Rockhampton railyards local plan code

(a) Application

This code applies to assessing development, where the code is identified as applicable in the table of assessment for the Rockhampton railyards local plan code.

The following supporting material may guide the assessment of development within this local plan:

(a) Rockhampton Illustrative Master Plan (Drawing No. 24, Revision A, dated 18 June 2019), prepared by Place Design Group, or otherwise changed and approved.
(b) Rockhampton Railyards Precinct Plan (dated June 2019), prepared by Place Design Group, or otherwise changed and approved.
(c) Rockhampton Workshops and Roundhouse Conservation Management Plan (Version 2.3), prepared by Thom Blake and Peter Marquis-Kyle, dated July 2019, or otherwise changed and approved.

The following administrative definitions listed here are the definitions for the purpose of interpreting the Rockhampton railyards local plan code:

Term	Definition
Lot 3	Means the land contained within Lot 3 on Survey Plan 318446 and includes any lots created from that land from time to time.
Lot 3 lawful uses	Means all lawful uses presently undertaken on Lot 3 as at the date when a development application (to which this code applies) is made.
Sensitive land uses	Has the means given to that term in Schedule 1 of the *Rockhampton Region Planning Scheme*.
Transport-related facility impacts	Means traffic impacts and amenity impacts such as visual impacts, noise impacts, air quality impacts (including dust emissions), odour impacts and light impacts, caused or contributed to by Lot 3 lawful uses.

Note - The following purpose, overall outcomes, performance outcomes and acceptable outcomes comprise the assessment benchmarks of this code.

(b) Purpose

(1) Land in the Rockhampton railyards local plan area is identified on the Rockhampton Railyards Master Plan map and includes the following precincts:

(a) Precinct 1 – Roundhouse;
(b) Precinct 2 – Railyards; and
(c) Precinct 3 – Industry Services.

(2) The purpose of the Rockhampton railyards local plan code will be achieved through the following overall outcomes:

(a) A range of industrial, commercial, service and community uses are established, providing a high level of economic and social activity, employment opportunities and a vibrant mixed-use destination for Rockhampton.
(b) Community and event spaces that capitalise of the uniqueness of the Roundhouse building and adjacent area provide a setting for the creative arts in Rockhampton.
(c) New development manages visual, air (including dust emissions), odour, light and noise impacts through appropriate siting and building design, to achieve a level of amenity consistent with the zone and local plan outcomes, and to ensure that the impact of Lot 3 lawful uses on the amenity of new development for sensitive land uses is prevented or minimised.

(d) The cultural heritage significance of the Rockhampton Railway Workshops as a State Heritage Place is conserved, including significant views, fabric and setting.
Editor's note – The Australian ICOMOS Charter for Places of Cultural Significance (Burra Charter) provides guidance on best practice conservation and/or management of the cultural heritage significance of heritage places.
(e) Movement, access and parking accommodates all modes of transport and achieves a high level of internal and external connectivity.
(f) Building and public realm design responds to the cultural heritage significance of the place, the subtropical climate and reflects and reinforces the unique urban form.
(g) Development achieves a high level of environmental performance and design with visually appealing development and complementary landscaping where appropriate.
(h) The preferred uses within the local plan area include:
    a. Bulk landscape supplies;
    b. Caretaker's accommodation;
    c. Community care centre;
    d. Community use;
    e. Educational establishment (if for tertiary education or tertiary training);
    f. Emergency services;
    g. Food and drink outlet (not exceeding 150 square metres gross floor area);
    h. Function facility
    i. Garden centre;
    j. Hardware and trade supplies;
    k. Indoor sport and recreation;
    l. Low impact industry;
    m. Medium impact industry;
    n. Research and technology industry;
    o. Sales office;
    p. Service industry;
    q. Service station;
    r. Theatre;
    s. Warehouse; and
    t. Any ancillary uses required to support specified activities.
(i) Operations at the existing railway marshalling yards and intermodal terminal on Lot 3 within Depot Hill and in proximity to the Rockhampton railyards local plan area will continue and may potentially expand in the future. The location, design and construction of new development for any sensitive land use must prevent or minimise the transport-related facility impacts on those sensitive land uses.

Where in the Roundhouse precinct (Precinct 1):

(3) The overall outcomes of the Roundhouse precinct are additional to the overall outcomes of the Rockhampton railyards local plan code and take precedence in the event of a conflict:

(a) The Roundhouse precinct is the focal point for the Rockhampton railyards local plan area. Development in the Roundhouse precinct, provides for the future protection of the heritage place, does not damage or diminish its cultural heritage significance and provides for its revitalisation as a community and event space for locals and visitors.
(b) The precinct's unique history is celebrated and promoted through the retention, conservation and adaptive reuse of the heritage place for a mix of community and finer-grain uses, such as Function facilities and Food and drink outlets, that facilitate public access, enjoyment and appreciation of the place while protecting its cultural heritage significance.
(c) Development responds sympathetically to the form, scale and setting of the heritage place and provides a built or landscaped form that maintains the cultural heritage significance of existing buildings, spatial patterns, views, access and layout.
(d) Development optimises public access through and around the precinct.
(e) The design and construction of new development for any sensitive land use must prevent or minimise the transport-related facility impacts on those sensitive land uses.
(f) Development is located and designed to prevent or minimise conflict with truck movements associated with Lot 3 lawful uses and to ensure a safe pedestrian environment is provided.
(g) Operations at the existing railway marshalling yards and intermodal terminal on Lot 3 within Depot Hill and in proximity to the Rockhampton railyards local plan area will continue and may potentially expand in the future. The location, design and construction of new development for any sensitive land uses must prevent or minimise the transport-related facility impacts on those sensitive land uses.

Where in the Railyards precinct (Precinct 2):

(4) The overall outcomes of the Railyards precinct are additional to the overall outcomes of the Rockhampton railyards local plan code and take precedence in the event of a conflict:

(a) Development provides for the future protection and conservation of the former Carriage Shop and former Paint Shop buildings of the Rockhampton Railway Workshops heritage place.

(b) This precinct provides a strategically important inner-city industrial employment area and is developed for a range of industry uses including:
    a. Low impact industry;
    b. Medium impact industry;
    c. Service industry;
    d. Transport depot; and
    e. Warehouse.

(c) The design and construction of new development for any sensitive land use must prevent or minimise the transport-related facility impacts on that sensitive land use.

(d) Non-industrial uses, such as Indoor sport and recreation and Food and drink outlets will also be accommodated within this precinct.

(e) Development provides for an integrated movement and parking layout that enables the re-use of viable existing industrial buildings and structures and the integration of new buildings of a similar bulk and scale.

(f) Development is located and designed to prevent or minimise conflict with truck movements associated with Lot 3 lawful uses.

Where in the Industry Services precinct (Precinct 3):

(5) The overall outcomes of the Industry Services precinct are additional to the overall outcomes of the Rockhampton railyards local plan code and take precedence in the event of a conflict:

(a) This precinct supports the nearby city centre and residential development through providing larger-footprint buildings accommodating uses such as Hardware and trade supplies, Garden centre and Warehouse.

(b) This precinct does not accommodate large-scale retail shops such as discount department stores, supermarkets or shopping centres.

1.3 Categories of assessment

Editor's note – Development identified as 'Accepted' or 'Accepted subject to requirements' in section 1.3 may still require a development application to be submitted to the Chief Executive administering the *Planning Act 2016* for assessment when the premises are on or adjoining a Queensland heritage place.

1.3.1 Categories of assessment – Material change of use

The following tables identify the categories of assessment for a Material change of use for each precinct within the Rockhampton railyards local area plan.

Table 1: Rockhampton railways local plan - Material change of use - Precinct 1 Roundhouse

Use	Categories of development and assessment	Assessment benchmarks for assessable development and requirements for accepted development
• **Park**	**Accepted**	
		Not applicable
• **Caretaker's accommodation** • **Community use** • **Emergency services** • **Sales office**	**Accepted subject to requirements**	
	If involving the reuse of existing building(s) or structure(s).	Rockhampton railyards local plan code Other development codes: Works code
	Code assessment	
	Otherwise	Rockhampton railyards local plan code Other development codes: Access, parking and transport code Landscape code Stormwater management code Waste management code Water and sewer code

Table 1: Rockhampton railways local plan - Material change of use - Precinct 1 Roundhouse		
Use	**Categories of development and assessment**	**Assessment benchmarks for assessable development and requirements for accepted development**
• **Food and drink outlet** • **Theatre**	**Code assessment**	
	All circumstances	Rockhampton railyards local plan code Other development codes: Access, parking and transport code Landscape code Stormwater management code Waste management code Water and sewer code
• **Educational establishment**	If for tertiary education or tertiary training	Rockhampton railyards local plan code Other development codes: Access, parking and transport code Landscape code Stormwater management code Waste management code Water and sewer code
• **Low impact industry** • **Research and technology industry** • **Service industry** • **Warehouse**	**Accepted subject to requirements**	
	If: (a) involving the reuse of existing building(s) or structure(s); or (b) any additional gross floor area is less than or equal to 1,000m² and the total gross floor area is less than 8,000 m²	Rockhampton railyards local plan code Other development codes: Works code
	Code assessment	
	Otherwise	Rockhampton railyards local plan code Other development codes: Access, parking and transport code Landscape code Stormwater management code Waste management code Water and sewer code
Impact assessment		
• **Any other use not listed in this table.** • **Any use listed in this table and not meeting the description listed in the "Categories of development and assessment" column.** • **Any other undefined use.**		Rockhampton railyards local plan code The planning scheme

Editor's note — The above categories of development and assessment apply unless otherwise prescribed within the Regulation.

Table 2: Rockhampton railways local plan - Material change of use - Precinct 2 Railyards		
Use	**Categories of development and assessment**	**Assessment benchmarks for assessable development and requirements for accepted development**
• **Bulk landscape supplies** • **Caretaker's accommodation** • **Carwash** • **Sales office** • **Substation** • **Telecommunications facility**	**Accepted subject to requirements**	
	If: (a) involving the reuse of existing building(s) or structure(s); and (b) not located within 25 metres of the rail corridor.	Rockhampton railyards local plan code Other development codes: Works code
	Code assessment	
	Otherwise	Rockhampton railyards local plan code Other development codes: Access, parking and transport code Landscape code Stormwater management code Waste management code Water and sewer code
• **Food and drink outlet** • **Garden centre** • **Hardware and trade supplies** • **Indoor sport and recreation**	**Code assessment**	
	All circumstances	Rockhampton railyards local plan code Other development codes: Access, parking and transport code Landscape code Stormwater management code Waste management code Water and sewer code
• **Educational establishment**	If for tertiary education or tertiary training	Rockhampton railyards local plan code Other development codes: Access, parking and transport code Landscape code Stormwater management code Waste management code Water and sewer code

Table 2: Rockhampton railways local plan - Material change of use - Precinct 2 Railyards		
Use	**Categories of development and assessment**	**Assessment benchmarks for assessable development and requirements for accepted development**
• **Low impact industry** • **Medium impact industry** • **Renewable energy facility** • **Research and technology industry** • **Warehouse** • **Service industry**	**Accepted subject to requirements**	
	If: (a) not located within 25 metres of the rail corridor; and (b) involving the reuse of existing building(s) or structure(s); or (c) any additional gross floor area is less than or equal to 1,000m² and the total gross floor area is less than 8,000 m²	Rockhampton railyards local plan code Other development codes: Works code
	Code assessment	
	Otherwise	Rockhampton railyards local plan code Other development codes: Access, parking and transport code Landscape code Stormwater management code Waste management code Water and sewer code
• **Transport depot**	**Code assessment**	
	All circumstances	Rockhampton railyards local plan code Other development codes: Access, parking and transport code Landscape code Stormwater management code Waste management code Water and sewer code
Impact assessment		
• **Any other use not listed in this table.** • **Any use listed in this table and not meeting the description listed in the "Categories of development and assessment" column.** • **Any other undefined use.**		Rockhampton railyards local plan code The planning scheme

Editor's note — The above categories of development and assessment apply unless otherwise prescribed within the Regulation.

Table 3: Rockhampton railways local plan - Material change of use - Precinct 3 Industry Services		
Use	**Categories of development and assessment**	**Assessment benchmarks for assessable development and requirements for accepted development**
• **Adult store** • **Agricultural supplies store** • **Garden centre** • **Hardware and trade supplies** • **Outdoor sales** • **Service Station** • **Veterinary services**	**Accepted subject to requirements**	
	If: (a) not located within 25 metres of the rail corridor; and (b) involving the reuse of existing building(s) or structure(s); or (c) any additional gross floor area is less than or equal to 1,000m²	Rockhampton railyards local plan code Other development codes: Works code
	Code assessment	
	Otherwise	Rockhampton railyards local plan code Other development codes: Access, parking and transport code Landscape code Stormwater management code Waste management code Water and sewer code
• **Food and drink outlet** • **Indoor sport and recreation**	**Code assessment**	
	All circumstances	Rockhampton railyards local plan code Other development codes: Access, parking and transport code Landscape code Stormwater management code Waste management code Water and sewer code

Table 3: Rockhampton railways local plan - Material change of use - Precinct 3 Industry Services		
Use	**Categories of development and assessment**	**Assessment benchmarks for assessable development and requirements for accepted development**
• **Low impact industry** • **Medium impact industry** • **Service industry** • **Warehouse**	**Accepted subject to requirements**	
	If: (a) not located within 25 metres of the rail corridor; and (b) involving the reuse of existing building(s) or structure(s); or (c) any additional gross floor area is less than or equal to 1,000m² and the total gross floor area is less than 8,000 m²	Rockhampton railyards local plan code Other development codes: Works code
	Code assessment	
	Otherwise	Rockhampton railyards local plan code Other development codes: Access, parking and transport code Landscape code Stormwater management code Waste management code Water and sewer code
Impact assessment		
• **Any other use not listed in this table.** • **Any use listed in this table and not meeting the description listed in the "Categories of development and assessment" column.** • **Any other undefined use.**		Rockhampton railyards local plan code The planning scheme

Editor's note — The above categories of development and assessment apply unless otherwise prescribed within the Regulation.

1.3.2 Categories of assessment – Building work

Not applicable.

Editor's note—The planning scheme also regulates building work associated with an overlay through the tables of assessment under section 5.9.

1.3.3 Categories of assessment – Operational works associated with an advertising device

The following table identifies the categories of assessment for Operational works associated with an Advertising device within the Rockhampton railyards local plan area.

Table 4: Rockhampton railways local plan – Operational works associated with an Advertising device - All Precincts

Precinct	Categories of development and assessment	Assessment benchmarks for assessable development and requirements for accepted development
• **All Precincts**	**Accepted**	
	If: (a) an advertising device that is: (i) located internally within a building; and (ii) not visible from outside; or (b) an advertising device that is: (i) a blind sign; or (ii) a business hours sign; or (iii) a business name plate sign; or (iv) a canopy sign; or (v) a election sign; or (vi) a flag sign that is no higher than six (6) metres from ground level; or (vii) a hamper sign; or (viii) a park sign; or (ix) a public notification sign; or (x) a real estate sign; or (xi) a sporting field fence sign; or (xii) a stallboard sign; or (xiii) a street furniture sign; or (xiv) a trade sign; or (xv) a window sign.	Not applicable

Table 4: Rockhampton railways local plan – Operational works associated with an Advertising device - All Precincts		
Precinct	**Categories of development and assessment**	**Assessment benchmarks for assessable development and requirements for accepted development**
	Accepted subject to requirements	
	If for the following advertising devices: (a) animated sign; (b) awning fascia sign; or (c) balloon or kite sign; (d) banner sign; or (e) bunting; or (f) creative awning sign; or (g) fence sign; or (h) flag sign; or (i) footpath sign; or (j) ground sign; or (k) information board sign; or (l) newsagency sign; or (m) panel sign; or (n) pole sign; or (o) pylon sign not exceeding 2m in height; or (p) road reserve sign; or (q) three-dimensional sign; or (r) under awning sign; or (s) wall sign (where 10m² or less in total area)	Other development code: Advertising devices code
	Code assessment	
	Otherwise.	Other development code: Advertising devices code

Editor's note — Schedule 2 Dictionary of the *Planning Act 2016* provides that building work involving a Queensland heritage place includes:

- altering, repairing, maintaining or moving a built, natural or landscape feature on the place; and
- excavating, filling or other disturbances to land that damage, expose or move archaeological artefacts, as defined under the *Queensland Heritage Act 1992*, on the place; and
- altering, repairing or removing artefacts that contribute to the place's cultural heritage significance (furniture or fittings for example); and
- altering, repairing or removing building finishes that contribute to the place's cultural heritage significance (paint, wallpaper or plaster, for example).

Any applications for operational works associated with an advertising device which involve any of the above building works and is located within the boundary of the Queensland heritage place will require an exemption certificate issued under the *Queensland Heritage Act 1992* or assessment by the Chief Executive administering the *Planning Act 2016*.

1.3.4 Categories of assessment – Reconfiguring a lot

No variation to the Planning Scheme.

1.3.5 Categories of Assessment – Operational Works (excluding operational works associated with an advertising device)

No variation to the Planning Scheme.

1.3.6 Categories of Assessment – Overlays

The following table identifies where an overlay changes the categories of assessment from that stated in Table 1 – Table 5 of this document and the relevant assessment benchmarks.

Table 5: Rockhampton railways local plan – Overlays - All Precincts		
Development subject to overlay	**Categories of development and assessment**	**Assessment benchmarks for assessable development and requirements for accepted development**
Acid sulfate soils overlay		
All development	No change	Acid sulfate soils overlay code
Airport environs overlay		
All development	No change	Airport environs overlay code
Flood hazard overlay		
All material change of use and reconfiguring a lot (if new lots are created)	Code assessable	Flood hazard overlay code
Heritage place overlay		
All development	No change	Heritage place overlay code
Steep land overlay		
All development	No change	Steep land overlay code

Editor's note — the above categories of development and assessment apply unless otherwise prescribed within the Regulation.

Editor's note - where development is proposed on premises partly affected by an overlay, the assessment benchmarks for the overlay only relates to the part of the premises affected by the overlay.

1.4 Specific benchmarks for assessment

Table 6: Development outcomes for assessable development and requirements for accepted development	
Performance outcomes	**Acceptable outcomes**
Where involving a new building or expansion to an existing building	
PO1 Development does not adversely impact on the character of the locality, having regard to the scale and visibility of buildings.	AO1.1 The height of new buildings and structures does not exceed 20 metres above ground level.
	AO1.2 Site cover does not exceed 80 percent of the total site area for all precincts.
PO2 Building setbacks contribute to an attractive streetscape and provide for landscaping at the front of the site.	AO2 New buildings and structures are set back from street frontages: (a) Within 20 per cent of the average front setback of adjoining buildings; or (b) where there are no adjoining buildings a minimum of 6 metres.
PO3 Development has a high-quality appearance and makes a positive contribution to the character of the area having regard to orientation of buildings to the street and incorporation of directional elements.	AO3 Development ensures that the main pedestrian entry to the buildings are: (a) Easily identifiable; (b) Clearly visible from the street and visitor car parking areas; and (c) Where appropriate, incorporate sun and rain shelter, such as overhangs or awnings.
PO4 Landscaping to road frontages must make a positive contribution to the streetscape and incorporate landscape elements that screen the scale and bulk of buildings.	AO4 Landscaping is provided along the frontages of the site.
Effects of development	
PO5 Outdoor lighting does not adversely affect the amenity of adjoining premises or create a traffic hazard on adjacent roads.	AO5 Outdoor lighting is designed, installed and maintained in accordance with the parameters and requirements of the *Australian Standard AS 4282 — Control of the obtrusive effects of outdoor lighting* as updated from time to time.

Table 6: Development outcomes for assessable development and requirements for accepted development	
Performance outcomes	**Acceptable outcomes**
PO6 Development prevents or minimises the generation of any noise, dust and odour so that: (a) nuisance is not caused to adjoining sensitive land use(s); and (b) desired ambient noise levels in residential zones are not exceeded.	AO6.1 The noise generation levels set out in the *Environmental Protection (Noise) Policy 2019*, is achieved for all development.
	AO6.2 The air quality design objectives set out in the *Environmental Protection (Air) Policy 2019*, is achieved for all development.
PO7 Development provides for the appropriate storage, collection, treatment and disposal of liquid wastes or sources of contamination such that off-site releases of contaminants do not occur. All storage areas are screened from the streetscape and adjoining residential zones.	AO7.1 Development that involves the storage of materials on site that are capable of generating air contaminants either by wind or when disturbed are managed by: (a) being wholly enclosed in storage bins; or (b) a watering program so material cannot become airborne.
	AO7.2 Areas where potentially contamination substances are stored or used, these are: (a) roofed and sealed with concrete, asphalt or similar impervious substance; and (b) not located within a flood area.
	AO7.3 Roof water is piped away from areas of potential contamination.
	AO7.4 Outdoor storage areas are: (a) screened from view from off-site public places; and (b) screened from adjoining sensitive land use(s) by a 1.8 metre high solid screen fence.
PO8 Development is designed and managed so that it provides appropriate protection for community safety and health and avoids unacceptable risk to life and property.	No acceptable outcome is nominated.
PO9 Development does not create adverse impacts on the amenity of adjacent residential areas by the way of noise, dust, lighting, hours of operation or unsightly activities.	AO9 Noise generating activities, access and driveways and outdoor activities are not located directly adjacent to a residential zone or sensitive land use and are restricted to between the hours of 07:00 and 19:00 Monday to Saturday.

Table 6: Development outcomes for assessable development and requirements for accepted development	
Performance outcomes	**Acceptable outcomes**
PO10 Non-industrial uses are located, designed and constructed to: (a) prevent or minimise potential Transport-related facility impacts; and (b) ensure the functionality and viability of Lot 3 lawful uses are not compromised or reduced.	No acceptable outcome prescribed
PO11 Site layout facilitates the security of people and property having regard to: (a) visitor parking being appropriately located near the building; (b) the provision of a safe and suitable pedestrian entry to the site and main buildings from any vehicular entry points and manoeuvring areas; (c) opportunities for passive surveillance and sightlines; (d) exterior building designs which promote safety; (e) adequate lighting; (f) appropriate directional mechanisms (for example signage); (g) no entrapment locations; and (h) building entrances, loading and storage areas being well lit and lockable after hours.	No acceptable outcome prescribed.
PO12 Development responds sensitively to on- site and surrounding topography, drainage patterns, utility services, access, vegetation and adjoining land uses, such that: (a) any earthworks are minimised; (b) the retention of natural drainage lines is maximised; (c) the retention of existing vegetation is maximised; (d) damage or disruption to sewer, stormwater and water infrastructure is avoided; and (e) there is adequate buffering, screening and separation to sensitive land use(s).	No acceptable outcome is nominated.
PO13 Roads and other infrastructure are of a sufficient capacity to accommodate the demands generated by the development. Editor's note—A traffic impact assessment report, certified by a Registered Professional Engineer of Queensland (RPEQ) traffic engineer, will be required to demonstrate compliance with this performance outcome in regard to road infrastructure.	No acceptable outcome is nominated.

Table 6: Development outcomes for assessable development and requirements for accepted development	
Performance outcomes	**Acceptable outcomes**
PO14 Development protects the cultural heritage significance of the Rockhampton Railway Workshops heritage place, including the setting and significant views to the listed place. Editor's note—A heritage impact assessment report, prepared by a suitably qualified person, may be required to demonstrate compliance with this performance outcome.	No acceptable outcome is nominated.
PO15 Development provides a stormwater management system which achieves the integrated management of stormwater to: (a) ensure that flooding impacts do not increase, including upstream or downstream of the development site; (b) avoid net worsening of stormwater peak discharges and runoff volumes; (c) utilises the use of water sensitive urban design principles; and (d) ensure the site maximizes opportunities for capture and reuse. Editor's note—A stormwater management plan may be required to demonstrate compliance with the performance outcome.	AO15.1 Development provides a stormwater management system which is designed in compliance with Rockhampton Regional Council's SC6.18— Stormwater management planning scheme policy, SC6.10 — Flood hazard planning scheme policy, the Queensland Urban Drainage Manual, the Capricorn Municipal Development Guidelines and Australian Rainfall and Runoff. AND AO15.2 Stormwater is conveyed to a lawful point of discharge in accordance with the Queensland Urban Drainage Manual.
PO16 Development provides a stormwater management system which: (a) has sufficient capacity to safely convey run-off taking into account increased run-off from impervious surfaces and flooding in local catchments; (b) maximises the use of natural waterway corridors and natural channel design principles; and (c) efficiently integrates with existing stormwater treatments upstream and downstream.	AO16 Development provides a stormwater management system which is designed in compliance with Rockhampton Regional Council's SC6.18 — Stormwater management planning scheme policy, the Queensland Urban Drainage Manual, the Capricorn Municipal Development Guidelines and Australian Rainfall and Runoff.
PO17 Development ensures that the location and design of stormwater detention and water quality treatment facilities: (a) minimise risk to people and property; (b) provide for safe access and maintenance; and (c) provide for the safe recreational use of stormwater management features.	AO17.1 Development provides for stormwater detention and water quality treatment facilities which are located outside of a waterway. AND AO17.2 Development provides a stormwater quality treatment system which is designed in accordance with State Planning Policy - Water Quality.
PO18 Development facilitates the orderly provision and upgrading of the transport network or contributes to the construction of transport network improvements. Editor's note—Identification of transport network upgrade requirements will be based on a traffic impact assessment report, certified by a Registered Professional Engineer of Queensland (RPEQ) traffic engineer.	No acceptable outcome is nominated.

Table 6: Development outcomes for assessable development and requirements for accepted development	
Performance outcomes	**Acceptable outcomes**
PO19 On-site transport network infrastructure integrates safely and efficiently with surrounding networks. Editor's note—Identification of transport network integration requirements will be based on a traffic impact assessment report, certified by a Registered Professional Engineer of Queensland (RPEQ) traffic engineer.	AO19.1 Intersections, connections and access arrangements are designed in accordance with the Capricorn Municipal Development Guidelines and Australian Standard AS 2890.
Land use	
Caretaker's accommodation	
PO20 Development does not compromise the productivity of the surrounding uses.	AO20 No more than one (1) caretaker's accommodation is established within the local plan area.
PO21 Development ensures that internal rooms and spaces are designed, located and constructed to minimise noise intrusion from external sources.	AO21 Caretaker's accommodation is designed and constructed using materials which ensure that habitable rooms meet the following internal noise criteria: (a) ≤45 dB(A) single event maximum sound pressure level.
Land Use	
Child care centre	
PO22 Development ensures that internal rooms and spaces are designed, located and constructed to minimise noise intrusion from external sources in indoor education areas and indoor play areas.	AO22.1 Development is designed and constructed using materials which ensure indoor education areas and indoor play areas meet the following internal noise criteria: (a) ≤50 dB(A) single event maximum sound pressure level.
	AO22.2 Development is designed and constructed using material which ensure sleeping rooms in a childcare centre meet the following internal noise criteria: (a) ≤45 dB(A) single event maximum sound pressure level.
Land use	
Educational Establishment	
PO23 Development minimises noise intrusion from external sources in indoor education areas and indoor play areas.	AO23 Development is designed and constructed using materials which ensure indoor education areas and indoor play areas meet the following internal noise criteria: (a) ≤50 dB(A) single event maximum sound pressure level.
PO24 Outdoor activity areas are screened from adjoining properties and from the street.	AO24 All outdoor education areas are shielded from adjacent industrial uses by a building, a solid gap-free fence, or other solid gap-free structure.

