Data Source

The information for this entry comes from the following source:

Data Source	Record Owner	Heritage Item ID
Local Government	Clarence Valley Council	6000705
Internet Available	Item Redundant	
False		

Every effort has been made to ensure that information contained in the State Heritage Inventory is correct. If you find any errors or omissions please send your comments to [council@clarence.nsw.gov.au](mailto:council@clarence.nsw.gov.au)

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## Merged Heritage Items

Merged Heritage Items

Records Retrieved: 0

Name	Address	Date Merged
No Results Found		

## Images



Caption: Culvert 2 northwest view

Photographer: Virtus Heritage

Copyright Owner: No Credit

Date: 8/20/2022 12:00:00 AM





Caption: Culvert 2 view to NE top corner and lintel

Photographer: Virtus Heritage

Copyright Owner: No Credit

Date: 8/20/2022 12:00:00 AM



Caption: Culvert 2 interior 2

Photographer: Virtus Heritage

Copyright Owner: No Credit

Date: 8/20/2022 12:00:00 AM





Caption: Rock drainage on northern side of road

Photographer: D.Wray

Copyright Owner: No Credit

Date: 9/5/2022 12:00:00 AM



Caption: Location on Glen Innes Road Sandstone Kerb and Gutter

Photographer: D.Wray

Copyright Owner: No Credit

Date: 9/5/2022 12:00:00 AM



Caption: Sandstone Culvert #1 Old Glen Innes Road

Photographer: D.Wray

Copyright Owner: No Credit

Date: 9/5/2022 12:00:00 AM



Caption: Sandstone Culvert #1 Old Glen Innes Road

Photographer: D.Wray

Copyright Owner: No Credit

Date: 9/5/2022 12:00:00 AM





Caption: Sandstone Culvert #1 Old Glen Innes Road

Photographer: D.Wray

Copyright Owner: No Credit

Date: 9/5/2022 12:00:00 AM