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18 May 2020

Our Reference: 0911819

Aurizon Operations Limited
GPO Box 456
BRISBANE QLD 4001

Att: Mr. Andrew Batts

RE: INFORMATION REQUEST - DEVELOPMENT APPLICATION D/66-2019 FOR A MATERIAL CHANGE OF USE FOR A PRELIMINARY APPROVAL VARYING THE EFFECT OF THE PLANNING SCHEME - SITUATED AT 338-380 BOLSOVER STREET, DEPOT HILL - DESCRIBED AS LOT 32 AND 33 ON SP131823 AND LOT 38 ON SP131824, PARISH OF ROCKHAMPTON

Response to Council's Information Request (7 November 2019)

Dear Andrew,

I refer to Council's Information Request dated 7 November 2019 and provide the following response:

> **5. Please provide an Engineering Report to assess all networks with regards to any future impacts associated with the potential future uses. Where the future uses are not known, it is reasonable to consider a worst case scenario based on the identified use in the local plan.**
> **Council is concerned that some uses identified may require external network (water, sewerage, stormwater, road) improvements / upgrades as a result of the demand. The assessment benchmarks associated with the accepted assessment category i.e. Rockhampton Railyards Local Plan Code and the Works Code does not address these concerns, please revise.**
> **Or alternatively, the uses proposed need to be interrogated considering impacts to the networks. Some uses may need to be raised to 'code or impact assessment'.**

Please refer to the attached preliminary engineering advice provided by McMurtrie Consulting Engineers. The recommendation of this advice is that there is capacity in the above mentioned networks however some networks may require upgrading as development progresses. This is further underpinned by the size and intensity of the previous use as a railyards/depot. In this particular case, at the preliminary MCU stage, it is not considered reasonable to undertake more detailed or worst case analysis. Council therefore ought to be able to require assessment of these networks to support future development applications as they occur.

I believe the above responses meets Council's requirements and satisfies the information request submitted by Council. If you require any further information, please contact me on (07) 49211780.

Yours sincerely

Chris Hewitt
Principal Civil Engineer

mcmurtrie
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OUR AFFILIATIONS

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Engineering Consultancy Services
Contract: BUS 226-0212

mcmurtrie
CONSULTING ENGINEERS

TECHNICAL MEMORANDUM

Project No. 0911819

Date: 15-May-20

To:
Andrew Batts
Senior Advisor Environmental Planning and Approvals
Aurizon
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From:
Chris Hewitt
Principal Engineer
McMurtrie Consulting Engineers
Chris@mcmengineers.com

Re: **Aurizon Rockhampton Workshops**
Engineering Advice for MCU Preliminary Approval

1.0 Introduction

McMurtrie Consulting Engineers (MCE) have been engaged by Aurizon Property Pty Ltd to provide high level engineering advice in relation the possible redevelopment of the Aurizon Rockhampton Workshops Precinct associated with a "PRELIMINARY APPROVAL VARYING THE EFFECT OF THE PLANNING SCHEME – SITUATED AT 338-380 BOLSOVER STREET, DEPOT HILL -– DESCRIBED AS LOT 32 AND 33 ON SP131823 AND LOT 38 ON SP131824, PARISH OF ROCKHAMPTON".

This high level assessment provides some quantification of likely future loadings of transport, stormwater, water and sewer networks as well as some commentary on flooding as a result of future development in order to provide a basis for preliminary approval by Rockhampton Regional Council (RRC) and the State Referral Agency (SARA). This does not remove the requirement for future development applications to be assessed by these authorities where they are considered within referral triggers and hence significant enough to make impact on these networks.

The proposed redevelopment site is located in the Depot Hill area within the Rockhampton Regional Council Local Government Area. The proposed site is located as per **Figure 1** below.

Figure 1 - Proposed Site Location

MCE will provide preliminary advice on the following engineering issues:

1. <u>Traffic/Transport Network</u>
   Undertake a high level review of the existing road network and likely connection points to proposed development. Provide a high level assessment of the surrounding road network capacity and give recommendations for future traffic investigations.

2. <u>Water Supply and Sewerage Network</u>
   Provide comment on the existing Council water and sewerage networks servicing the site. Comment on suitability for future development use including recommendations for any further assessment at a subsequent stage of site development.

3. <u>Stormwater Management & Flood Impact Assessment</u>
   Provide a high level review of the existing Council stormwater drainage network. Undertake a review and provide a summary of Rockhampton Regional Council's (RRC) flood model including assessment of the impacts of flooding upon the proposed development and possible recommendations of mitigation measures.

2.0 Existing Situation

MCE have carried out a detailed desktop investigation of the proposed site in relation to the existing and surrounding services (water, sewer and storm water). The outcome of this investigation process is a prepared set of drawings showing the existing site (and adjacent area) highlighting existing stormwater drainage, sewerage and water supply services overlaid on a satellite image. The Fitzroy River 1% AEP flood line is also including on these services mapping plans which are included as **Attachment 1**.

The site is heavily impacted by the Fitzroy River 1% AEP flood line. RRC currently have a proposal to construct a flood levee to alleviate the impact of flooding from the Fitzroy River that would essentially render the site free from any impact from flooding in the Fitzroy River. The proposed flood levee alignment in the vicinity of the site is shown in **Figure 2** overleaf.

The current status of RRC's flood levee project is that an early works package is currently underway and progressing however construction funding has not been secured. The early works package includes updating of the levee internal drainage report and implementation report as well as funding to address proposed land acquisition, service relocations and installation of non-return valves.

Figure 2 - Proposed Flood Levee Alignment extracted from RRC documents

3.0 Proposed Site Development

Three possible preliminary options for the future site development have been assessed. Each option contains various mixtures of use including Public Open Space, Community-Cultural Use, Mixed Industry, Commercial and Residential. These three options are appended as **Attachment 2**.

4.0 Traffic/Transport Network

With the sites previous use as the QR/Aurizon Workshops traffic generation numbers were quite high due to the activity and the number of workers onsite. Heavy vehicle numbers were also presumably elevated as compared to the latest traffic count data given the heavy requirement for materials in and outbound from site and the operation of the freight transfer hub. As such existing road networks surrounding the site are well developed and could currently be considered well under capacity from a traffic carrying perspective.

From a State Controlled Road Network perspective given the remoteness of the site from the closest State Controlled Road it is unlikely that individual development applications (DA) in the various proposed precincts would be of an appropriate threshold to be referred to Transport and main Roads (TMR). Should any future (DA) meet the TMR referral triggers then it ought to be referred to them for code or impact assessment.

The roads surrounding the site including Denison, South and Bolsover Streets are all two lane, two way roads with wide shoulders used for vehicle parking. Based on the latest available traffic counts the adjacent road network would seem to have ample capacity to absorb any development traffic pending any required intersection treatments.

The most recent traffic counts (and year of count) are shown in **Figure 3** below – this data was provided by Rockhampton Regional Council (RRC). These existing 24hr traffic volumes could dramatically increase without resulting in any capacity issues from a road link perspective.

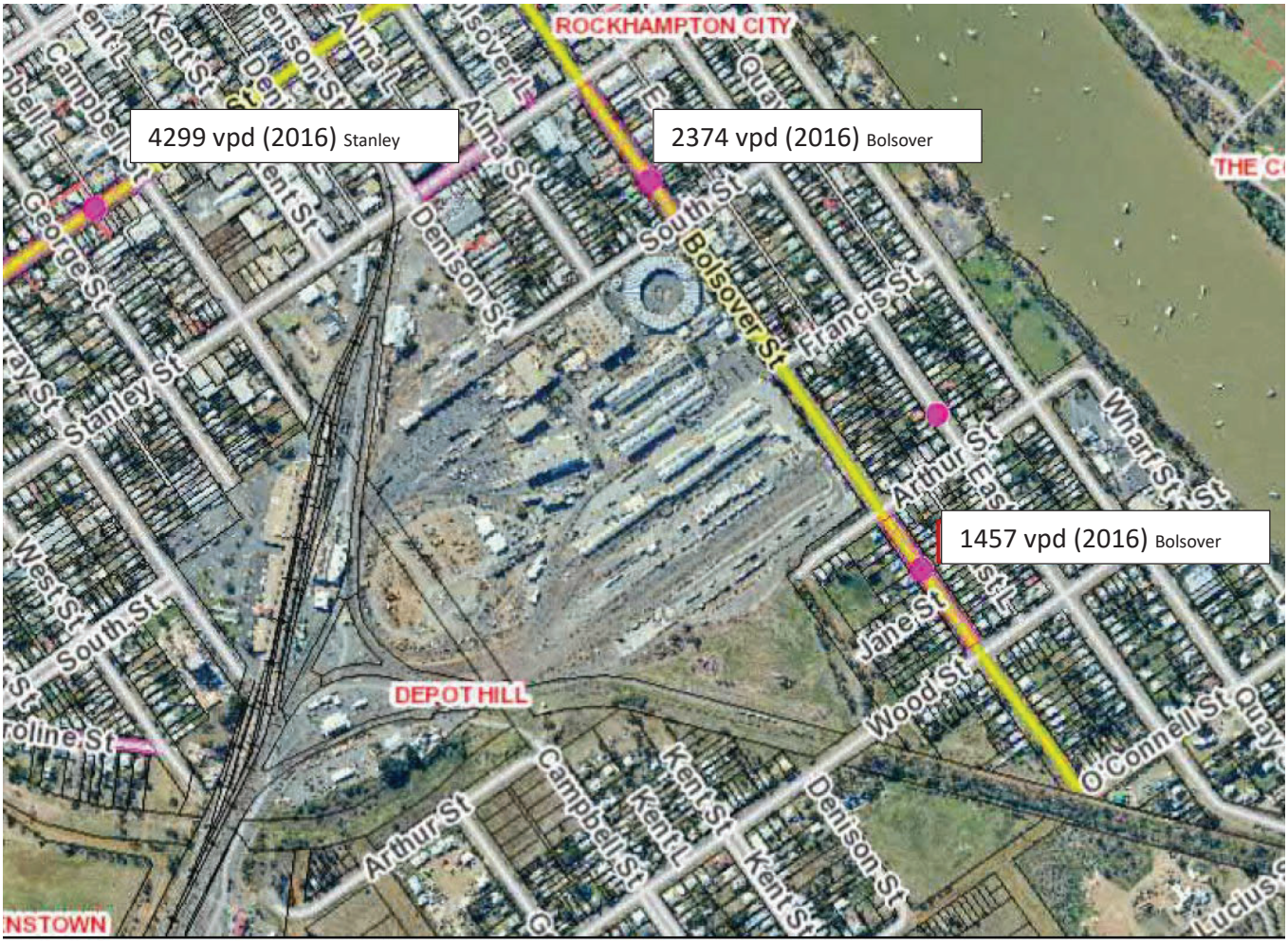

Figure 3 - Traffic Counts and Year

Rockhampton Regional Councils Planning Scheme currently references a Road Hierarchy for all roads under its jurisdiction. For current definitions under the Rockhampton Regional Council's Road Hierarchy see **Figure 4** below. These road hierarchy definitions are consistent with the adjacent land uses however it would be reasonable to presume that the sections of Denison, Alma and South Streets adjacent to the site would ultimately need to change from their current definitions of Urban Access Streets to Minor Urban Collectors as a result of proposed site development. This would appear to be entirely appropriate given their current widths and adjacent land uses of these roads.

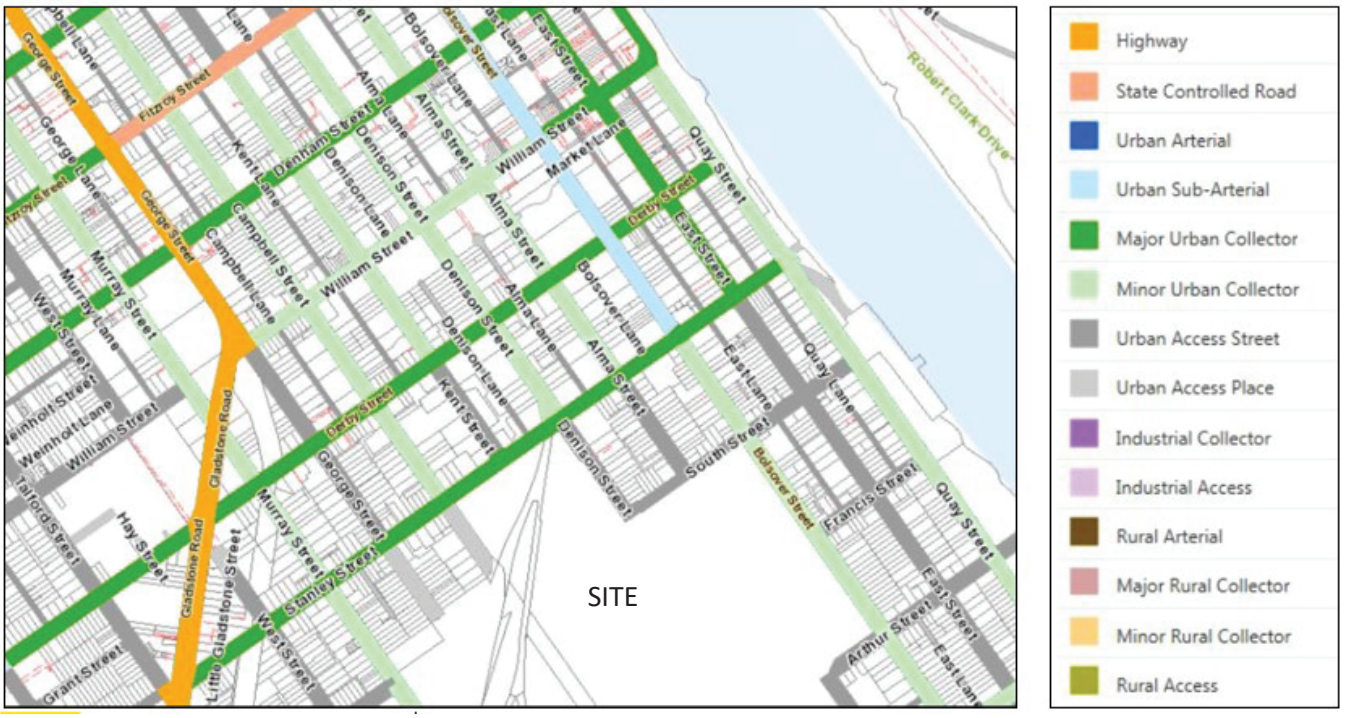

Figure 4 – Road Hierarchy Adjacent to site

The proposed site new use options as per **Attachment 2** will provide for a mix of uses including Industrial, Commercial, Cultural and Residential. Likely site traffic generation for each development option is summarized in **Table 1** overleaf.

Table 1

Option 1b

Proposed Use	Relevant Use for Traffic Generation Calculation	Reference Source	Site Area (ha)	Dev Unit	Dev Area (m^2)	Daily		Peak Hr	
						Gen Rate	Traffic Gen	Gen Rate	Traffic Gen
Public Open Space / Public Realm	-	-	1	-	-	-	-	-	-
Community-Cultural Use	Museum	ITE	2	92.93m^2 GFA	10,000	1.8	194	0.18	19
Mixed Industry - Medium/Low Impact	Factories / Light Industry	RTA GTGD	15.1	100m^2 GFA	67,950	7	4,757	0.95	646
Mixed Industry - Low Impact	Warehouse / Light Industry	RTA GTGD	8.4	100m^2 GFA	37,800	6.5	2,457	0.7	265
						Total	**7,407**	**Total**	**930**

Option 2b

Use	Relevant Use for Traffic Generation Calculation	Reference Source	Site Area (ha)	Dev Unit	Dev Area (m^2)	Daily		Peak Hr	
						Gen Rate	Traffic Gen	Gen Rate	Traffic Gen
Public Open Space / Public Realm	-	-	1.8	-	-	-	-	-	-
Community-Cultural Use	Museum	ITE	2	92.93m^2 GFA	10,000	1.8	194	0.18	19
Mixed Industry - Medium/Low Impact	Factories / Light Industry	RTA GTGD	12.8	100m^2 GFA	57,600	7	4,032	0.95	547
Mixed Industry - Low Impact	Warehouse / Light Industry	RTA GTGD	4.2	100m^2 GFA	18,900	6.5	1,229	0.7	132
Business Incubator - Strata Title	Commercial / Office	RTA GTGD	2.1	100m^2 GFA	16,800	10	1,680	2	336
Commercial Office	Commercial / Office	RTA GTGD	1.6	100m^2 GFA	12,800	10	1,280	2	256
						Total	**8,414**	**Total**	**1,291**

Option 3b

Use	Relevant Use for Traffic Generation Calculation	Reference Source	Site Area (ha)	Dev Unit	Dev Area (m^2)	Daily		Peak Hr	
						Gen Rate	Traffic Gen	Gen Rate	Traffic Gen
Public Open Space / Public Realm	-	-	1.8	-	-	-	-	-	-
Community-Cultural Use	Museum	ITE	2	92.93m^2 GFA	10,000	1.8	194	0.18	19
Mixed Industry - High Impact	Factories	RTA GTGD	6.5	100m^2 GFA	29,250	5	1,463	1	57
Mixed Industry - Medium/Low Impact	Factories / Light Industry	RTA GTGD	5.6	100m^2 GFA	25,200	7	1,764	0.95	239
Residential	Low Density Residential	RTA GTGD	1.8	lots	57	9	513	0.85	48
Business Incubator - Strata Title	Commercial / Office	RTA GTGD	2.1	100m^2 GFA	10,500	10	1,050	2	210
Commercial Office	Commercial / Office	RTA GTGD	2.9	100m^2 GFA	29,000	10	2,900	2	580
						Total	**7,883**	**Total**	**1,154**

Further refinement of traffic generation rates along with relevant network assignment should be carried out once the development profile is more well defined and further development detail is made available.

Based on the above volumes adopting an average daily generation of 8000 vpd and splitting this volume over several routes it would appear that there is ample midblock capacity in the surrounding network to accommodate the additional traffic.

Development site access streets have been shown at South St/Denison Street intersection, Bolsover/Francis Street intersection and Bolsover/Arthur Street intersection. Visibility is good at each of these locations and there is ample space for any intersection treatment should it be required. The site access/intersection network will need to be further investigated once the development profile and layout is set.

There are various uses that have been shown with direct access from the existing network along Denison, South, Bolsover and Arthur Streets and this also appears entirely appropriate given the hierarchy of these streets and the adjacent land development. With the wide sealed shoulders such direct access to individual sites would be appropriate pending further advice from RRC.

Traffic links to the broader transport network will likely be via Alma and Bolsover Streets to the north and Stanley Street to the west as depicted in the **Figure 5** overleaf.

Figure 5 – Links to broader network

Links to the CBD area and the Bruce Highway beyond that will likely be made via Alma and Bolsover Street. Both of these links are two lane/two way roads with wide shoulders used for vehicle parking. Alma Street is defined as an Urban Access Street adjacent the site then a Minor Urban Collector once over Stanley Street whilst Bolsover is defined as a Minor Urban Collector adjacent to the site then an Urban Sub Arterial under the Road Hierarchy as outlined in the Rockhampton Regional Council Planning Scheme.

Links to the west and ultimately Gladstone Road will be provided via Stanley and Derby Streets. Stanley Street is defined as a Major Urban Collector under the Rockhampton Regional Council Planning Scheme and is wide in formation and capable of handling much higher traffic volumes and also higher volumes of heavy vehicles than current to form a link between the sites industrial precinct and the highway. Connection to Gladstone Road at Stanley Street is currently via a priority controlled "T" intersection however background growth on Gladstone Road regardless of the site development may precipitate some upgrading of this intersection. The TMR are unlikely to permit signalization of the intersection so therefore it may be more attractive to make Stanley Street left in/left out from Gladstone Road with any heavy vehicles incapable of performing 'U' turn movements accessing the site via the Derby Street/Gladstone Road signals for any right turn movements.

Any direct link from the site to the west and Gladstone Road other than via Stanley or Derby Streets is currently severed by the North Coast Rail line and it is understood from advice from QR that any proposed new crossing of this rail line would need to be grade separated. Such a proposal would essentially be considered economically unfeasible given the likely cost/benefit limitations of any grade separation.

In the long term there is a vague proposal (albeit in no real detail) to relocate the North Coast Rail line out of the city however given that such a rail relocation is not part of the current TMR Rockhampton Ring Road proposal to bypass the city it is unlikely to occur for many years beyond the possible site development timeframe.

Public transport services the Depot Hill area via the existing SUNBUS service. The current service route is shown in **Figure 6**. With minor amendment to the route the site can comfortably be serviced.

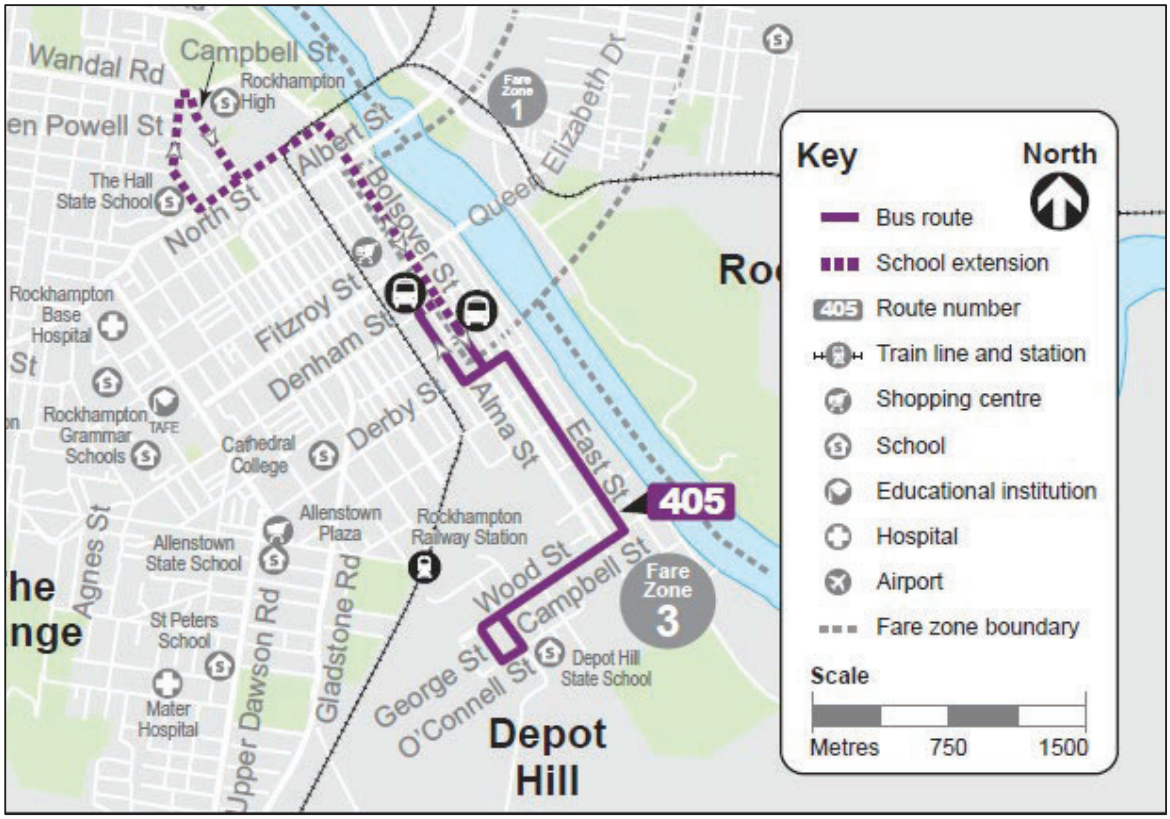

Figure 6 – Sunbus Depot Hill Service

Pedestrian and cycleway paths will need to be considered as part of any further detailed design for the site.

In summary given the proposed development scale and intensity the site access streets and road links to the broader Rockhampton area would appear to have ample capacity to service the associated traffic growth.

Adjacent intersections may require some upgrading to accommodate additional traffic movements but there appears ample space and opportunity to do so. Other major intersections more remote from but still impacted by the increase in site traffic volumes associated with the proposed development may also need further upgrading.

The site could be comfortably serviced by public transport and further detailed attention will be required to address active transport needs.

It is recommended that once development layouts are further refined and uses confirmed that traffic studies may be required (if individual development impacts are considered large enough) to determine the impact of the additional traffic loads on the surrounding road network. It is unlikely given the proposed traffic generation rates that any DA will require referral to TMR given the remoteness from the State Controlled Road Network. In any case the previous site use as a Railway Depot/ Workshops generated and comfortably absorbed significant traffic on the surrounding road networks.

5.0 Water Supply and Sewerage Network

The site is currently serviced by both water supply and sewerage infrastructure with a number of external connection locations based on the existing (previous) use requirements. **Figures 7 and 8** present the local infrastructure for the water supply and sewerage reticulation systems within and external to the site.

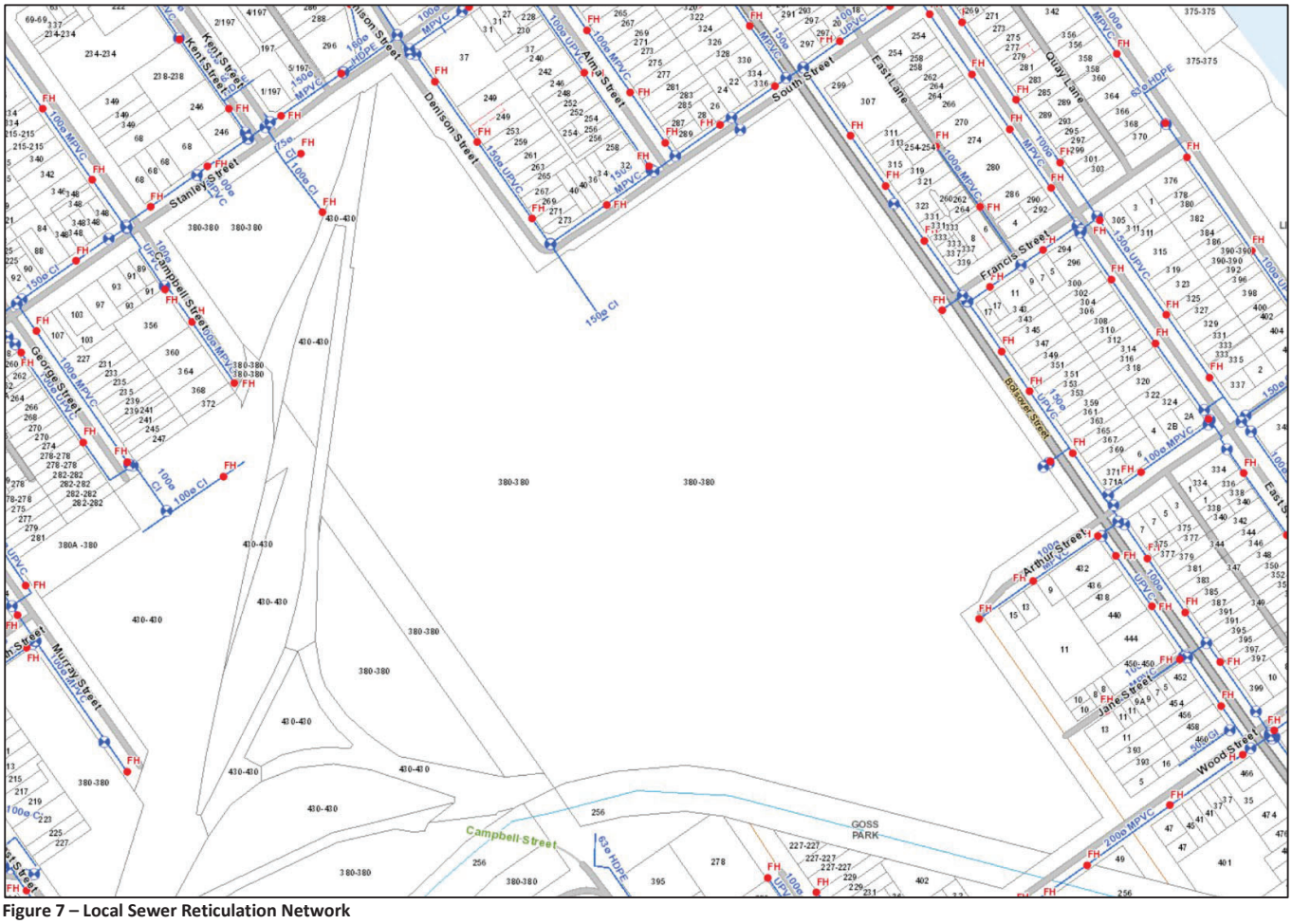

Figure 7 – Local Sewer Reticulation Network

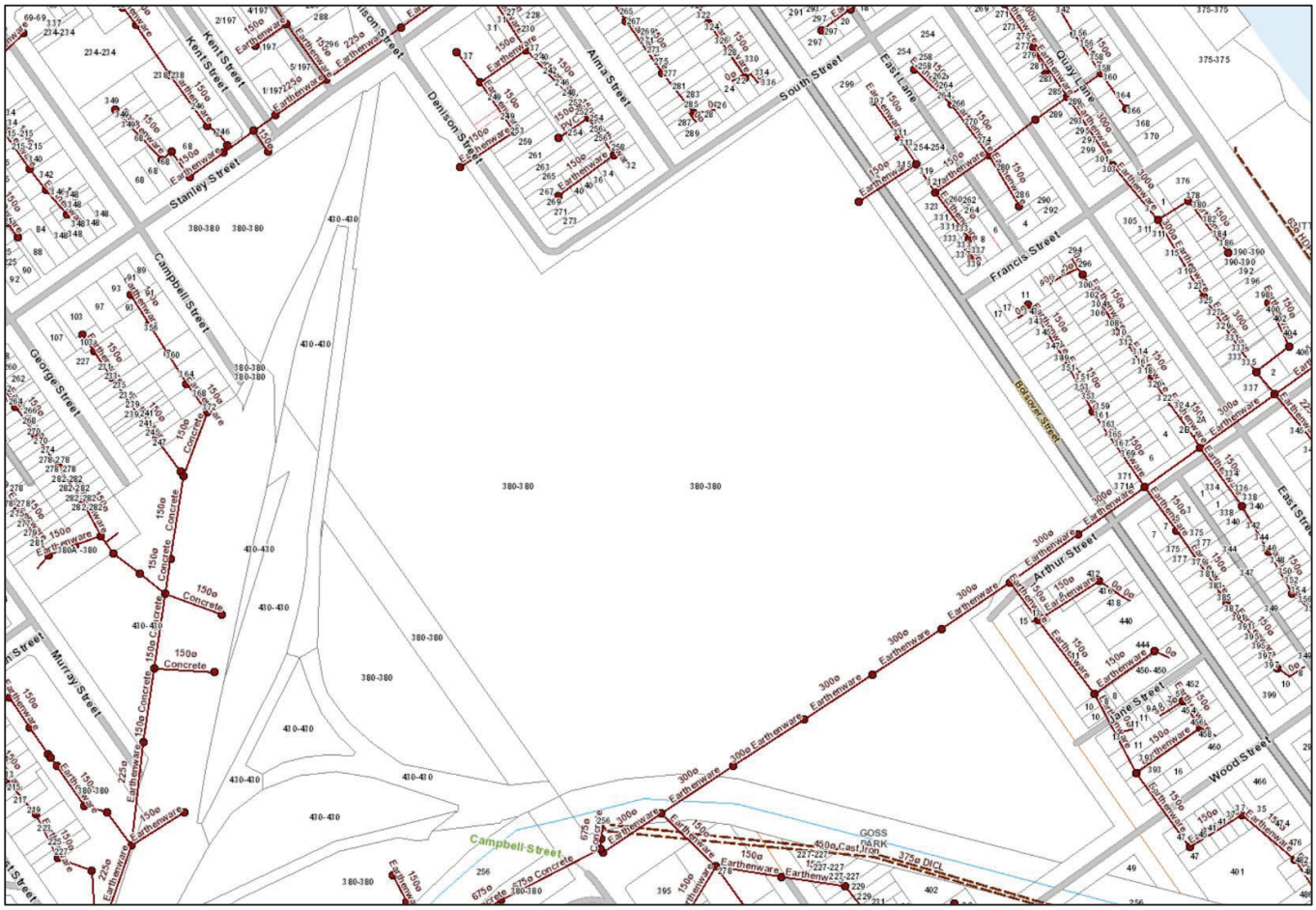

Figure 8 – Local Sewer Reticulation Network

5.1 Water Supply

The water supply connections to the site are in the form of 100mm and 150mm diameter mains at West Street, George Street, Stanley Street, South Street and Bolsover Street. There is a 200mm diameter main within the local area to the south and south-west that provides pressure management for the area, with connection located via a smaller main on West Street.

The existing water demand for the site has been estimated based on the Queensland Planning Guidelines for Water Supply and Sewerage (DEWS, 2014) relative to the land area and existing (previous) use. The guideline presents indicative average demands ranging between 10,000L to 35,000L per hectare per day. The following table summarises the potential site demand applying the area of potential reuse of approximately 31ha.

Table 2: Existing Reuse Area Water Demands

Approx. Area (ha)	Low Estimate (L/d)	High Estimate (L/d)
31	310,000	1,085,000

The existing water demands have been used as a benchmark to compare against the potential future site use options. **Table 3** presents a summary of the indicative water demands based on the three scenarios currently being reviewed.

Table 3: Future Reuse Area Water Demands

Option 1b

Proposed Use	Site Area (ha)	Low Demand Rate	High Demand Rate	Low Demand (L/d)	High Demand (L/d)
Public Open Space / Public Realm	1	10,000/ha	20,000/ha	10,000	20,000
Community-Cultural Use	2	500L/100m2 GFA	600L/100m2 GFA	70,000	84,000
Mixed Industry - Medium/Low Impact	15.1	10,000/ha	35,000/ha	151,000	528,500
Mixed Industry - Low Impact	8.4	10,000/ha	35,000/ha	84,000	294,000
Total				**315,000**	**926,500**

Option 2b

Proposed Use	Site Area (ha)	Low Demand Rate	High Demand Rate	Low Demand (L/d)	High Demand (L/d)
Public Open Space / Public Realm	1.8	10,000/ha	20,000/ha	18,000	36,000
Community-Cultural Use	2	500L/100m2 GFA	600L/100m2 GFA	70,000	84,000
Mixed Industry - Medium/Low Impact	12.8	10,000/ha	35,000/ha	128,000	448,000
Mixed Industry - Low Impact	4.2	10,000/ha	35,000/ha	42,000	147,000
Business Incubator - Strat Title	2.1	500L/100m2 GFA	800L/100m2 GFA	12,600	20,160
Commercial Office	1.6	500L/100m2 GFA	800L/100m2 GFA	9,600	15,360
Total				**280,200**	**750,520**

Option 3b

Proposed Use	Site Area (ha)	Low Demand Rate	High Demand Rate	Low Demand (L/d)	High Demand (L/d)
Public Open Space / Public Realm	1.8	10,000/ha	20,000/ha	18,000	36,000
Community-Cultural Use	2	500L/100m2 GFA	600L/100m2 GFA	70,000	84,000
Mixed Industry - Medium/Low Impact	6.5	10,000/ha	35,000/ha	65,000	227,500
Mixed Industry - Low Impact	5.6	10,000/ha	35,000/ha	56,000	196,000
Residential	1.8	440L/Dwelling	680L/Dwelling	15,840	24,480
Business Incubator - Strat Title	2.1	500L/100m2 GFA	800L/100m2 GFA	12,600	20,160
Commercial Office	2.9	500L/100m2 GFA	800L/100m2 GFA	17,400	27,840
Total				**254,840**	**615,980**

The comparison of values presented in Tables 2 and 3 above indicate that the future water demands are estimated to be similar or less than the existing land use demand potential. Option 1b generates a slightly

higher low estimate of demand with a respectively lower high demand potential. On that basis, we would not consider any specific water reticulation network upgrades being required for the future development of the site – unless there are network deficiencies created by a defined demand (i.e. high demand multi-story building).

We can however confirm that Rockhampton Regional Council will require an assessment of the water reticulation network to support any future development applications.

5.1 Sewerage Reticulation Supply

The 150mm diameter sewerage reticulation connections within the site are located at Stanley Street, Denison Street, Bolsover Street. There is also a trunk 300mm diameter sewer main that crosses the site between Arthur Street and Campbell Street. The trunk main will be a development constraint and needs to be considered as part of all road alignment planning to ensure suitable access is maintained for this asset by Council.

Similar to the water supply assessment, the existing sewer demand for the site has been based on DEWS (2014) relative to the land area and existing (previous) use. The guideline presents indicative average demands ranging between 10,000L to 13,500L per hectare per day. The following table summarises the indicative sewer flow rates from the site.

Table 4: Existing Reuse Area Sewer Demands

Approx. Area (ha)	Low Estimate (L/d)	High Estimate (L/d)
31	310,000	418,500

The existing sewer demands have been used as a benchmark to compare against the potential future site use options. **Table 5** presents a summary of the indicative sewer demands based on the three scenarios currently being reviewed.

Table 5: Future Reuse Area Sewer Demands

Option 1b

Proposed Use	Site Area (ha)	Low Demand Rate	High Demand Rate	Low Demand (L/d)	High Demand (L/d)
Public Open Space / Public Realm	1	1,000/ha	2,000/ha	1,000	2,000
Community-Cultural Use	2	280L/100m2 GFA	450L/100m2 GFA	39,200	63,000
Mixed Industry - Medium/Low Impact	15.1	10,000/ha	13,500/ha	151,000	203,850
Mixed Industry - Low Impact	8.4	10,000/ha	13,500/ha	84,000	113,400
Total				**275,200**	**382,250**

Option 2b

Proposed Use	Site Area (ha)	Low Demand Rate	High Demand Rate	Low Demand (L/d)	High Demand (L/d)
Public Open Space / Public Realm	1.8	10,000/ha	20,000/ha	1,800	3,600
Community-Cultural Use	2	200L/100m2 GFA	400L/100m2 GFA	39,200	63,000
Mixed Industry - Medium/Low Impact	12.8	10,000/ha	13,500/ha	128,000	172,800
Mixed Industry - Low Impact	4.2	10,000/ha	13,500/ha	42,000	56,700
Business Incubator - Strat Title	2.1	150L/100m2 GFA	300L/100m2 GFA	3,780	7,560
Commercial Office	1.6	150L/100m2 GFA	300L/100m2 GFA	2,880	5,760
Total				**217,660**	**309,420**

Option 3b

Proposed Use	Site Area (ha)	Low Demand Rate	High Demand Rate	Low Demand (L/d)	High Demand (L/d)
Public Open Space / Public Realm	1.8	10,000/ha	20,000/ha	1,800	3,600
Community-Cultural Use	2	200L/100m2 GFA	400L/100m2 GFA	39,200	63,000
Mixed Industry - Medium/Low Impact	6.5	10,000/ha	13,500/ha	65,000	87,750
Mixed Industry - Low Impact	5.6	10,000/ha	13,500/ha	56,000	75,600
Residential	1.8	300L/Dwelling	470L/Dwelling	10,800	169,200
Business Incubator - Strat Title	2.1	150L/100m2 GFA	300L/100m2 GFA	3,780	7,560
Commercial Office	2.9	150L/100m2 GFA	300L/100m2 GFA	5,220	10,440
Total				**181,800**	**417,150**

The comparison of values presented in Tables 4 and 5 above indicate that the future sewer demands are estimated to be less than the existing land use demand potential. On that basis, we would not consider any

specific sewer reticulation network upgrades being required for the future site – unless there are network deficiencies created by a defined demand (i.e. high demand multi-story building).

We can however confirm that Rockhampton Regional Council will require an assessment of the sewer reticulation network to support any future development applications.

Water supply and sewerage impact analysis is slightly different to other site services in that water supply and sewerage network models are owned and operated by Council and any capacity analysis needs is generally undertaken by Council with given loads from the development proposal to ensure compliance with Capricorn Municipal Design Guidelines (CMDG) master plans. Future water demand and sewage flow including peaking factors should be based on actual system performance, historical records and a consideration of future demand pattern based on the proposed development needs.

6.0 Stormwater Management and Flood Impact Assessment

Stormwater management and flooding are obviously linked and dependent on the construction of the proposed South Rockhampton Levee. The levee is approximately 8.8 km long generally consisting of earth fill embankment, with portions being crib wall, vertical flood walls and temporary flood barrier systems. It will protect an area including the proposed site from the 1% AEP Fitzroy River flood event.

The Fitzroy River Flood Study (AECOM, 2014) utilizes 2009 Lidar data. Council are currently completing an updated Fitzroy River Flood Model using more up to date Lidar information but we have not been given access to this study. It is recommended that these updated flood studies be used to guide any detailed planning and design for the Aurizon site.

For the without levee option nearly 50% of the site floods at the 1% AEP event for the Fitzroy River. Flood velocities however are low at 0 to 0.5m/s and depths are up to 1.5m at the southern end of the goods yard and up to 2.5m deep in the bottom corner of the site that is shown as open space/detention in **Attachment 2**.

Any filling within the flood zone will not be permitted by Council unless a flood study is undertaken to show the impact of any filling on flood levels and surrounding infrastructure. Council have advised that his will likely be the case for the with and without levee options but this will have to be debated further with Council during the next stage of the project. It is presumed that in order to allow any filling to occur to develop useable land there would have to be some compensatory flood storage created onsite which could indeed be created in the south east corner of the site as indicated as green area on the three options outlined in Attachment 2 but again this will need to be confirmed via flood modelling. There is also substantial benefit in using this area for some form of water harvesting and it is assumed that Council would see this as advantageous to be included as part of the development.

In terms of stormwater drainage, the site is currently drained by a stormwater pipe (600mm diameter) system that bisects the development area running from west to east and draining to the river. This system currently services the northern and central part of the site. The southern part of the site falls to the south east and any development will need to comply with relevant QUDM guidelines for treatment of stormwater quality and any increase in runoff quantity as a result of the site development. The south east corner of the site has been identified as a detention/bioretention basin area regardless of the levee construction.

As the site is located in relatively close proximity to the Fitzroy River and is therefore constrained by the impact of flood inundation from the regional and local contributing catchment areas. **Figures 9 and 10** present the location of existing stormwater infrastructure nearby and within the site.

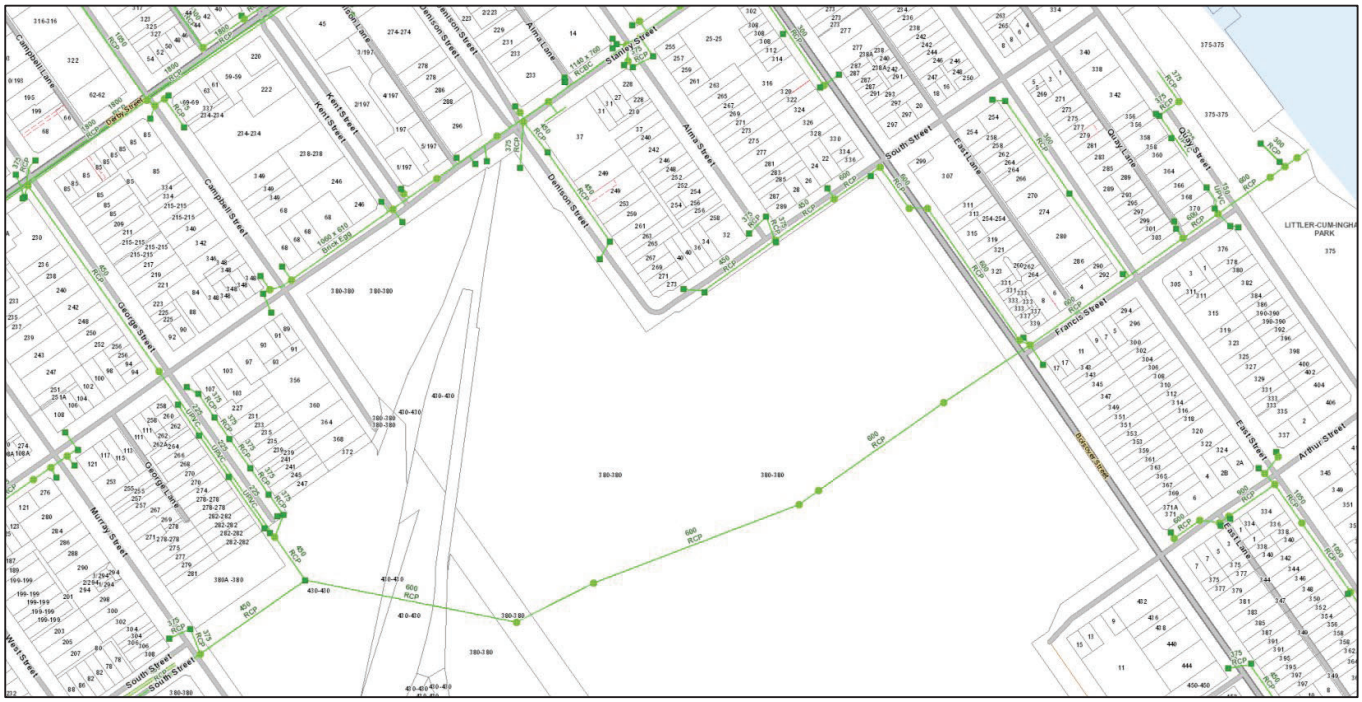

Figure 9 – Local Stormwater Drainage Infrastructure (North)

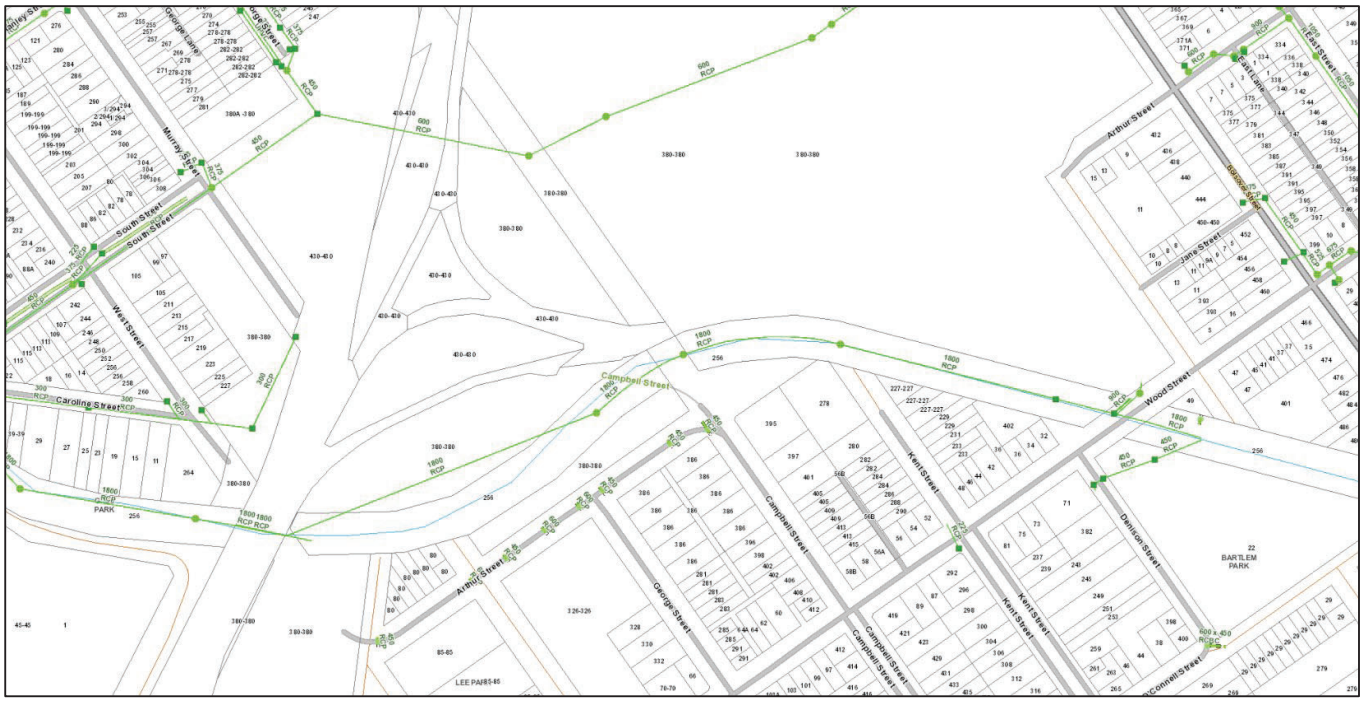

Figure 10 – Local Stormwater Drainage Infrastructure (South)

Council has completed a Levee Interior Drainage study which involved the assessment of existing flooding conditions of the South Rockhampton urban area (including the Aurizon site) as well as the assessment of

changes to the flooding regime due to construction of the proposed levee and internal drainage infrastructure.

The base case for a 1% AEP event in the local catchment is included in Attachment 3 and shows some minor flooding of the site in its current form.

Also note that the south eastern corner of the site is still impacted by afflux (albeit relatively minor less than 0.3m) with the levee in place and river in flood (1% AEP) and with a 1% AEP event in the local catchment – refer to Attachment 3.

The internal drainage strategy of the levee system incorporates a number of components that facilitate drainage of the internal area of the system during local flooding.

These include:

- Underground drainage infrastructure (which will operate as it currently does during local rainfall events but will be retrofitted with backflow prevention devices)
- Overland flow paths (which are expected to be maintained through a combination of breaks in the levee and culvert structures that allow flow through the levee when Fitzroy River levels are not elevated. Table drains will be constructed inside the levee to facilitate drainage to outlets and pump stations.)
- Three pump stations (which are to be constructed to provide drainage of the internal area of the levee system once the outlets of the underground drainage and culvert structures are inundated, and to assist gravity drainage during larger local catchment events)

The hydraulic model developed as part of this study has been used in the optimisation process for the levee alignment and drainage configuration however the report only presents the assessment of the final levee configuration and impacts. Any proposed filling on the site will have to considered with further updating of this model.

The development of the site will have a greater functional use pursuant to the construction of the pump and levee configuration. As mentioned previously, in the event that the development of the site is to occur then significant filling of the southern area would be required with compensatory storage elements required. In the event that this is required then a comprehensive flood study will need to be completed, using Council's model as the primary input, to assess the opportunities and constraints associated with the flood protection of the site.

Kind regards,

Chris Hewitt
Principal Engineer, RPEQ 5141

Attachment 1 - MCE Existing Services Plans (including AEP 1% Floodline)
Drawing Nos. 1131718-01, 02, 03, 04, 05, 06 and 07
Attachment 2 - Place Design Group – Preliminary Options for Rockhampton Railyards Options 1, 2 and 3
Drawing Nos. 118065-06, 07 and 08
Attachment 3 - AECOM (from RRC South Rockhampton Flood Levee – Internal Drainage Modelling Report) –
Base Case
Local Catchment 1% AEP Event
Impacted Properties
Maximum Water Depth
- AECOM (from RRC South Rockhampton Flood Levee – Internal Drainage Modelling Report)–
Fitzroy River 1% AEP Event
Local Catchment 1% AEP Event
Impacted Properties
Afflux

Attachment 1 – MCE Existing Services Plans (including AEP 1% Floodline)
Drawing Nos. 1131718-01, 02, 03, 04, 05, 06 and 07

S OVERALL LAYOUT PLAN
2000(A1) 1:4000(A3)

INFORMATION ONLY

URIZON.

PREPARED BY

1131718

mcmurtrie
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CLIENT AURIZON
PROJECT AURIZON PLANNING ROCK
TITLE
EXISTING SERVICES OVERALL LAYOUT PLAN
SHEET 1 OF 1

A1	DRAWING NUMBER 1131718-01	REVISION B

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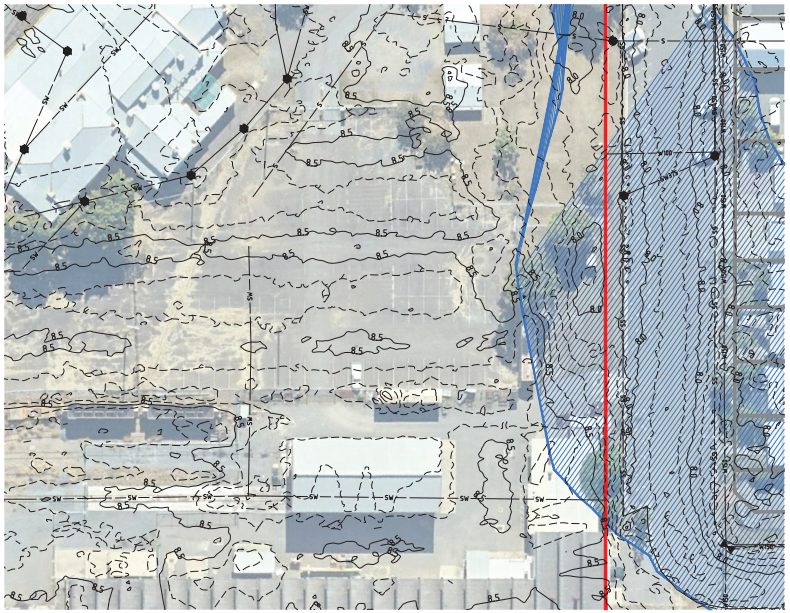

S PLAN 1131718-03

ERVICES LAYOUT PLAN

E 1:500(A1) 1:1000(A3)

INFORMATION ONLY

URIZON.

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CLIENT AURIZON

PROJECT AURIZON PLANNING ROCK

TITLE
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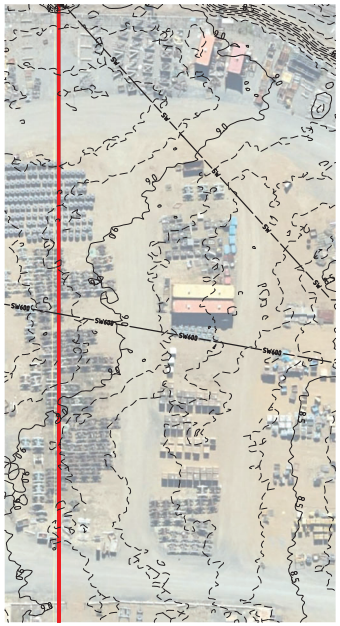

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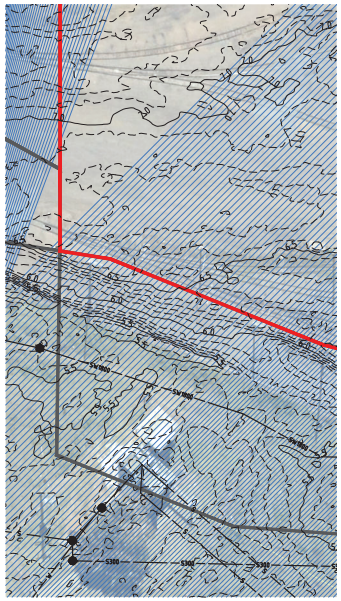

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SCALE 1:500 @ A1

SCALE 1:1 000 @ A3

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ADDRESS:							
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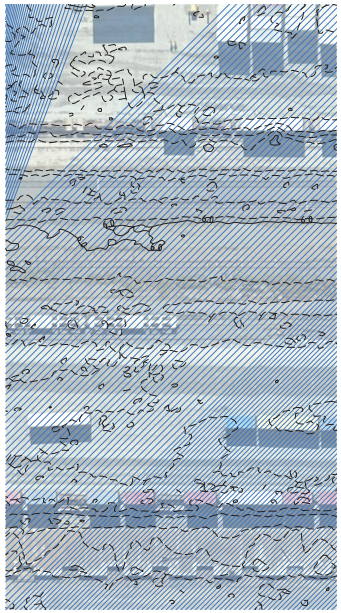

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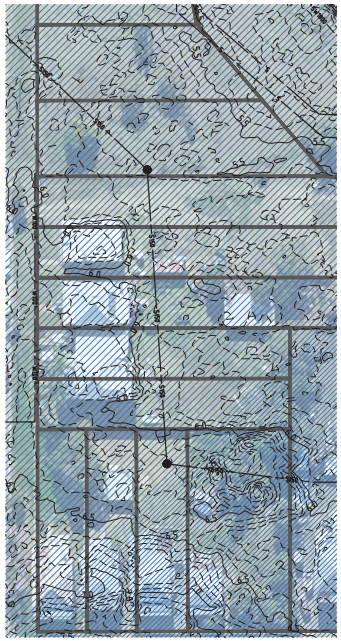

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Rockhampton Railyards
Illustrative Masterplan

ROCKHAMPTON REGIONAL COUNCIL

APPROVED PLANS

These plans are approved subject to the current conditions of approval associated with

Preliminary Approval No.: D/66-2019

Dated: 2 March 2021

Date	Project No.	Revision	DWG No.
18/06/2019	3019023S	A	24

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Figure 6: Master plan

The master plan vision is implemented through the action and intent of the precincts. Three interrelated and complementary precincts support the implementation and outcomes of the plan.

PRECINCT 1
ROUNDHOUSE

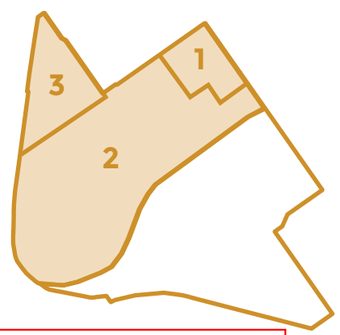
The oldest part of the Railyards site containing the majority of the heritage buildings for the site.

PRECINCT 2
RAILYARDS

The industrial heart of the proposal which contains a range of buildings that have been purpose built for industry uses.

PRECINCT 3
INDUSTRY SERVICES

This precinct will provide a range of supporting uses that complement the Railyards Precinct.



ROCKHAMPTON WORKSHOPS & ROUNDHOUSE CONSERVATION MANAGEMENT PLAN

Thom Blake & Peter Marquis-Kyle

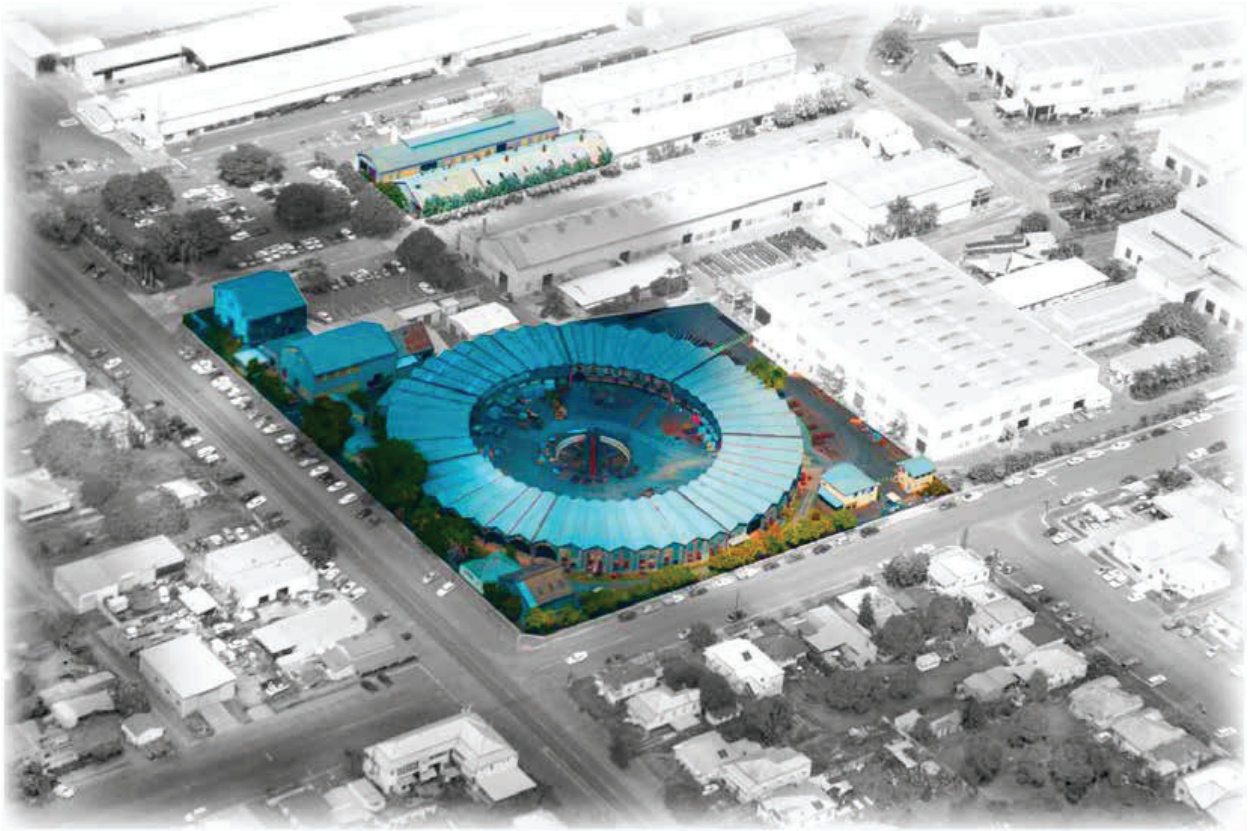
ROCKHAMPTON REGIONAL COUNCIL

APPROVED PLANS

These plans are approved subject to the current conditions of approval associated with

Preliminary Approval No.: D/66-2019

Dated: 2 March 2021



version 2.3
July 2019

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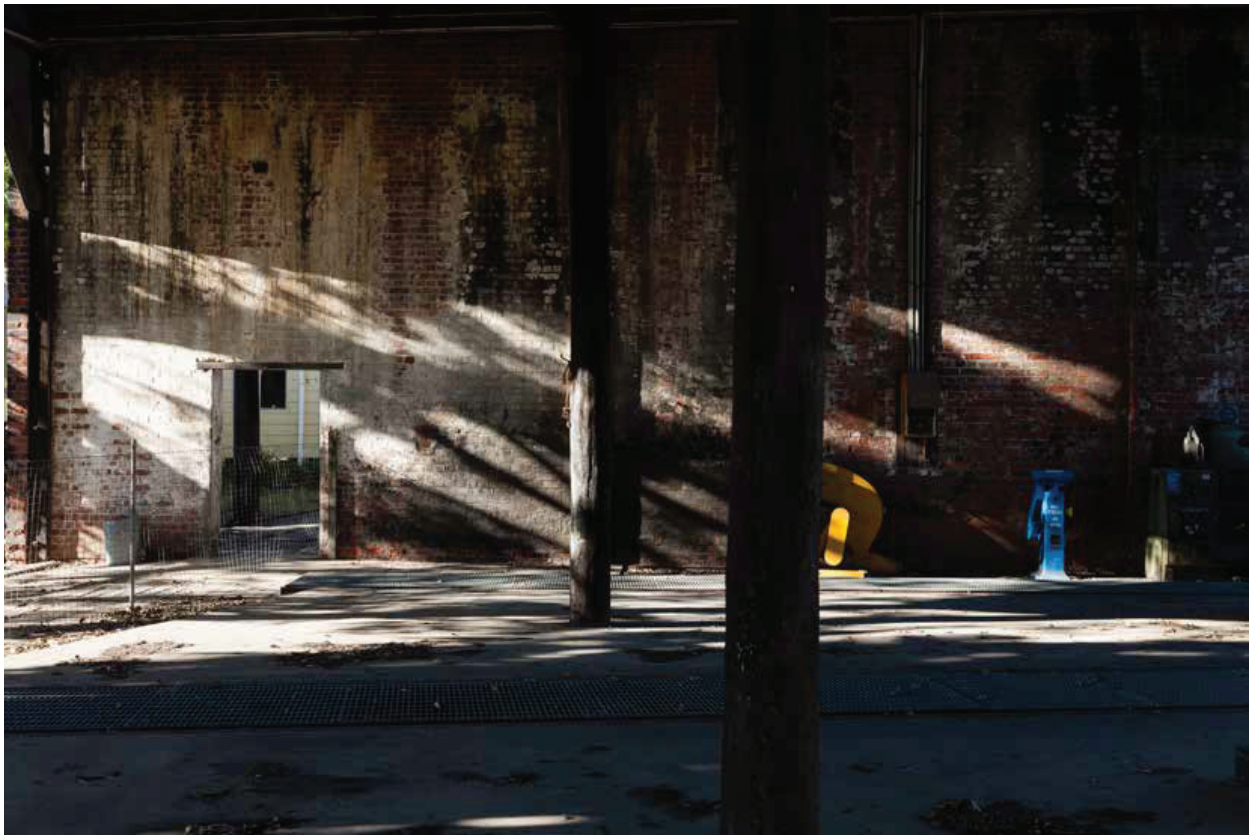
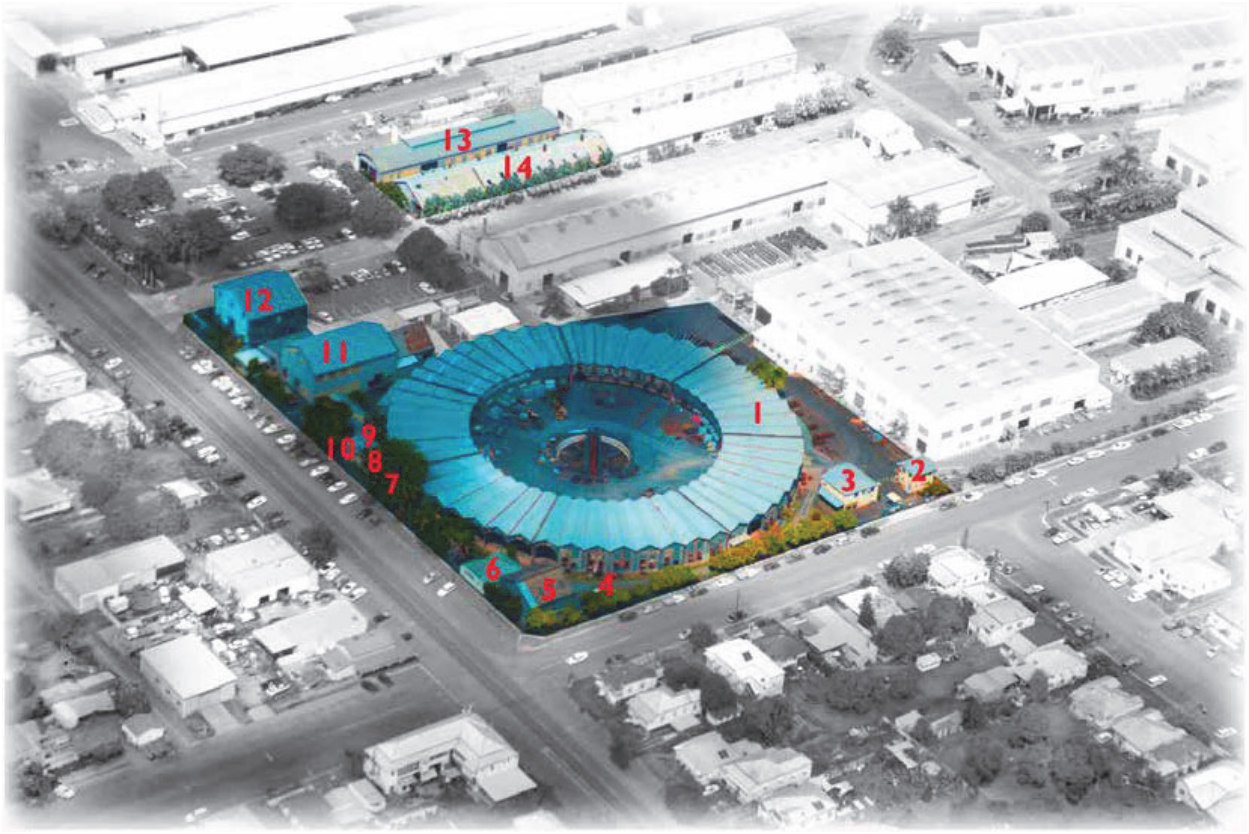
CONTENTS





Part of the Rockhampton workshops and roundhouse site seen from the air. The coloured buildings are in the area listed in the Queensland Heritage Register. [Thom Blake photo, 2 September 2010]

Legend

1 Roundhouse
2 Apprentice master's building
3 Commercial office
4 Urinal
5 Apprentice training building
6 Training rooms
7 Demountable building
8 Maintenance planning office
9 Computer based training room
10 Timekeeper's office
11 Plant maintenance shop
12 Old machine shop
13 Machine shop
14 Building maintenance shop

INTRODUCTION

The Rockhampton Railway workshops was established in the 1870s by Queensland Railways. The workshops were expanded significantly in the early 20th century and a substantial roundhouse constructed on the site. The workshops became an integral part of the central Queensland rail network. Part of the site was entered on the Queensland Heritage Register in 2004. In 2014 the first version of this conservation management plan was prepared to guide the management of the heritage buildings.

This plan builds on work carried out by Queensland Rail, including the 1992 report *Rockhampton roundhouse: an appraisal of significance.*

METHOD

In line with accepted professional practice for conservation planning this plan includes a short account of the history of the place drawn from expert knowledge and documentary sources acknowledged in the text. The descriptions of the place and its current condition are based on site inspections, and the discussion of cultural significance uses the criteria set out in the *Queensland Heritage Act 1992*. The general and specific conservation policies are intended to guide future use and management in ways that protect cultural heritage significance.

THIS UPDATE

This is version 2 of this conservation management plan. It includes various minor revisions made in July 2019 to take account of Aurizon's decision in 2018 to discontinue its use of the Rockhampton workshops site and to make the site available for other uses.

SITE

This conservation management plan deals with the area included in the Queensland Heritage Register, which is only a part of the Rockhampton rail yards site—see the photo on the left. In this plan the area listed in the register is referred to as *the heritage place*.

AUTHORSHIP

This document was written and edited by Peter Marquis-Kyle (consultant

conservation architect) and Dr Thom Blake (consultant historian). We inspected the site together over two days in July 2014 and wrote a draft for discussion. Peter edited and designed the document, and Thom reviewed it.

Our work has been informed by, and the text includes material from, the report *Rockhampton roundhouse: an appraisal of significance* which was prepared for Queensland Railways in 1992 by Allom Lovell Marquis-Kyle Architects. Richard Allom directed that work. The late John Kerr contributed much of the documentary research and wrote early drafts of parts of the report. Other parts were written, and the whole compiled and edited, by Thom Blake, Peter Marquis-Kyle and Richard Allom.

ACKNOWLEDGEMENTS

We are pleased to acknowledge the help of these people in the preparation of this plan:

Jacqueline Murray (Cultural Heritage & Native Title Coordinator, Aurizon, Brisbane), who coordinated and facilitated our work.

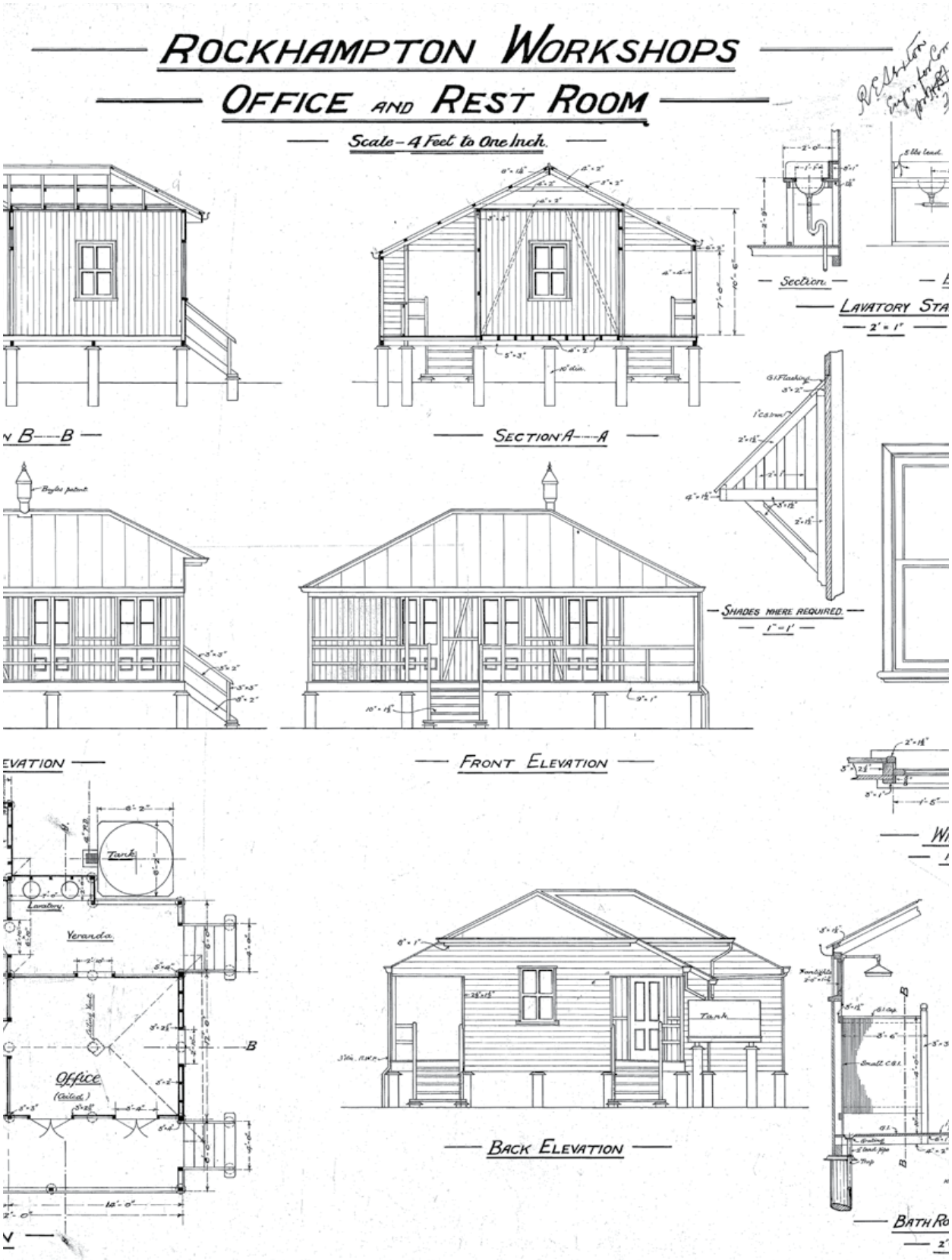
Ray Cameron (Blacksmith, Aurizon, Rockhampton), who showed us the blacksmith shop within the roundhouse, and explained the work done there.

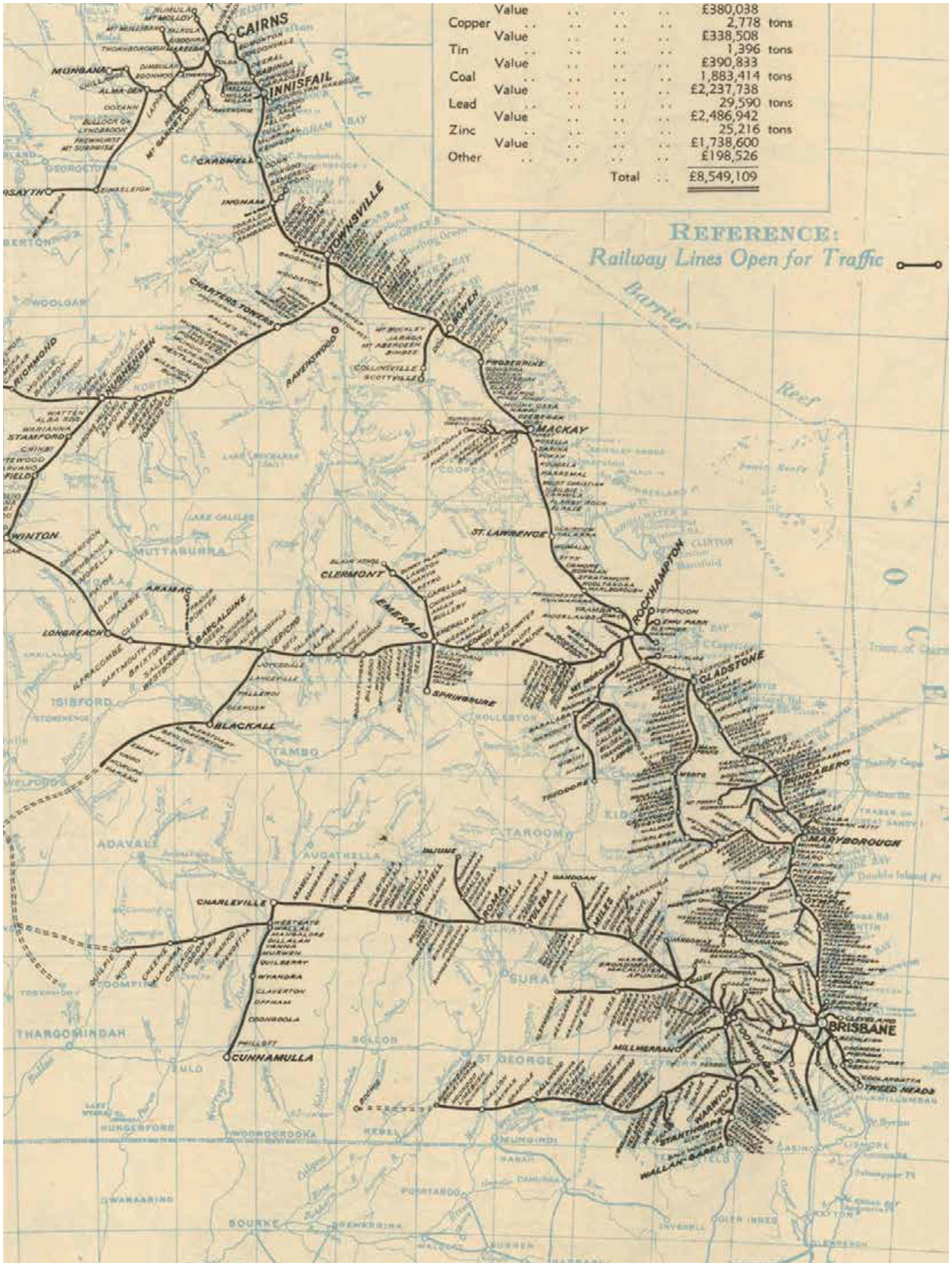
Bart Thring (Building Maintenance Manager, Aurizon, Rockhampton), who briefed us on building maintenance issues.

Ian Jacques (Apprentice Master, Aurizon, Rockhampton), who oversaw our safety induction and showed us around the site. He answered our questions about the present and past use of the site—some of these answers came from Ian's father, a retired engine driver, for which we are especially grateful.

LANGUAGE

In this plan some words—like restoration, reconstruction, and preservation—are used with the meanings defined in the Burra Charter. See the *Glossary of heritage conservation terms* (page 71).


ROCKHAMPTON WORKSHOPS
OFFICE AND REST ROOM
Scale – 4 Feet to One Inch.
Section
LAVATORY STA
2" = 1'
SECTION A—A
SHADES WHERE REQUIRED.
1" = 1'
FRONT ELEVATION
Tank
Lavatory
Verandah
Office
BACK ELEVATION
BATH RO


Value £380,038
Copper .. .. 2,778 tons
Value £338,508
Tin .. .. 1,396 tons
Value £390,833
Coal .. .. 1,883,414 tons
Value £2,237,738
Lead .. .. 29,590 tons
Value £2,486,942
Zinc .. .. 25,216 tons
Value £1,738,600
Other £198,526
Total .. £8,549,109
REFERENCE:
Railway Lines Open for Traffic
CAIRNS
INNISFAIL
TOWNSVILLE
CHARTERS TOWERS
RAVENSWOOD
MACKAY
ROCKHAMPTON
GLADSTONE
BUNDABERG
MARYBOROUGH
BRISBANE
TOOWOOMBA
IPSWICH
CLERMONT
EMERALD
SPRINGSURE
BLACKALL
LONGREACH
WINTON
CHARLEVILLE
CUNNAMULLA
ST. LAWRENCE
MT. MORGAN
MILLMERRAN
TWEED HEADS
Barrier
Reef

HISTORY

ROCKHAMPTON AND THE CENTRAL RAILWAY

In 1853 a small settlement was founded on the banks of the Fitzroy River to service the embryonic pastoral industry in central Queensland. The settlement was boosted by the discovery of gold at Canoona in 1858 and the brief rush that ensued. The development of the settlement was such that in late 1858 Rockhampton was declared a township and a port of entry. The colonial government of New South Wales surveyed the township and offered allotments for sale. When Queensland was declared a separate colony in 1859, Rockhampton was one of its major towns, albeit with a modest population. The gold rush was short lived, but the town continued to grow, mainly as a result of the increasing pastoral activity in central Queensland.

In the early 1860s inhabitants of the town and region began lobbying for a railway for central Queensland. Many would have had first hand experience of the railway mania which had gripped Great Britain in the 1840s and 1850s. They were well aware of the potential for rail to boost the development of central Queensland.

The discovery of a rich copper deposit at Copperfield on Peak Downs in 1863, and the establishment of the Peak Downs Copper Mining Company, provided the main justification for a railway. But Rockhampton was not the closest port and as a river port had other disadvantages.

The first step in the creation of the rail network in central Queensland was the construction of a line from Rockhampton to Westwood, about 30 miles (48 km) west. This line opened in September 1867.[1] Construction of this short line was a significant event in the town's history. Rockhampton had been jostling with the coastal port of Gladstone to become the major centre in central Queensland, and the construction of this line gave Rockhampton a decisive advantage over its rival. It was initially known as the 'Great Northern Railway' and importantly Rockhampton was the terminus.

The railway was not extended beyond Westwood for seven years for two reasons. First, local traffic was small and there was not a pressing need to extend the line. The second reason was the financial crisis of 1867 which slowed rail development for several years.

It was agitation for an extension from Ipswich to Brisbane which gave central Queensland interests the opportunity to demand an extension as the price for agreeing to the Brisbane line. Construction began in 1878 and reached Emerald in 1879, Barcaldine in 1886 and Longreach in 1892.

Opposite: Part of a *Map of Queensland showing all railways open for traffic, under construction, and approved by Parliament*, 1948, showing the rail network extending west from Rockhampton near the end of the steam traction era.

The partial roundhouse, with seven locomotive stalls, built at Rockhampton in 1877. In 1880 three more stalls were added, and in 1884 the shed was extended to form a full circle. Each successive extension had longer stalls, so the building was not a perfect circle in plan.

Branches to Clermont and Springsure opened in 1884 and 1887.

By 1900, central Queensland had a substantial rail network with the main line extending as far as Longreach and branches to Mount Morgan, Springsure and Clermont. In 1903 the last section of the North Coast line from Brisbane to Rockhampton was completed. As a consequence Rockhampton became a busy rail centre, not just handling passengers and freight, but also maintaining and repairing the ever increasing fleet of locomotives and rolling stock on the network. This work was undertaken in two separate but related facilities at the Rockhampton rail yards: the roundhouse and the workshops.

THE ROUNDHOUSE

Steam locomotives required constant care and attention. They had to be regularly cleaned, inspected, replenished with water and lubricated with oil and grease. The fire tubes, flues and smoke box were cleaned daily of soot and cinders while the boiler needed washing out approximately once a week. Mechanical gear needed to be checked regularly and inspection pits between the rails enabled ready access. Lubrication similarly was a regular part of the basic daily maintenance and was monitored by the driver at regular intervals.

The storage and day to day care of locomotives was undertaken in a 'running shed'. Running sheds varied in size from just one bay to thirty or more at large depots. The basic requirements for an effective and efficient running shed included ease of access, plenty of room, good lighting, the means to lift an engine off its bearings or drop its wheels, adequate arrangements for washing out, and the requisite basic tools, stores and offices.

Roundhouses were running sheds designed for efficient garaging and servicing of steam engines. A roundhouse was a circular building with a central open courtyard with a turntable in the middle, from which tracks radiated to all parts of the roundhouse. There were also partial roundhouses which did not form a complete circle.

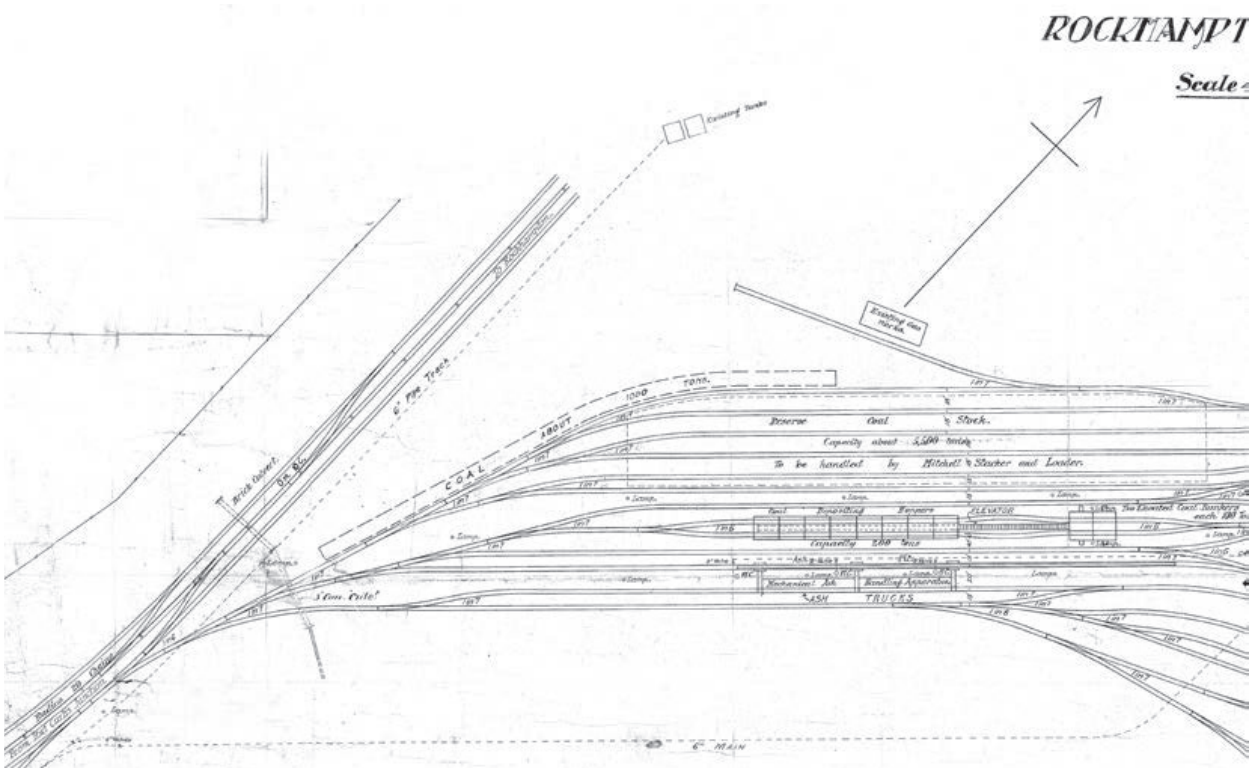
A partial roundhouse was built at Rockhampton in 1877. At first it had

The new roundhouse under construction in 1914. [State Library of Queensland, http://hdl.handle.net/10462/deriv/3010].

seven stalls but was soon enlarged to accommodate more engines. It was located near the original railway station and close to the intersection of Stanley and Denison streets. Further improvements were undertaken in 1903 to the partial roundhouse but it was soon at full capacity.

In 1909 the district locomotive superintendent in Rockhampton complained of a lack of accommodation for locomotives. Henry Horniblow, the department's long-serving locomotive engineer, concluded that *a new round engine-shed* was needed. Horniblow died in February 1910 and his successor, Charles Pemberton, reiterated the point that a new engine shed was *a necessity*.

The problem for the Railways Department was where to locate the roundhouse as well as new workshops. While the railway reserve was extensive, much of it was flood prone. The department decided that Fitzroy Square, a park and recreation ground controlled by the Rockhampton Municipal Council, would be a suitable site for a new roundhouse and workshops. The council reluctantly agreed to transfer the site.

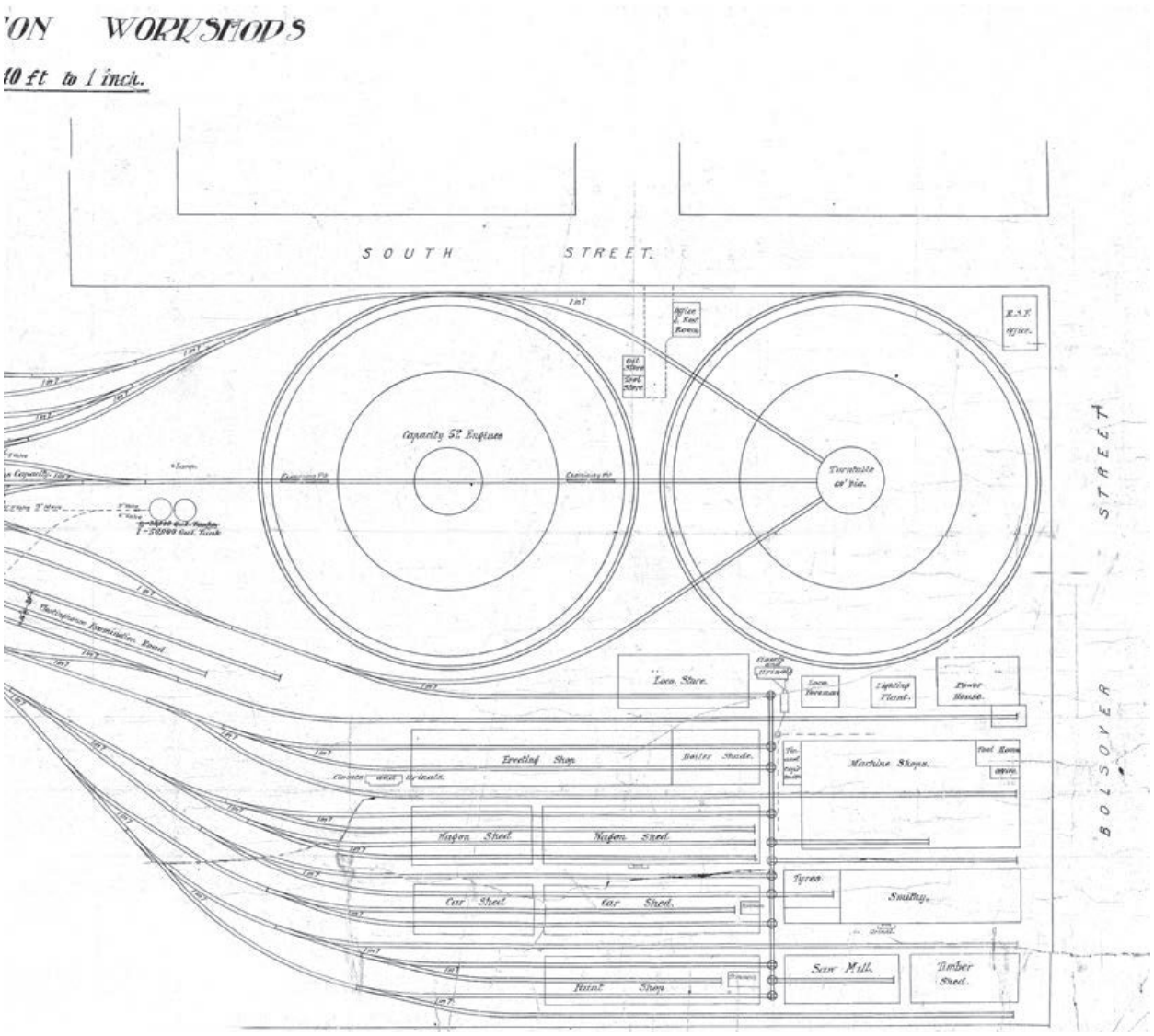


The intention was to construct two roundhouses and final plans were completed in April 1913. Work on the foundations of the roundhouse closest to Bolsover Street with accommodation for 52 locomotives commenced in August 1913. The second one closer to the station was never built.

The roundhouse had seven sections, each containing seven or eight stalls, making a total of 52 stalls. Each stall had its own track, and fifty of the tracks had inspection pits. Consequently the foundation work was substantial. Five foot long sections of 41¼ pound rail at five foot intervals were built into the footings under each pit.

Each section of the roundhouse was divided from its neighbours by radial brick walls. The stalls within each section were open to each other and separated only by four round hardwood posts which supported the roof and other structural timber members. The bricks came from Mount Morgan Gold Mining Company brickworks and the main timber came from the department's sawmill at Ipswich. The asbestos-cement slate tiles for the roof were purchased from Sydney importer C L Sadgrove.

The roundhouse was built by railway staff and it was ready for use in November 1914.

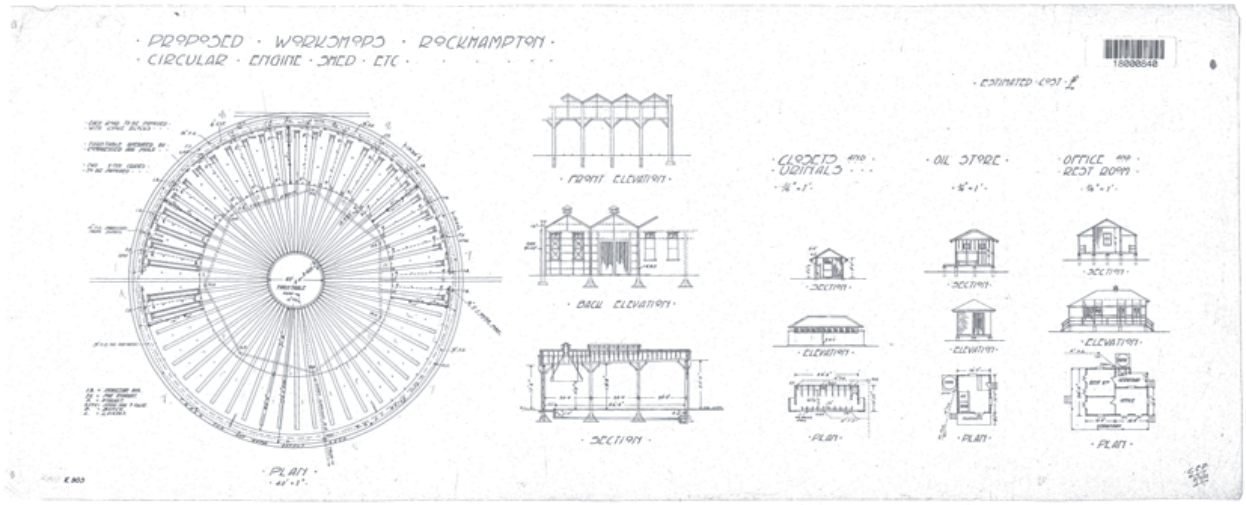


A proposed plan for the Rockhampton workshops complex prepared in 1917, showing an ultimate development with two roundhouses each with fifty-two locomotive stalls. Only one of these was actually built, and it was never fully utilised.

The roundhouse in use

The new roundhouse solved the accommodation problem of the old running shed. In fact the new roundhouse was seldom at capacity, and parts of the building were used for other purposes. By the later 1930s, there were sheet metal workers, coppersmiths and tinsmiths working in several stalls.

The adoption of Garratt locomotives to provide greater engine power had been debated in the railways department since the 1920s and recommended more than once. During World War II, the commonwealth government forced Queensland to adopt such locomotives and a dozen or more Australian Standard Garratts were attached to Rockhampton. They had many design problems but after the war Rockhampton became the base for



Design drawing of the roundhouse and its associated outbuildings, 3 July 1912.

the more successful Beyer-Garratt locomotive, thirty of which were imported in 1950–51. These locomotives were ninety feet long over the buffers and therefore could only use the roads in the round house which did not require them to turn on the turntable. A new building was therefore erected to house these engines.

Renewal of the turntable

The turntable is a key part of the roundhouse as it is the only means of access for locomotives in the shed. Should the turntable be immobilised all the locomotives in the shed would be trapped.

The original turntable no longer exists. The first recorded fault with the turntable was in December 1927 when the driving gear for rotating the turntable required repairs. The turntable failed again in April 1944 when the central pivot broke into a dozen pieces. Further repairs were undertaken in the following few years. A new turntable, built by the English makers Cowans, Sheldon and Co, was installed in 1953.

Since the end of steam operations

The 1950s was period of major change in Queensland Railways with the introduction of diesel-electric locomotives and the phasing out of steam. The roundhouse closed as a steam locomotive depot in September 1969.[2] Dieselisation of the rail system in the late 1960s was rapid and all the major depots closed to steam operation between 1967 and 1969.

As the railway system has for most of its existence been short of capital, the roundhouse was not simply demolished with the end of steam but put to other uses which required a minimum of alteration. The idea of using

The new administrative offices, inserted into two sections of the roundhouse, photographed soon after completion in 1994. [Photo John Gollings]

the roundhouse as a supplement to the goods yard was suggested but not considered practicable. Instead, it was used for a variety of other functions, including as a wagon repair shop.

The roundhouse was suited only to the lighter wooden wagons—including flat wagons and cattle wagons—and not to the repair of the heavy aluminium and steel coal wagons that were becoming more numerous. Wooden wagons were eventually phased out and the facilities in the roundhouse for wagon repairs shut down. The roundhouse was used for other purposes including storing rolling stock and stores, and an office for the sub-foreman.

The original asbestos-cement roof lasted the best part of half a century. The material was chosen because it was not affected by the corrosive locomotive exhaust gases in which galvanised iron had a limited life. ln the early 1960s the asbestos-cement slates were replaced with *Super-Six* asbestos-cement sheeting. That work included the repair of the lantern roof vents which allowed the exhaust gases to escape. Around 1976-78, with steam engines no longer in the building, the roof was completely rebuilt with hardwood replacing the original pine framing. Galvanised iron sheeting was used and the lantern vents were eliminated.[3]

The new administrative offices

The most substantial change to the roundhouse since it ceased to be used as a running shed was the insertion of new administrative offices in a segment of the building. This work was undertaken in 1993 after preparation of the precursor to this conservation management plan. The office building, designed by Allom Lovell Marquis-Kyle Architects, was intended to provide office space needed for the operation of the site, without serious detriment to the roundhouse. The new building, curved in plan, occupied 14 of the 52 engine bays. The project was recognised by several professional awards.[4]

Other current uses of the roundhouse

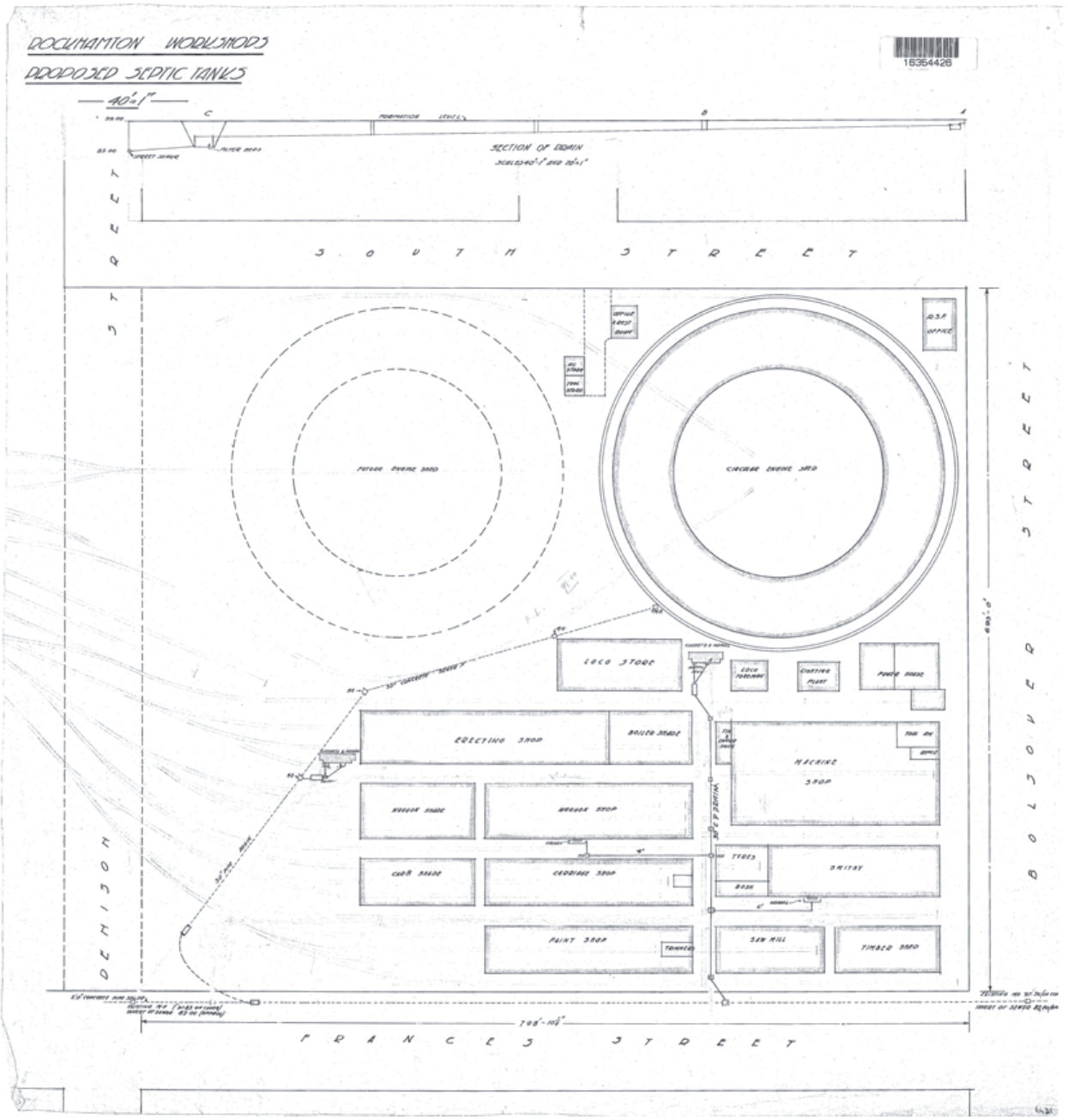
A more recent change was the relocation of the blacksmith's shop into a section of the roundhouse in 1999 . Other parts of the roundhouse are used to store a collection of historical equipment, and various materials and equipment.

THE WORKSHOPS

Workshops were essential parts of the operations of a rail network. Facilities were necessary for the assembly or construction of locomotives and rolling stock, and also their maintenance and repair. In Queensland the first workshops were built at Ipswich in 1864. The Ipswich workshops were used for assembling locomotives and rolling stock imported from Britain and for repairing rolling stock and locomotives used on the great southern railway which initially ran to Toowoomba. Ipswich became the main workshops in Queensland and the complete range of activities including manufacture of locomotives and rolling stock, as well as maintenance and repairs, were carried out there. Smaller workshops in regional centres concentrated on maintenance and repair, and the manufacture of some rolling stock such as wagons, but not larger items such as carriages and locomotives.

Workshops were established at Rockhampton soon after the first section of the central railway was opened in 1867. Little is known about the extent of these workshops except that the Rockhampton Bulletin reported in August 1874 that *instructions have been given for the construction of twelve open and six covered waggons, at the railway workshops in Rockhampton, excepting the wheels, springs, and axles, which have been ordered from England*.[5] In 1877, Parliament approved expenditure for *additional accommodation for the repair of engines and other work*.

The work done in the workshops expanded in the late 1870s as the central



This plan shows the roundhouse and workshops buildings as they were in 1914. [QR drawing 642R3, barcode 16354426]

line was extended westwards. By the turn of the century, the workshops were at full capacity. As already mentioned, the railways department started planning an upgrade of the workshops in conjunction with a new roundhouse.

Construction of the new workshops began in 1915. The total cost of the workshops and roundhouse when completed in 1918 was £130,000. These were the new workshop buildings, and their functions:

Machine shop	making and repairing parts for locomotives, carriages and wagons
Erecting shop	repairing locomotives
Boiler shop	overhauling and repairing boilers
Wagon shop	making and repairing wagons
Carriage shop	repairing and maintaining carriages
Saw mill and timber shed	milling timber for use in construction
Blacksmith	making and repairing iron goods used in the railways including bolts, rivets, dog spikes and tools
Paint shop	painting carriages and wagons
Power house	generating electricity for use on site at a time when reticulated mains electricity was not available in Rockhampton
Ancillary buildings and structures	a variety of other structures were built, such as water tanks, coal loaders, timekeeper's office, toilets, washrooms, rest rooms, tools stores, oil stores

Over the next sixty years, only minor additions and alterations were undertaken to the workshops. New buildings included an ambulance room in the 1940s and amenities blocks in 1970 and 1972.

The workshops had been built specifically for maintaining steam locomotives, and timber carriages and wagons. By the 1970s, most of

the work being done there was on diesel locomotives and steel wagons, principally coal wagons. Consequently the workshops were in need of a major upgrade. In 1981 Queensland Railways considered the possibility of building new workshops at Parkhurst on the northern outskirts of Rockhampton. But a 1983 report on Queensland Railway operations by PA Management Consultants recommended that the existing workshops site in Rockhampton should be redeveloped rather than relocated.

The redevelopment of the site occurred in two stages. First, in 1985-6 a modern repair facility and a large holding and sorting yards for wagons was completed at a cost of $8.6 million. The second stage in 1994-6 included the construction of new wheel, bogie and machine shops, a facility to overhaul diesel locomotives, and the overhaul of the existing shops. This work, including the construction of new offices within the roundhouse, cost $21.4 million.

Heritage listing

The cultural significance of the roundhouse has been recognised for many years. The Commonwealth Register of the National Estate was set up in 1975 and the roundhouse was listed in it in 1978. When Queensland's interim heritage legislation was enacted (the *Heritage Building Protection Act 1990*) the roundhouse was included in its schedule. When the *Queensland Heritage Act 1992* came into effect the roundhouse was transferred to the Queensland Heritage Register.

Initially a large parcel of land was entered in the register—the whole of lot 389 on plan LN1380—which included most of the workshops site. After negotiation with the Queensland Heritage Council the listed area was reduced—see *Legislative obligations*, on page 21.

A further amendment to the boundary was approved by the Queensland Heritage Council in May 2019. This amendment was a small alteration to the southwestern boundary to exclude the awning of the wheel and bogie shop.

AURIZON

In 2004 Queensland Rail established *QR National* which comprised the coal, bulk and container units in the organisation. The Rockhampton workshops became part of QR National as part of this re-organisation.

QR National was separated from Queensland Rail in June 2010;QR National changed its name to *Aurizon* in December 2012.

The workshops, which had more recently focused on rolling stock maintenance, were closed in 2018, and options for the future use of the

site are being investigated.

The Rockhampton workshops complex in its suburban setting, 2 October 2010. [Thom Blake photo]

CULTURAL SIGNIFICANCE

The entry in the Queensland Heritage Register includes an assessment of the significance of the heritage place that is generally sound.[6] But the entry does not make a clear enough distinction between the roundhouse and the workshops—two parts with separate and independent functions.

The following assessment is based on the register entry with modifications to make the functional distinction clearer.

HISTORICAL EVIDENCE

The Rockhampton railway workshops and roundhouse demonstrate the evolution of the Queensland railway network and the growth of the central division based in Rockhampton. The site, including the roundhouse, workshop buildings, tracks and other buildings, provides evidence that Rockhampton was, historically, a major railway terminus.

The workshops and the roundhouse demonstrate the change of motive power in Queensland from steam to diesel-electric and electric traction. The railway workshops is significant as it demonstrates an evolutionary solution to the problems of servicing and housing locomotives and rolling stock.

The workshops buildings are significant, to varying degrees, as the extant structures of a major facility constructed on the site in the early part of the 20th century, that demonstrate the operation of the complex. These buildings include part of the former machine shop, the former power house, the former paint shop and the former carriage shop.

The former paint shop, which was relocated to the site from the Broadmount wharf, is significant in demonstrating the practice by Queensland Railways of relocating buildings that had become redundant.

The heritage place is significant for its association with the steam locomotive era in Queensland (1865–1969) and the period of railway expansion from 1907 to 1920. The roundhouse reflects the historical pattern of building large steam depots, such as at Mayne (originally planned as three semi-circular sheds, later modified to two through sheds), North Ipswich (1908) and Willowburn (1928).

RARITY

The Rockhampton roundhouse is significant as the only full circle roundhouse constructed in Queensland, and, as one of only two examples still extant in Australia, it is significant as a rare example of this type of structure.

TYPICALITY

The roundhouse demonstrates the characteristic features of a round steam locomotive running shed and maintenance depot consisting of covered stalls with inspection pits, central turntable, storage roads radiating from a central point, and boiler washout facility.

The former power house (currently the electrician's shop) and the former machine shop are examples of typical structures that were built as part of the workshops with steel framing, concrete floors and corrugated steel cladding. The Rockhampton roundhouse is important for its aesthetic contribution to the railway workshop environment of Rockhampton, for its form and adaptation and particularly, for its contribution to the Bolsover and South Street streetscapes.

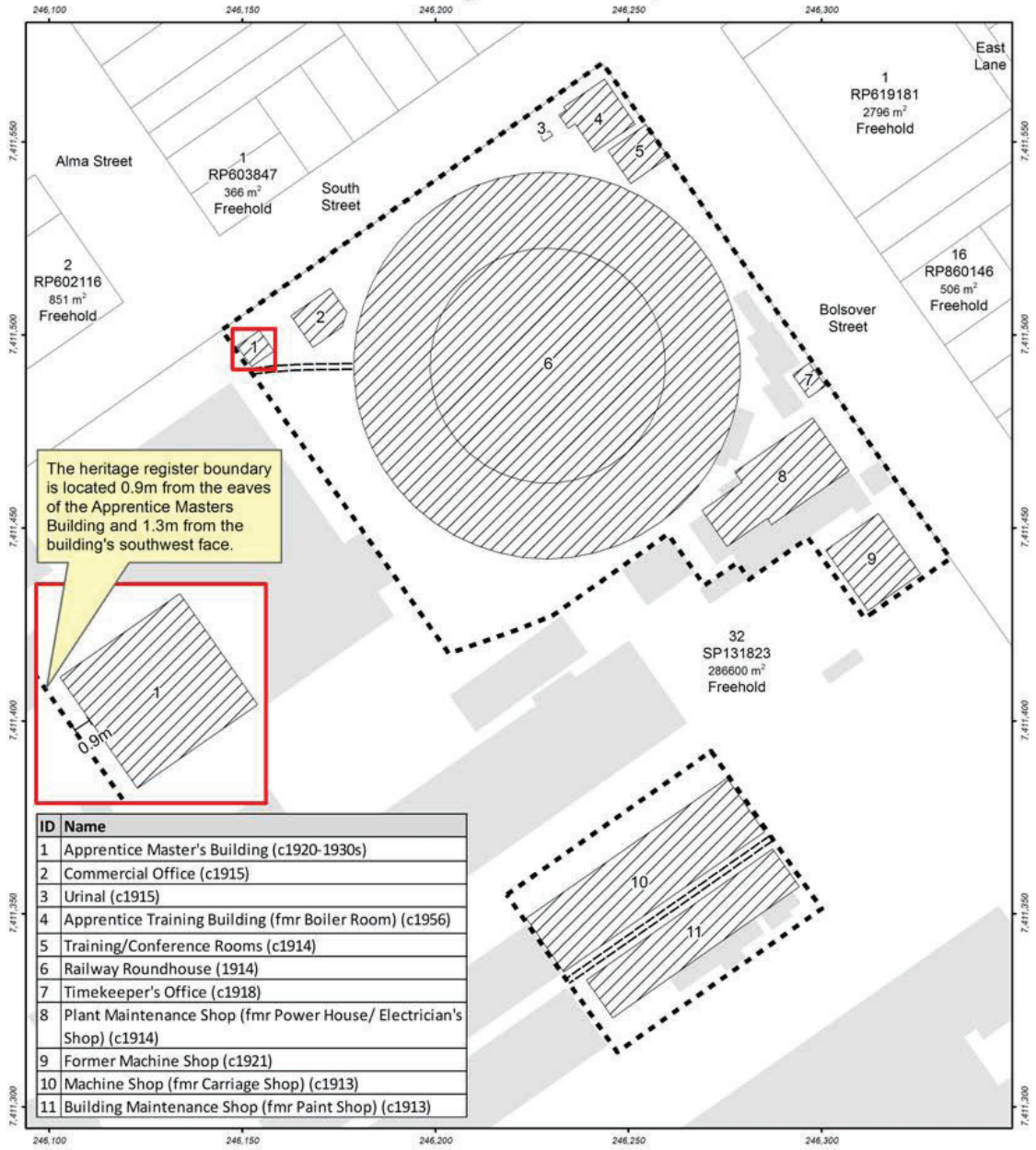
AESTHETICS

The former power house and machine shop are part of the group of buildings at the site which are larger and higher than others, built to accommodate gantries for heavy lifting. Together these structures contribute to the industrial aesthetic character of Bolsover Street.

Set back from Bolsover Street, but still making a contribution to the streetscape, are the former carriage repair shop and the former paint shop. With timber columns, steel roof trusses, corrugated galvanised iron cladding and concrete floor, the former carriage shop demonstrates a standard Queensland Railways design. The former paint shop has a curved roof, which makes a further aesthetic contribution to the complex. Both buildings are examples of the smaller workshops typically found at the site.

Inside the roundhouse in one of the bays on the north east side. An open engine pit can be seen, as well as a temporary prop to support the roof structure until a failed timber post can be replaced. The new administrative office within the roundhouse is visible across the turntable courtyard. [PMK_20140717_5506]

Railway Workshops 600783



ID	Name
1	Apprentice Master's Building (c1920-1930s)
2	Commercial Office (c1915)
3	Urinal (c1915)
4	Apprentice Training Building (fmr Boiler Room) (c1956)
5	Training/Conference Rooms (c1914)
6	Railway Roundhouse (1914)
7	Timekeeper's Office (c1918)
8	Plant Maintenance Shop (fmr Power House/ Electrician's Shop) (c1914)
9	Former Machine Shop (c1921)
10	Machine Shop (fmr Carriage Shop) (c1913)
11	Building Maintenance Shop (fmr Paint Shop) (c1913)

Map 2 (with site plan)

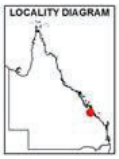
Heritage register boundary overview

Legend

- Heritage register boundary
- Significant features
- Railway tracks
- Features not of state significance

Cadastre

- Parcel
- Easement



N

0 5 10 20 30 40 Meters

This product is projected into GDA 1994 MGA Zone 56

Date created: 03/05/2019

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

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

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

OPPORTUNITIES & CONSTRAINTS

LEGISLATIVE OBLIGATIONS

Because the heritage place is entered in the Queensland Heritage Register, the requirements of the *Queensland Heritage Act 1992* come into play. The Act obliges the owner to conserve the place, in ways that are prudent and feasible.

Opposite page: Plan showing, within the broken lines, the parts of the site currently entered in the Queensland Heritage Register. Not everything inside the boundary is of equal significance, as will be discussed later. [Queensland Heritage Register entry.]

CONSERVATION POLICY

This chapter sets out policies to protect the cultural significance of the roundhouse and the other buildings in the heritage place. The next chapter—*Fabric* (page 31)—recommends how these policies should be applied to each building.

PRINCIPLES

The best professional practice in conservation should be employed in using and caring for the heritage place. The need for this is well summarised in the *Burra Charter*:

Places of cultural significance enrich people's lives, often providing a deep and inspirational sense of connection to community and landscape, to the past and to lived experiences. They are historical records, that are important as tangible expressions of Australian identity and experience. Places of cultural significance reflect the diversity of our communities, telling us about who we are and the past that has formed us and the Australian landscape. They are irreplaceable and precious.

These places of cultural significance must be conserved for present and future generations.

The Burra Charter advocates a cautious approach to change: do as much as necessary to care for the place and to make it usable, but otherwise change it as little as possible so that its cultural significance is retained.[7]

Significance as the basis for decisions

The cultural significance of the site resides in its fabric, and also in its intangible aspects—such as the meanings people ascribe to it, and the connections to other places and things. The survival of its cultural values depends on a well-informed understanding of what is significant, and on clear thinking about the consequences of change. The Burra Charter sets out good practice for conserving cultural significance.

Policy 1 — The cultural significance of the site will be the basis for deciding how to manage it.

This heritage management plan includes relevant background information to support this policy—in particular the chapters on *History* (page 5)

and *Cultural significance* (page 17).

Maintaining an appropriate setting

The workshops complex is a major visual element in the townscape of Rockhampton, and the roundhouse is prominent in many views of the site from the surrounding streets.

Policy 2 — Protect the visual setting of the heritage place by not erecting new structures that intrude on significant views.

PROCESSES

Using this plan

This plan contains information that is useful for many purposes.

Policy 3 — Make this plan available to every person who makes decisions about the management of the heritage place.

Reviewing this plan

Circumstances will continue to change, so this plan will need to be kept up to date.

Policy 4 — Review this plan within ten years of its adoption, or sooner if major changes to the heritage place are needed.

Heritage conservation practice

The *Burra charter* sets out the principles of a sound approach to conserving places like the roundhouse and workshops, and is the accepted standard.

Policy 5 — Follow best practice, as set out in the *Burra Charter*, when considering changes to the heritage place.

Heritage approvals

The *Queensland Heritage Act 1992* imposes requirements on the owner concerning the heritage place. Development approval is required for any harmful alterations to the fabric. To get such approval the owner must dem-

onstrate that there is *no prudent and feasible alternative* to the proposal.[8]

Policy 6 — Comply with the requirements of the *Queensland Heritage Act 1992*.

The Act provides for exemptions from the development application process where the work *will not have a detrimental impact on the cultural heritage significance of the place*.[9]

Policy 7 — As far as possible, avoid work that will have a detrimental impact on significance.

SKILLS

Expert advice

Expert advice is available from conservation practitioners in fields such as engineering, architecture, history, and archaeology. Advice may also be sought from officers of the Department of Environment and Science and from private consultants.

Policy 8 — Seek expert heritage conservation advice at early stages in considering changes, to protect the heritage place and to achieve good outcomes.

Specialised trade skills

The heritage place includes buildings that were constructed using methods and materials that are no longer common. .

Policy 9 — Engage specialist tradespeople and conservation experts when they are needed.

USE

The purposes that the buildings are used for are relevant to their conservation because any change of use implies alteration of the fabric to accommodate them, and because their significance is bound up with their past use for maintaining railway equipment.

Policy 10 — Use the workshop buildings and roundhouse for purposes

that do not damage the cultural heritage significance of the place, and which require the least possible change to the significant fabric.

Access

Throughout its past use as a working workshop site, where a variety of potentially hazardous activities were carried out, public access was strictly controlled.

Policy 11 — Maintain controls on public access to ensure the safety of people who access the heritage place.

CONSERVING THE FABRIC

Various conservation approaches are appropriate for different parts of the buildings.

Preservation

Preservation means maintaining the fabric of a place in its existing state and retarding deterioration. It is the least-invasive conservation approach.

Policy 12 — Monitor the condition of the buildings to give early warning of deterioration.

Timber building are vulnerable to damage by ground-dwelling termites (white ants).

Policy 13 — Make periodic inspections to prevent termite infestation and damage.

Maintenance

It is good practice, for asset management and for conservation, to schedule maintenance in an ongoing cyclical program. The needs of conservation should be integral to the program, not an extra. Regular maintenance can reduce the need for repairs later on. See *Maintenance checklist* on page 73.

Policy 14 — Undertake scheduled periodic maintenance to keep the place in good working order and repair.

Adaptation

Adaptation will be required for new uses on the site. The impact of change needs to be kept to a minimum. These principles should be followed:

Necessity—only changes that are critically necessary for the ongoing use of the place should be made.

Visibility—the change should be clearly visible, and not disguised as original work.

Reversibility—it should be possible to restore the fabric to its original form without damage.

Policy 15 — The principles of necessity, visibility and reversibility should continue to the applied when changes are made to the fabric.

Some of the buildings may include at least some asbestos-cement com-ponents, such as wall and ceiling linings. Another potentially hazardous material is paint containing lead pigment.

Policy 16 — Avoid the release of hazardous materials by avoidance, encap-sulation or replacement.

Recording

As part of the proper process for managing change in significant places, the *Burra charter* points out the importance of making records before any change, and advocates placing the records in a permanent archive, and making them available where this is appropriate.[10]

Policy 17 — Develop a system for maintaining records of maintenance work and changes to the place. Lodge records in a public archive when this is a condition of development approval.

Removal

Some of the buildings don't make a positive contribution to the cultural significance of the place. Some buildings, or elements of them, are intrusive.

Policy 18 — Elements that are intrusive may be removed from the site, provided appropriate processes have been followed to gain approval and to make records beforehand.

CONSERVING MOVABLE EQUIPMENT

There are movable items—such as workshop machine tools, rolling stock, and building parts—stored in the roundhouse. Much of this equipment has cultural heritage significance. Some items have significant associations with the history of the workshops and roundhouse, while other items are connected with the wider Queensland railway system. Assessing the significance of these artefacts is outside the scope of this conservation plan.

Policy 19 — The cultural heritage significance of movable equipment stored in the roundhouse should be properly assessed, and appropriate measures taken to conserve those that are found to be significant.

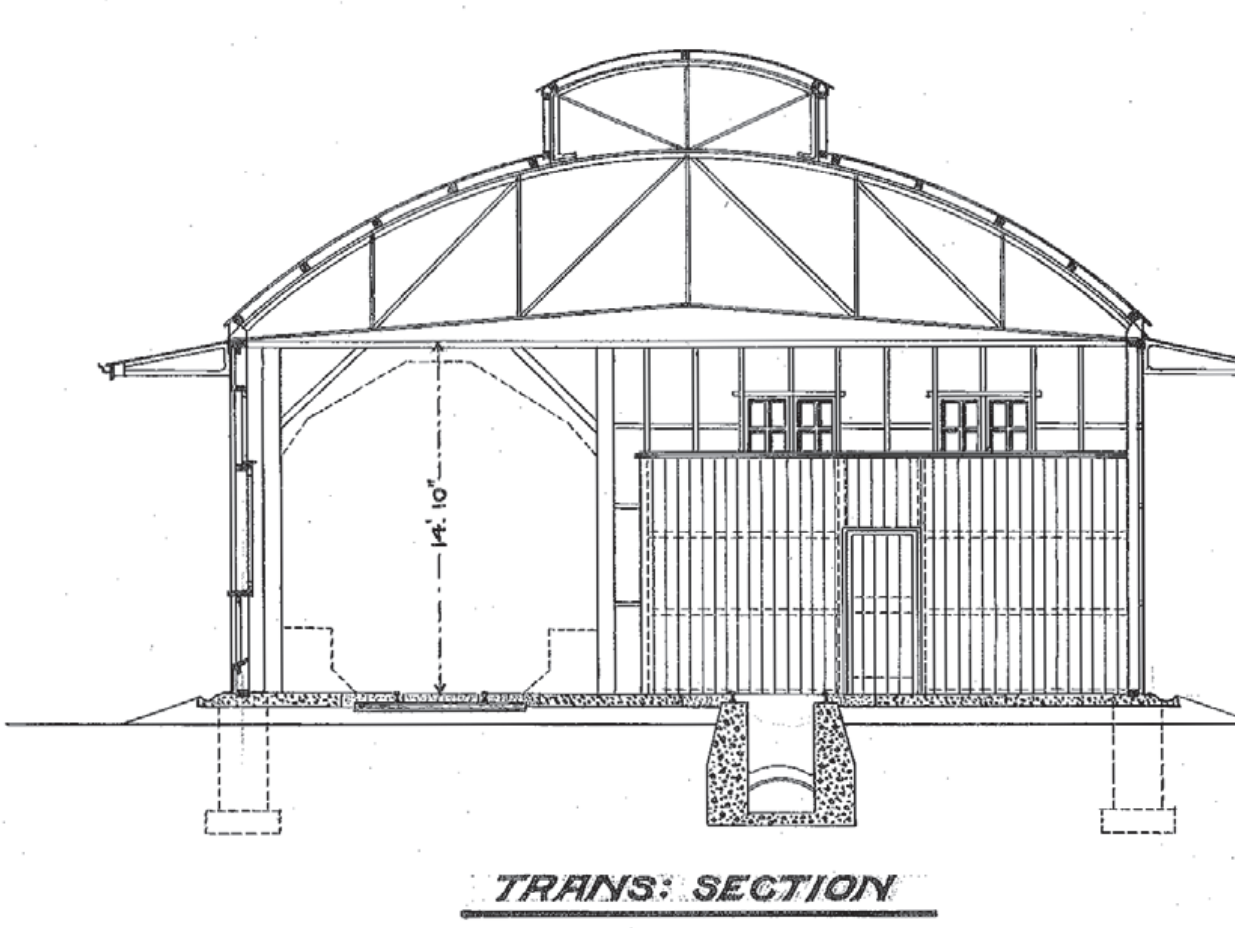
INTERPRETATION

The story of the development of the roundhouse and workshops is of interest to many people.

On-site interpretation

People who work on the site have a strong interest and they have access to parts of the site that are closed to the general public.

Policy 20 — Make accurate and relevant information about the history and significance of the heritage place available to site users.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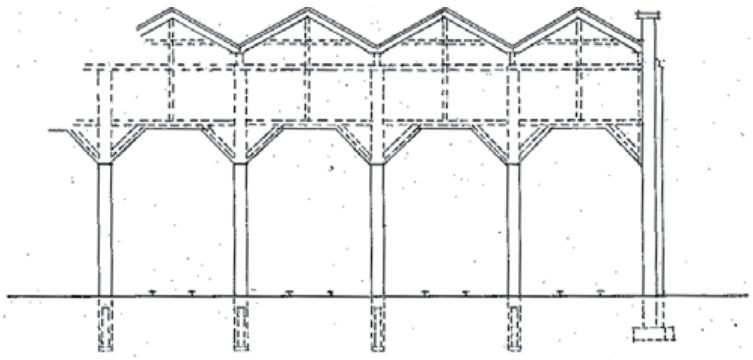
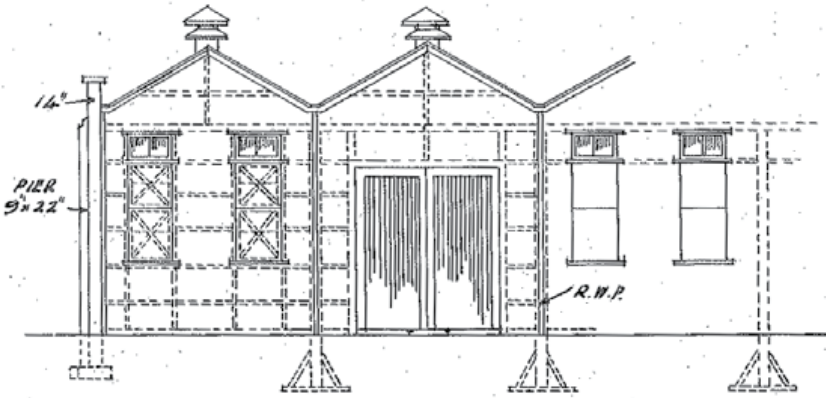
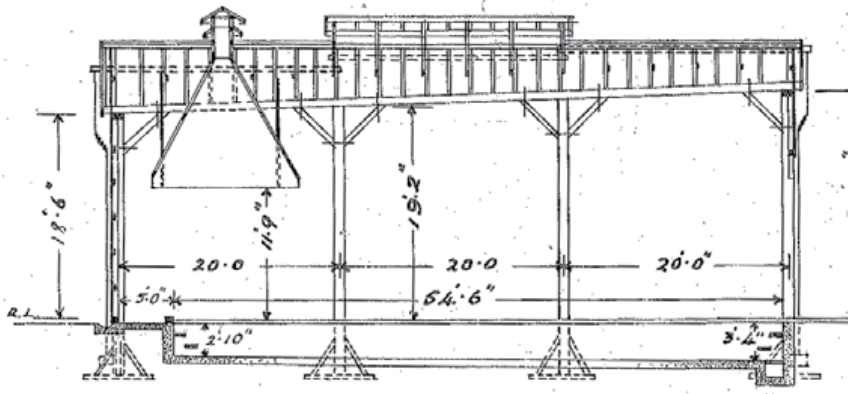
TRANS: SECTION



· FRONT ELEVATION ·



· BACK ELEVATION ·



· SECTION ·

FABRIC

This chapter contains information about the buildings and other structures of the heritage place. For each structure there is an outline of its history, a short description, an assessment of cultural significance, and recommended conservation policy. The significance of each structure is stated in these terms:

Structures of **considerable** significance are those that are essential to the significance of the place—for example, the central roundhouse courtyard and turntable.

Structures of **some** significance contribute to the significance of the place by illustrating part of the history or the development of the place—for example, the commercial office which illustrates the relocation and reuse of buildings.

Structures of **slight** significance contribute in only a minor way to the significance of the place—for example, the modern substation in front of the plant maintenance shop. Some structures assessed as having slight significance are also judged to be **intrusive** because of their impact on other values—for example, the demountable building that obscures the view of the roundhouse from Bolsover Street.


NO ENTRY

The courtyard and turntable

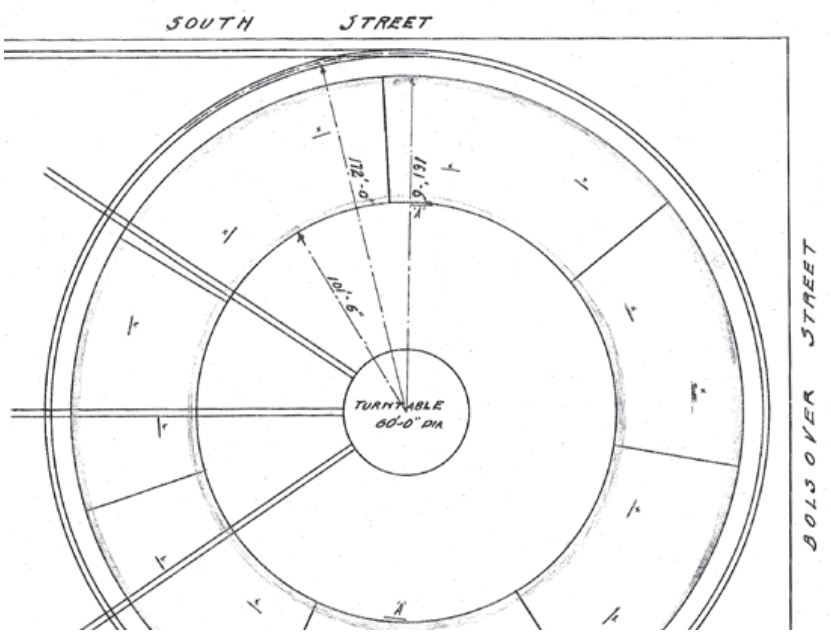
History — Construction of the roundhouse was started in April 1913 and completed in November 1914. The present turntable was installed in 1953. Steam operations ended in 1969.

Fabric — The courtyard and turntable are generally in the condition they were in when the steam depot was closed. The radial railway lines leading up to the turntable have been filled to allow vehicles to move around the space.

Significance — The roundhouse courtyard and turntable have **considerable** historical significance because they are essential elements in this type of building. The space has aesthetic significance that arises from the pleasing circular form and from the industrial character of the surrounding loco bays.

Significant fabric — All below-ground structures including rail, sleepers, ballast; rail bed, retaining walls and floor slabs; the turntable and its associated machinery. (The levelling fill over the rails is not significant, but not intrusive).

Conservation — **Preserve** the form of the building in its current location. **Maintain** the fabric. **Adapt** the building to meet operational requirements and accommodate appropriate uses.



Offices

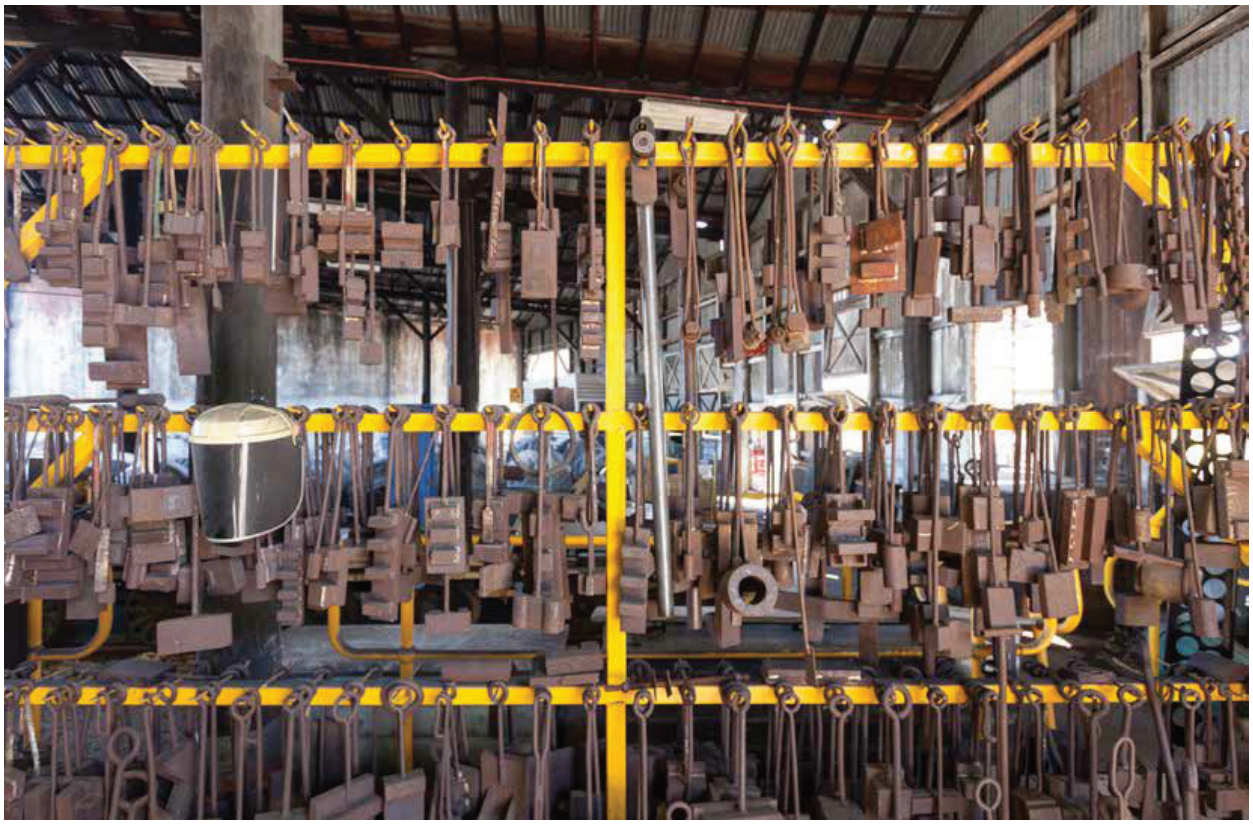
History — The offices were constructed inside two sections (fourteen engine bays) in 1993.

Fabric — The offices are built of modern lightweight materials in such a way that the structure can be removed without damage to the original roundhouse, except that a number of the posts supporting the old roof were cut off and their upper sections supported on the new structure.

Significance — The new offices are not significant.

Significant fabric — The pre-1993 roundhouse structure, above and below ground. (The office building within the original roundhouse is not significant, but is not intrusive).

Conservation — No particular requirements.



New blacksmiths' shop

History — In 1999 two engine bays in the roundhouse were adapted to accommodate a small blacksmiths' workshop, equipped with a small proportion of the equipment from the old blacksmith shop elsewhere on the site.

Fabric — The adaptation involved filling the pits in the two bays and laying a new concrete floor. Deep concrete footings were installed to support the two drop hammers. The drop hammers are supplied with compressed air from a compressor elsewhere on the site. Each hammer forms the centre of a smith's forging workstation, along with a forge, anvil, swage block and tools. There is a rack containing a range of dies, templates and other tooling. Welding and heat-treatment equipment is available. In a nearby bay is a demountable office for the smith.

Significance — The blacksmith's shop in the roundhouse has **some** significance because it can demonstrate the continuation of a trade that was a central part of the technology of steam, but is a peripheral part of current technology. The equipment is generic and typical of hand forging, except for the tooling that is specific to the railway work carried out at the workshops. The conversion of the engine bays to this new use has had little adverse effect on the significance of the roundhouse.

Significant fabric — Dies, templates and other tooling specific to railway work; drop hammers, anvils, swage blocks, hammers, tongs, hardies, punches and other tools specific to blacksmiths' work. (Modern welders, drop saws, and other common equipment, are not significant).

Conservation — **Preserve** the equipment that has a specific connection with railway work.

Other sections

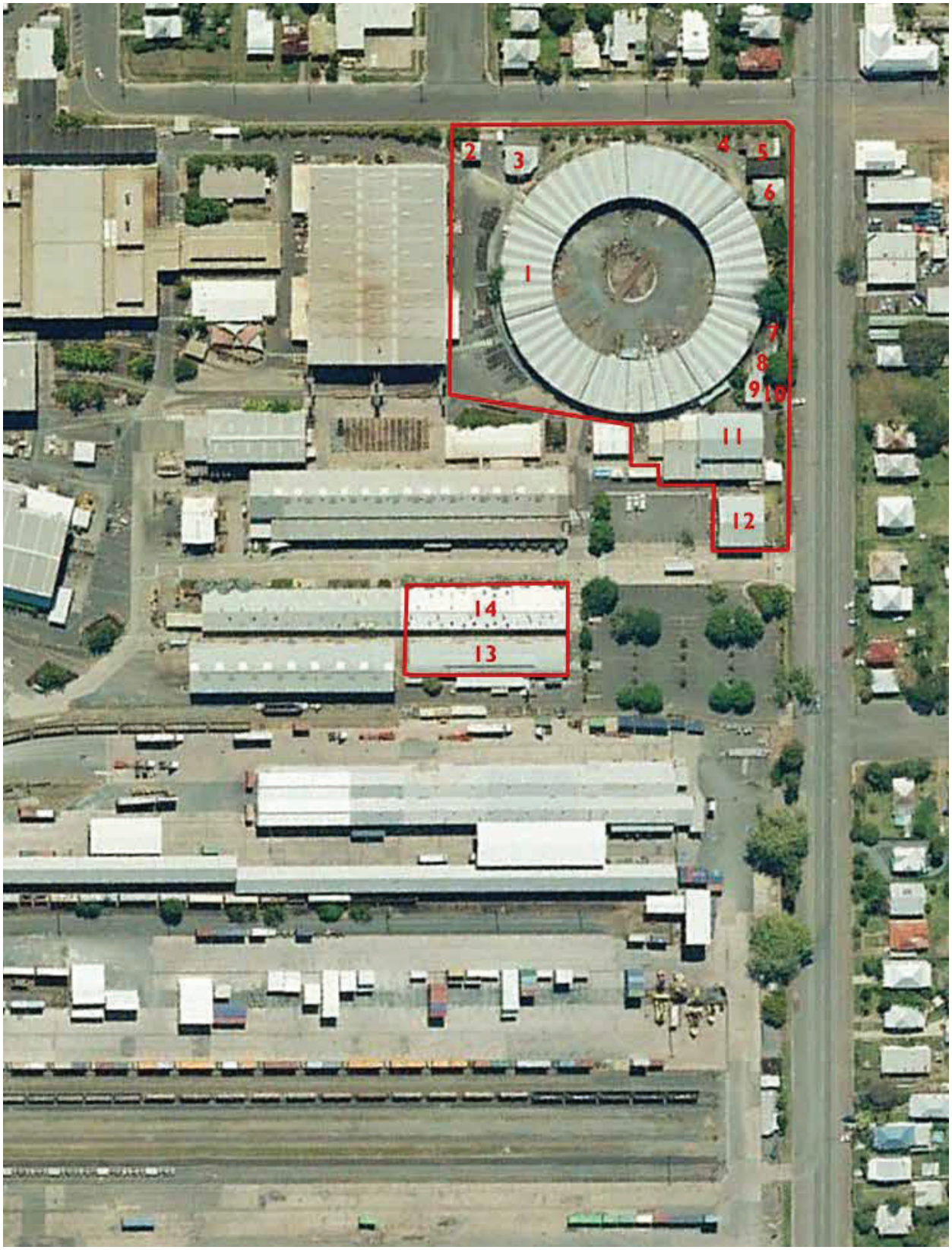
History — Construction of the roundhouse was started in April 1913 and completed in November 1914. The asbestos-cement slate roof was replaced with corrugated asbestos-cement sheeting in the early 1960s. Steam operations ended in 1969. Around 1976–78 the roof was completely rebuilt with hardwood , sheeted with galvanised iron, and the lantern vents were eliminated.

Fabric — Circular shed with radiating engine bays, timber framed, with roof and wall sheeting of corrugated galvanised iron. Seven brick radial walls. Concrete floors and engine pits.

Significance — The other parts of the roundhouse have **considerable** historical significance because they demonstrate the form and operation of this rare building type. The structure has aesthetic significance that arises from the pleasing circular form and from the industrial character of the materials and forms.

Significant fabric — Concrete floors and pits; timber framing; corrugated iron sheeting; portable equipment associated with the operation of the engine shed. (Modern service pipes and wires are not significant).

Conservation — **Preserve** the form of the building in its current location. **Maintain** the fabric. **Adapt** the building to meet operational requirements and accommodate appropriate uses.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OTHER WORKSHOP BUILDINGS

These buildings outside the roundhouse, but within the area listed in the Queensland Heritage Register, will now be discussed. The buildings are marked on the aerial photo opposite. Number 1 is the roundhouse.

2 Apprentice master's building

3 Commercial office (formerly running foreman's office)

4 Urinal

5 Apprentice training building (water fitters' shed, washout plant)

6 Training rooms (enginemen's rest room)

7 Demountable building (conference room)

8 Maintenance planning office

9 Computer based training room

10 Timekeeper's office

11 Plant maintenance shop (power house)

12 Old machine shop

13 Machine shop (carriage shop)

14 Building maintenance shop (paint shop)

Opposite: Aerial image of part of the Rockhampton workshops, with the heritage place marked with a red line and the individual buildings numbered. [Google Earth]

Apprentice Master's Building

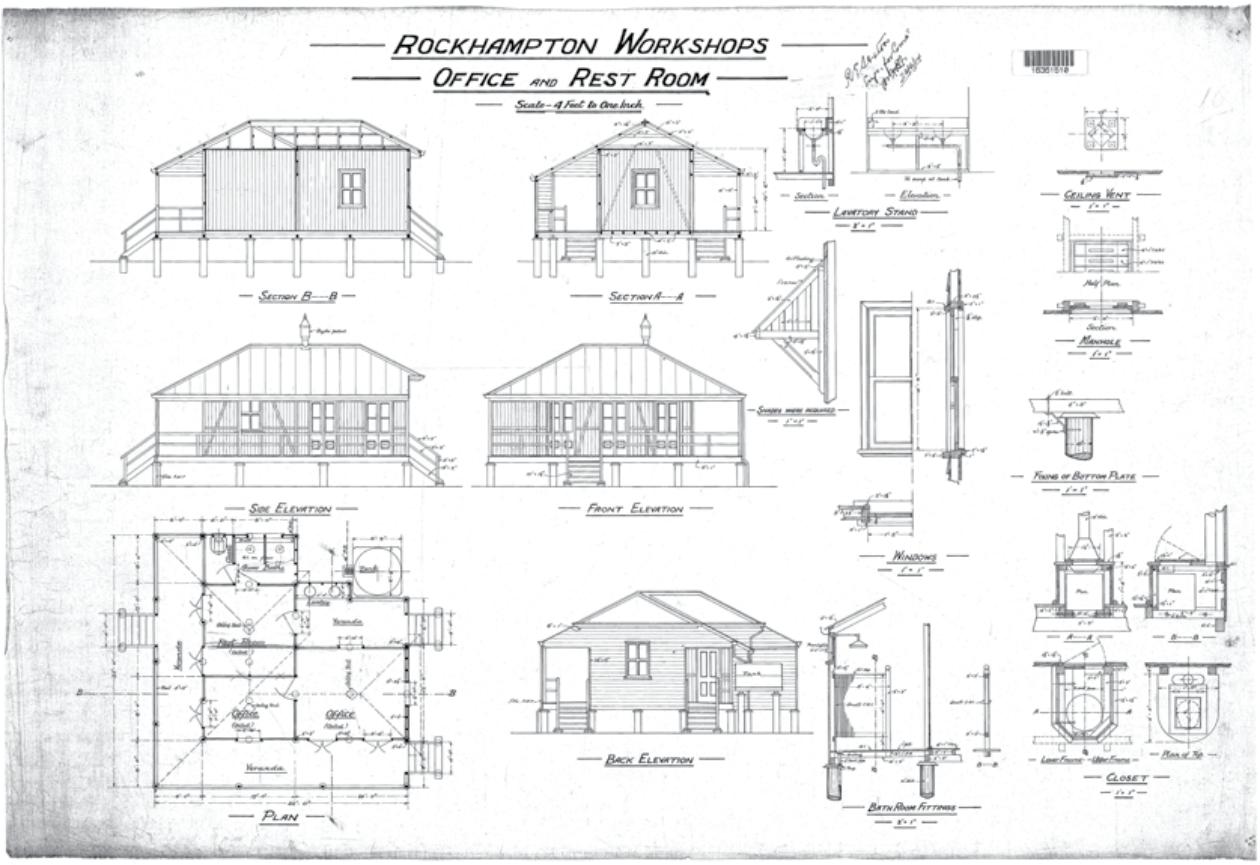
History — The history of this building has not been precisely determined but it appears to have been built in the 1920s or 1930s for an administrative function, probably associated with the entrance gateway. The upper floor is currently used as an office for apprentice trainers, and the lower floor as a cleaners' store.

Fabric — Small two-storey timber building. Corrugated galvanised iron gabled roof, gables clad with asbestos-cement sheeting with timber cover strips. Walls clad with chamfer boards. Original timber casement sashes replaced with sliding aluminium windows. Interior linings of flat sheet material with timber cover strips. Asbestos warning placards. Steep external stair for access to the upper floor.

Significance — **Some** historical significance because it demonstrates the pattern of work at the site, in particular the control of access. It also contributes to the visual character of the site as seen from the street.

Significant fabric — Timber framing and cladding; details of asbestos-cement gables; corrugated iron roof, details of asbestos-cement lining on upper storey. (Not significant: aluminium windows; interior lining in lower storey).

Conservation — **Preserve** the general form of the building in its current location. **Maintain** the fabric. **Adapt** the building to facilitate compatible uses.


ROCKHAMPTON WORKSHOPS
OFFICE AND REST ROOM
Scale – 4 Feet to One Inch.
Section B—B
Section A—A
Side Elevation
Front Elevation
Back Elevation
Plan
Lavatory Stand
Ceiling Vent
Manhole
Fixing of Bottom Plate
Windows
Bath Room Fittings
Closet
Office
Office
Verandah

Commercial office

History — Built around 1915 as office and rest room, initially as a low-set single storey building, perhaps sited at the corner of Bolsover and South Streets, and since moved to serve as office for the running foreman, raised and adapted for other office uses.

Fabric — Small single storey building elevated and enclosed underneath. Corrugated galvanised iron hipped roof extending continuously over verandahs. Walls clad with weather boards. Verandahs enclosed. Some original timber double-hung sash windows, but most windows have aluminium sliding sashes. Interior linings of original vertical timber tongue and groove boards and flat sheet material.

Significance — **Considerable** historical significance because it demonstrates the pattern of work of on the site, in particular the supervision of running operations. It also contributes to the visual character of the site as seen from the street.

Significant fabric — Timber frame, cladding and lining; corrugated iron roof; timber windows. (Not significant: aluminium windows; recent internal linings; recent verandah enclosures; recent wall openings).

Conservation — **Preserve** the general form of the building in its current location. **Maintain** the fabric. **Adapt** the building to facilitate compatible uses.

Urinal

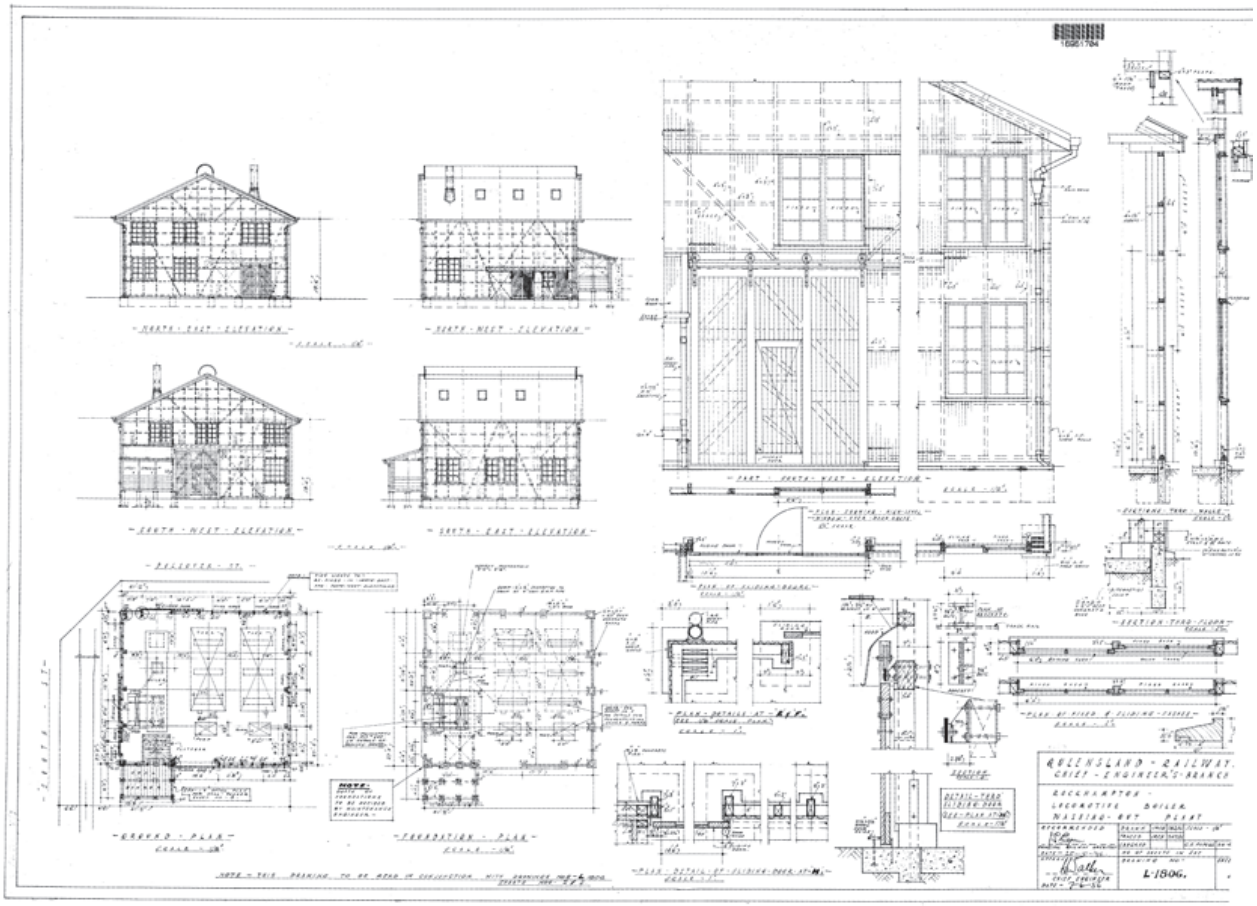
History — The history of this building has not been determined, but it is likely that this building was built around 1915 along with a series of toilet blocks. Still in use by men who work nearby.

Fabric — Small unroofed enclosure of corrugated galvanised iron on concrete slab floor. Later stainless steel urinal trough and cold water tap.

Significance — **Some** historical significance because it demonstrates the pattern of work of the roundhouse, in particular the provision of toilet facilities for workmen. It also contributes to the visual character of the site as seen from the street.

Significant fabric — Corrugated iron walls; timber frame. (Not significant: pipes, fixtures and fittings).

Conservation — **Preserve** the building in its current location. **Maintain** the fabric. **Adapt** the building to facilitate compatible uses.


QUEENSLAND - RAILWAY.
CHIEF ENGINEER'S BRANCH.
ROCKHAMPTON -
LOCOMOTIVE BOILER.
WASHING OUT PLANT
L-1806.

Apprentice training building

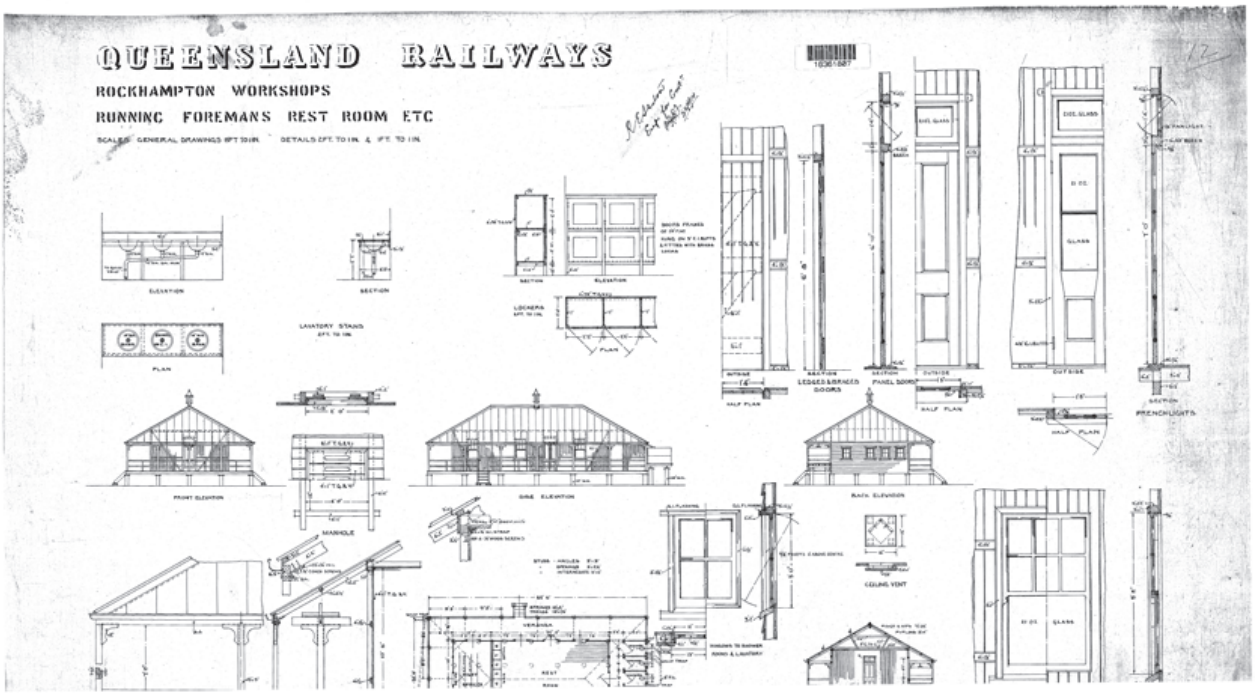
History — Built around 1956 to house a locomotive boiler washing-out plant. After the end of steam operations the boiler and water tanks were removed and the building was used as water fitters' shed. Currently being converted to accommodate apprentice training.

Fabric — Large shed with timber frame clad externally with corrugated galvanised iron. Gabled roof with ridge vent, originally sheeted with corrugated asbestos-cement, recently replaced with corrugated galvanised steel with inset translucent panels. Timber trussed roof frame. Original timber window joinery and timber sheeted doors currently being repaired. Concrete floor slab.

Significance — **Considerable** historical significance because it demonstrates the pattern of work at the site, in particular the later method of supplying hot water under pressure for washing-out loco boilers. As a prominent building at the corner of Bolsover and South Streets it contributes to the visual character of the site.

Significant fabric — Timber frame; concrete floor; timber doors and windows.

Conservation — **Preserve** the building in its general form and location in relation to the street and with its evidence of the equipment it originally housed; prevent termite damage. **Maintain** painted timber joinery and weather-tight walls and roof. **Adapt** to facilitate compatible uses.


QUEENSLAND RAILWAYS
ROCKHAMPTON WORKSHOPS
RUNNING FOREMANS REST ROOM ETC
SCALES GENERAL DRAWINGS 1/8" TO 1'0"
DETAILS 2" TO 1'0" & 1" TO 1'0"
ELEVATION
SECTION
PLAN
LAVATORY STAND
2" TO 1'0"
LOCKERS
1/2" TO 1'0"
ELEVATION
SECTION
PLAN
SECTION
HALF PLAN
LEDGED & BRACED DOORS
SECTION
PANEL DOOR
OUTSIDE
HALF PLAN
OUTSIDE
HALF PLAN
SECTION
FRENCH LIGHTS
FRONT ELEVATION
MANHOLE
SIDE ELEVATION
BACK ELEVATION
CEILING VENT

Training rooms

History — Purpose-built as enginemen's rest room, where drivers and firemen could stay overnight or rest between shifts. Probably built around 1914, at the corner of Bolsover and South Streets, oriented along Bolsover Street. It may have been moved to its present location around 1956 to make way for the loco boiler washout building (now apprentice training building), at the same time being rotated and reduced in length. Adapted for current use as a pair of training rooms.

Fabric — Low-set two-roomed timber building with verandah around three sides and corrugated iron roof.

Significance — **Considerable** historical significance because it demonstrates the pattern of work at the site, in particular the provision of sleeping accommodation for loco crews, and the practice of moving and adapting buildings. Also contributes in a minor way to the visual character of the site as seen from Bolsover Street.

Significant fabric — Timber floor, wall and roof frame and external cladding; timber boarded ceiling (above suspended ceiling); timber floors; remnant interior walls of single-skin tongue-and-groove boards; early timber window and door openings and associated joinery. (Not significant: Suspended ceilings; internal linings of sheet material.)

Conservation — **Preserve** the building in its general form and location in relation to the street. **Maintain** the fabric. **Adapt** the building to facilitate compatible uses, taking opportunities to reveal the earlier form of the open verandahs.

Demountable building

History — The history of this building has not been precisely established. It may date from as early as 1960 since a building of similar footprint appears on a 1961 drawing, though the form of construction suggests a later date.

Fabric — Small single-storey demountable building. Low pitched skillion roof. External cladding of vertically ribbed metal, with sliding aluminium windows. Low set on hollow steel stumps, with five concrete steps on steel strings for access.

Significance — **Slight** historical significance because it reflects the pattern of work at the site; **Intrusive** because it obscures views of the roundhouse from Bolsover Street.

Significant fabric — (no significant fabric).

Conservation — **Remove** when no longer required.

Maintenance planning office

History — Built after 1961.

Fabric — Small low-set timber framed building linked by an open verandah to the computer based training room and attached to the demountable building. Low pitched gabled roof sheeted with corrugated galvanised iron. Walls clad with fibre-cement weatherboards. Timber floor supported on low concrete stumps.

Significance — **Slight** historical significance because it reflects the pattern of work at the site; **Intrusive** because it obscures views of the roundhouse from Bolsover Street.

Significant fabric — (no significant fabric).

Conservation — **Remove** when no longer required.

Computer based training room

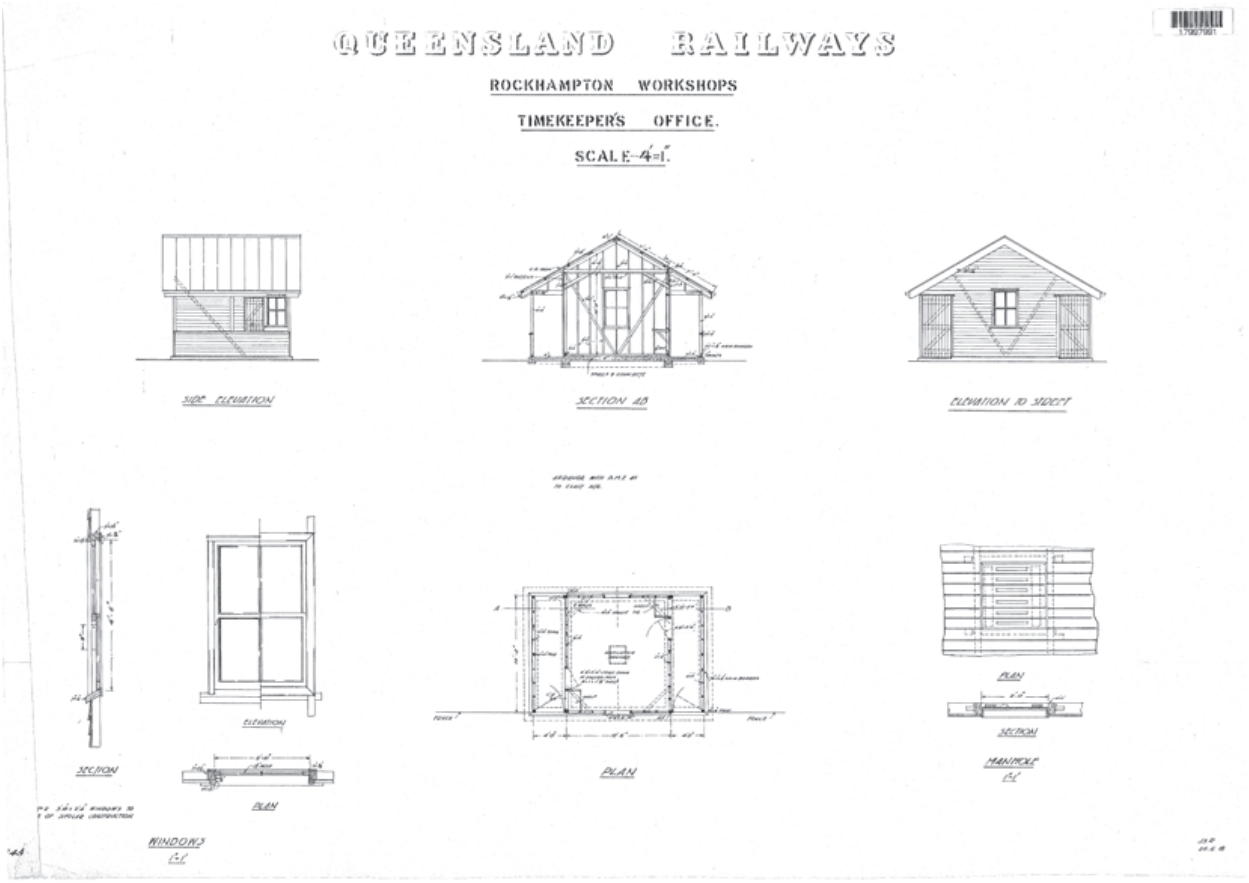
History — Built some time before 1961, when it appears on a plan labelled *ambulance room*. Details and materials suggest it was built in the 1950s.

Fabric — Small timber framed single storey building with gabled corrugate iron roof. Walls are clad with hardwood chamfer boards. Windows are aluminium sliding windows. The timber floor is supported on hollow steel stumps, which may be replacements.

Significance — **Slight** historical significance because it reflects the pattern of work at the site; **Intrusive** because it obscures views of the roundhouse from Bolsover Street.

Significant fabric — (no significant fabric).

Conservation — **Remove** when no longer required.


QUEENSLAND RAILWAYS
ROCKHAMPTON WORKSHOPS
TIMEKEEPER'S OFFICE.
SCALE-4=1'.
SIDE ELEVATION
SECTION AB
ELEVATION TO 3'DOOR
SECTION
ELEVATION
PLAN
WINDOWS
PLAN
PLAN
SECTION
MANHOLE

Timekeeper's office

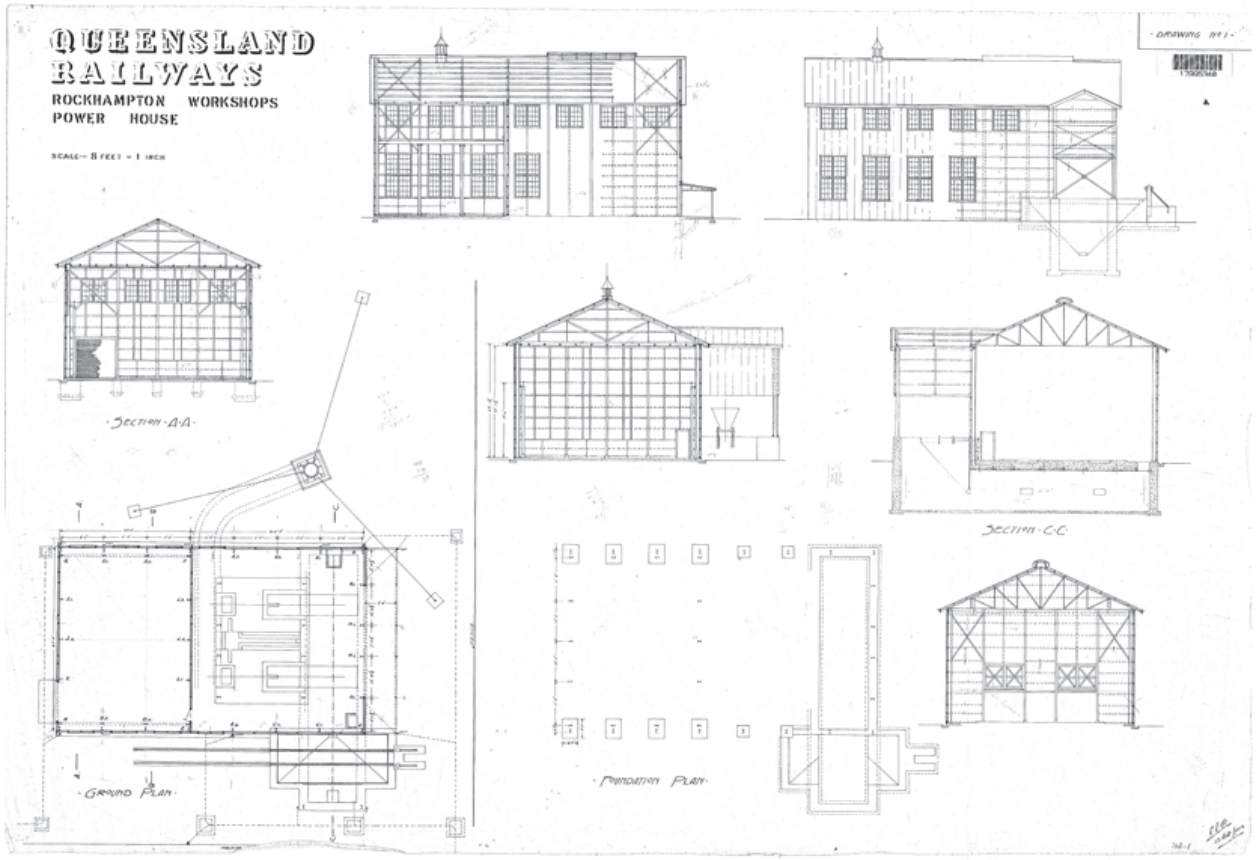
History — Built around 1918 for use recording arrival and departure of people who worked at the site. One side verandah has been enclosed, and the external wall removed. Currently used for training.

Fabric — Low-set one-room timber building with side verandahs and corrugated iron roof. Concrete slab on ground floor.

Significance — **Considerable** historical significance because it demonstrates the pattern of work at the site, in particular the clocking-on and clocking-off of workers. Also contributes in a minor way to the visual character of the site as seen from Bolsover Street.

Significant fabric — Concrete floor; timber framed walls clad externally with weatherboards; timber roof frame sheeted with corrugated galvanised iron; timber boarded ceiling (if it survives behind sheet material ceiling); timber doors and windows. (Not significant: Verandah enclosure; internal wall and ceiling linings).

Conservation — **Preserve** the building in its current location. **Maintain** the fabric. **Adapt** to facilitate compatible uses.


QUEENSLAND
RAILWAYS
ROCKHAMPTON WORKSHOPS
POWER HOUSE
SCALE— 8 FEET = 1 INCH
SECTION A-A
SECTION C-C
GROUND PLAN
FOUNDATION PLAN

Plant maintenance shop

History — Built around 1914 as a power house (that is, an electricity generating plant powered by a coal-fired boiler). The free-standing chimney and all of the plant has been removed and the shell of the building adapted for use as a general plant maintenance workshop.

Fabric — A large gable-roofed clear-span shed clad with modern colorbond steel sheeting. The main remnants from the original construction are the rolled steel columns and the riveted steel roof trusses. The roof purlins and sheeting are recent, as are the wall girts, sheeting and louvred vents. There is a modern concrete floor.

Significance — **Some** historical significance because its external form and the remaining parts of the early structure demonstrate the development of the workshops in the period when electricity was generated on site. It also contributes to the visual character of the site as seen from the street.

Significant fabric — Rolled steel columns; riveted steel roof trusses. (Not significant: Wall and roof sheeting and framing; concrete floor).

Conservation — **Preserve** the general form of the building in its current location, and the original columns and trusses. **Maintain** the significant fabric. Continue to **adapt** the building to facilitate compatible uses.

Electricity substation

History — The history of this element has not been precisely determined, but it appears to be a recent substation associated with the redevelopment of the site in the 2000s.

Fabric — Small steel framed building housing high-voltage electrical equipment.

Significance — **Slight** historical significance because it reflects the change to buying mains electricity rather than generating electricity on site, and because it reflects the major redevelopment of the site in the 1990s. It is visible from Bolsover Street but is not intrusive.

Significant fabric — (no significant fabric).

Conservation — No conservation requirements.

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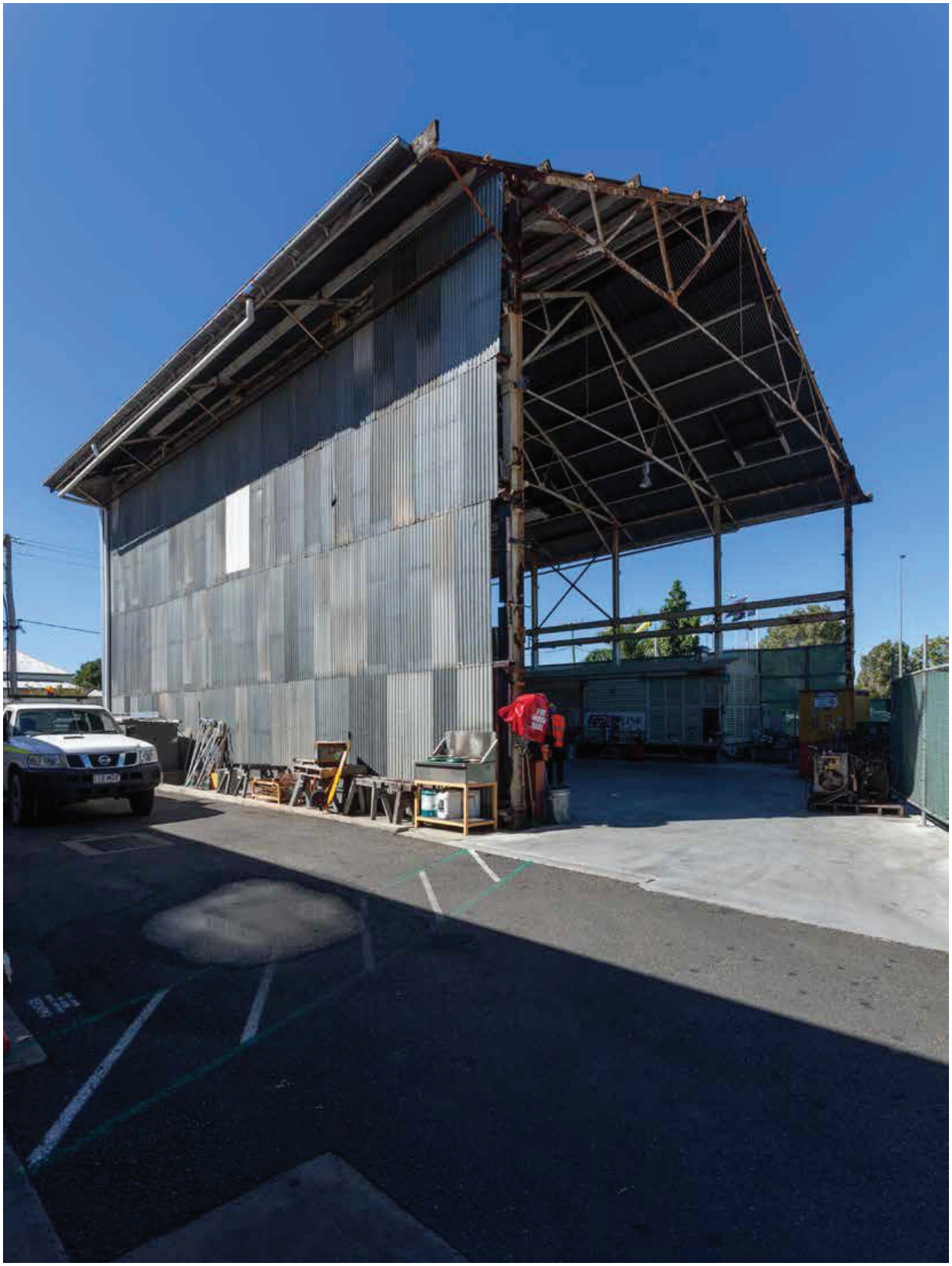


Old machine shop

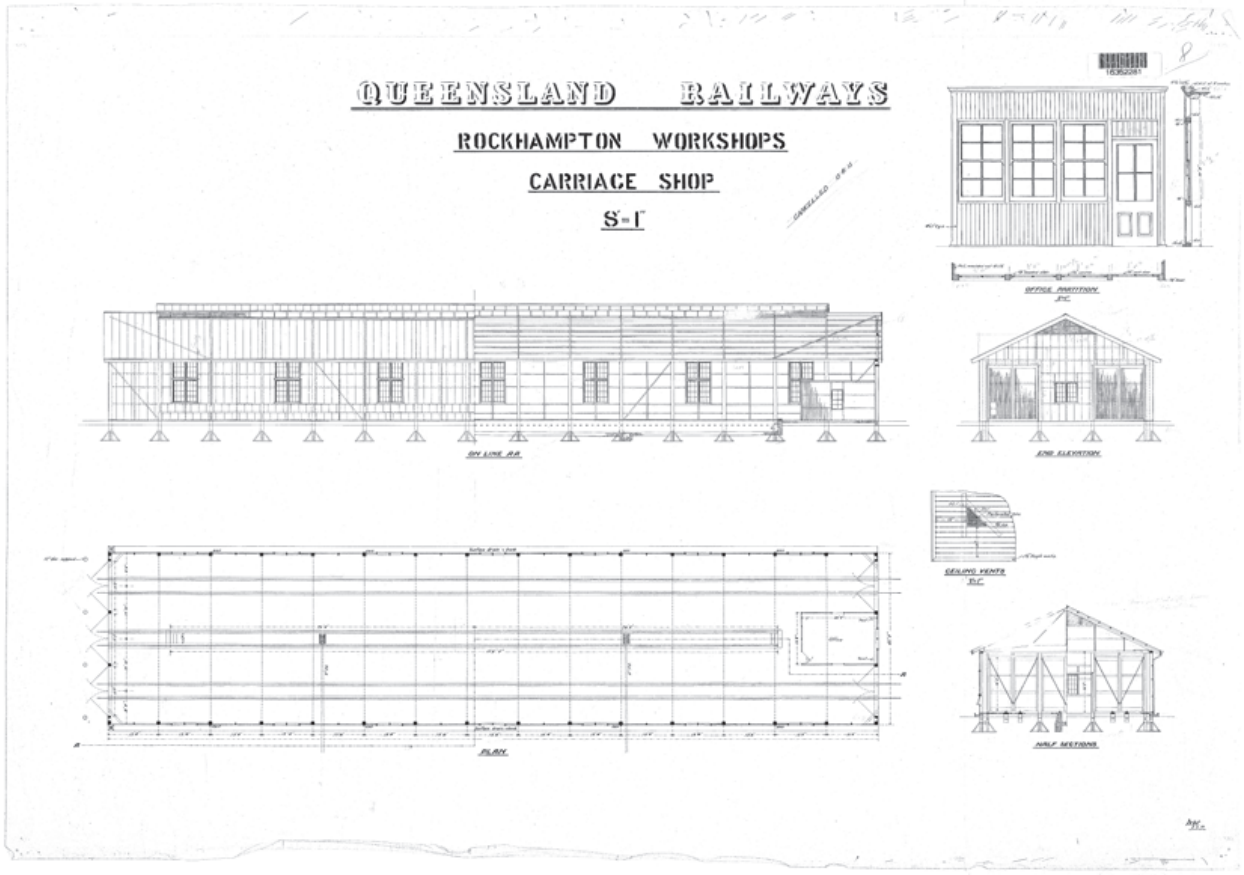
History — Built as a machine shop around 1921. The south-western end of the building was demolished to make a car park in the 2000s, leaving the Bolsover Street façade and four bays standing. The present heritage register boundary, after the 2002 reduction, excludes the car park but includes the four bays of the building that are still standing.

Fabric — A large gable-roofed clear-span shed clad with corrugated galvanised iron. The walls have rolled steel columns and rails. The iron roof sheeting is supported by riveted steel roof trusses and timber purlins. The shed is open at the back, facing the car park, and the sheeting has been removed from the south east side wall. The building is used as a shelter for vehicles. The steel roof trusses are rusty.

Significance — **Some** historical significance because the remaining section of the building demonstrates the provision of a large machine shop, an important functional element of the workshops in the time of steam. It also contributes to the visual character of the site as seen from the street.

Significant fabric — Front wall with its framing and corrugated galvanised iron sheeting and timber doors and windows; remaining roof with riveted steel trusses, purlins and sheeting; remaining side walls.

Conservation — **Preserve** the fabric of the building in its current location. **Maintain** the significant fabric and **repair** the rusted structure. **Adapt** the building to facilitate compatible uses.


QUEENSLAND RAILWAYS
ROCKHAMPTON WORKSHOPS
CARRIAGE SHOP
S-1
OFFICE PARTITION
SIDE ELEVATION
END ELEVATION
GEILING VENTS
PLAN
HALF SECTIONS

Machine shop

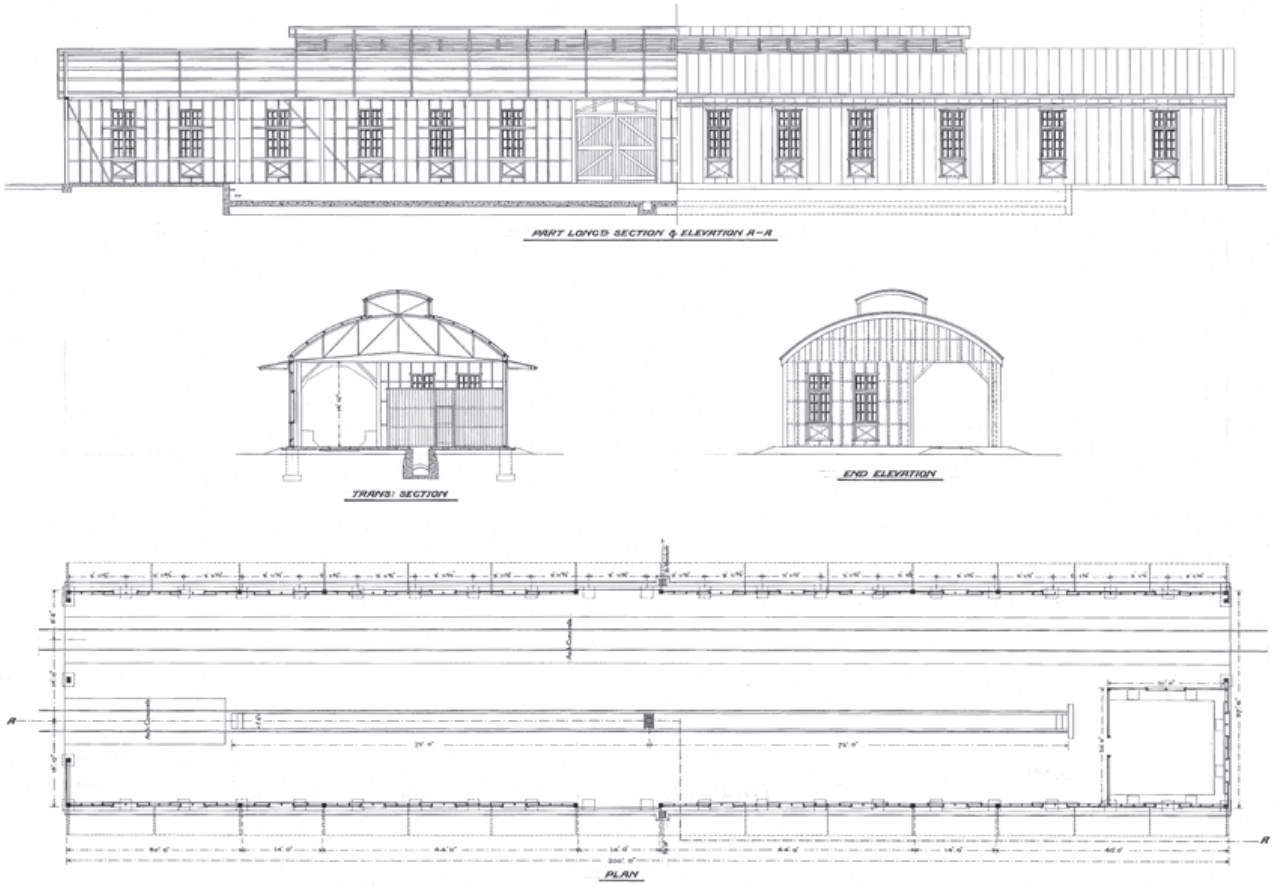
History — Built around 1913 as a carriage shop, where carriages were repaired and serviced. Extensively refurbished and adapted in the 2000s for use as a machine shop.

Fabric — A long gable-roofed clear-span shed clad with modern colorbond steel sheeting. The main remnants from the original construction are the rolled steel columns and the riveted steel roof trusses. The roof purlins and sheeting are recent, as are the wall girts, sheeting and louvred vents. There is a modern concrete floor, and an independent structure of steel columns, rails and travelling gantry cranes inside the old structure.

Significance — **Some** historical significance because its external form and the remaining parts of the early structure demonstrate the provision of carriage repair facilities.

Significant fabric — Rolled steel columns; riveted steel roof trusses. (Not significant: everything else).

Conservation — **Preserve** the general form of the building in its current location, and the original columns and trusses. **Maintain** the significant fabric. Continue to **adapt** the building to facilitate compatible uses.


PART LONG. SECTION & ELEVATION A-A
TRANS. SECTION
END ELEVATION
PLAN

Building maintenance shop

History —Around 1913 this building was dismantled from its previous site at Broadmount wharf and re-erected at Rockhampton as a paint shop, equipped for sheltering carriages and wagons while they were painted. In the 2000s it was extensively refurbished for use as a building maintenance shop.

Fabric — A long gable-roofed clear-span shed clad with modern colorbond steel sheeting. The main remnants from the original construction are the timber wall framework and the barrel-vaulted riveted steel roof trusses and lantern vent. The roof purlins and sheeting are recent, as are the wall girts, sheeting and louvred vents. There is a modern concrete floor, and an independent bracing structure of steel columns, beams and plates inside the old structure.

Significance — **Some** historical significance because its external form and the remaining parts of the early structure demonstrate the provision of carriage repair facilities, and because the structure demonstrates the practice of moving buildings.

Significant fabric — Remaining timber wall framing; riveted iron roof trusses and lantern vent. (Not significant: Wall sheeting; roof sheeting; concrete floor; internal steel bracing structure).

Conservation — **Preserve** the general form of the building in its current location, and the original roof and wall framing elements. **Maintain** the significant fabric. Continue to **adapt** the building to facilitate compatible uses.

APPENDIX

GLOSSARY OF HERITAGE CONSERVATION TERMS

The *Burra Charter*, from its first version adopted in 1979, defined a set of terms that have since been widely adopted in Australian heritage conservation practice. Where the following terms are used in this heritage management plan, the particular meanings defined in the charter are intended. The definitions are quoted from Article 1 of the charter.[11]

Adaptation means modifying a *place* to suit the existing *use* or a proposed use.

Associations mean the special connections that exist between people and a *place*.

Compatible use means a *use* which respects the *cultural significance* of a *place*. Such a use involves no, or minimal, impact on cultural significance.

Conservation means all the processes of looking after a *place* so as to retain its *cultural significance*.

Cultural significance means aesthetic, historic, scientific, social or spiritual value for past, present or future generations. Cultural significance is embodied in the *place* itself, its *fabric*, *setting*, *use*, *associations*, *meanings*, records, *related places* and *related objects*. Places may have a range of values for different individuals or groups.

Fabric means all the physical material of the *place* including components, fixtures, contents, and objects.

Interpretation means all the ways of presenting the *cultural significance* of a *place*.

Maintenance means the continuous protective care of a *place*, and its *setting*. Maintenance is to be distinguished from repair which involves *restoration* or *reconstruction*.

Meanings denote what a *place* signifies, indicates, evokes or expresses to people.

Place means a geographically defined area. It may include elements, objects, spaces and views. Place may have tangible and intaWWngible dimensions.

Preservation means maintaining a *place* in its existing state and retarding deterioration.

Reconstruction means returning a *place* to a known earlier state and is distinguished from *restoration* by the introduction of new material..

Related object means an object that contributes to the *cultural significance* of a *place* but is not at the place.

Related place means a *place* that contributes to the *cultural significance* of another place.

Restoration means returning a *place* to a known earlier state by removing accretions or by reassembling existing elements without the introduction of new material.

Setting means the immediate and extended environment of a *place* that is part of or contributes to its *cultural significance* and distinctive character.

Use means the functions of a *place*, including the activities and traditional and customary practices that may occur at the place or are dependent on the place.

These items should be included in the schedule of periodic checks and preventive maintenance for buildings in the heritage place.

Six monthly

Check that **roof gutters and sheeting** are sound and not obstructed; clear leaves and debris, replace loose fastenings.

Yearly

Check that **windows and doors** are sound, weather tight and operating correctly; replace broken glass, fix or adjust hardware.

Check rainwater **downpipes and drains**; clear blockages as necessary.

Check timber buildings for evidence of **termites**; treat any infestation and repair damage.

Five yearly

Check condition of **paint** on exterior timber; prepare and repaint if necessary.

NOTES

1 Petition in *Queensland Votes and Proceedings* (1863), 599–600; for a general history see John Kerr, *Triumph of Narrow Gauge: a History of Queensland Railways* (Brisbane: Boolarong, 1990), 23–27, 32–35.

2 J W Knowles, 'The Centenary of the Central Line,' *Australian Railway Historical Society Bulletin* (1967):201f.

3 Phone conversation with Mr Lionel Latchford, facilities supervisor, Queensland Rail, Rockhampton, 28 February 1992.

4 The Royal Australian Institute of Architects recognised the round-house project with the National President's Award for Recycled Buildings in 1994, as well as State and Regional awards. The National Trust of Queensland made the John Herbert Award to the project.

5 *Rockhampton Bulletin*, 8 August 1874.

6 Heritage register entry for place 600783, online at https://heritage-register.ehp.qld.gov.au/placeDetail.html?siteId=15558

7 'Why conserve,' in the preamble to Australian National Committee of ICOMOS, *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance, 2013* (Burwood: Australia ICOMOS, 2013).

8 *Queensland Heritage Act 1992*, §68.

9 *Queensland Heritage Act 1992*, §72.

10 *Burra Charter*, article 27.2 (Managing change) and article 32 (Records).

11 *Burra Charter, 2013*.