Appendix G

ACCESS ASSESSMENT (LINDSAY PERRY ACCESS)

lindsay perry access

Access Report

Carrington Hydraulic Engine House Stage 3 Engine Room Remediation

106 Bourke Street
CARRINGTON NSW

For: EJE Architecture
Ref: LP_21281

Executive Summary

Architectural documentation for the Carrington Hydraulic Engine House – Stage 3 Engine Room Remediation located at 106 Bourke Street Carrington, has been reviewed against current accessibility legislation.

The following table summarises our findings.

Item No.	Description	Compliance Status
New Work & The Affected Part		
4.	New Work & The Affected Part	Complaint
Access and Approach		
5.1	Allotment Boundary to Entrance	Complaint
5.2	Accessible Ramp	Complaint Configuration
Interior		
6.1	Accessible Entrance	Complaint Configuration
6.2	Extent of Access Generally	Complaint
6.3	Circulation Areas	Complaint
6.4	Accessible Ramp	Complaint Configuration
6.5	Stairs	Complaint Configuration
6.6	Slip Resistance (Ramps & Stairs)	To be addressed during construction
6.7	Floor Finishes	To be addressed during construction

We consider that the drawings presented for assessment, for the purposes of a development application, generally comply with current statutory requirements.

LINDSAY PERRY
Access Consultant (ACAA Accreditation No. 136)
Certificate IV in Access Consulting
Internationally Certified Access Consultant ICAC BE-02-106-18
Registered Architect NSW 7021
Livable Housing Assessor 20047 | NDIS SDA Assessor SDA00049

Document Control

This report has been prepared based on the documentation available and time allocated to conduct the review. All reasonable attempts have been made to identify key compliance matters. Best practice options, as noted in the report, are not mandatory but will minimise the risk of a complaint made under the DDA.

Revision Summary:

prepared by:		
Lindsay Perry	Revision 1	22 October 2021

Contact Details:

Lindsay Perry Access Pty Ltd
Suite 8, 15 Alma Road (PO Box 453)
NEW LAMBTON NSW 2305

lindsay@lpaccess.com.au
0418 909 180

Copyright:

Clarifications:

This report is limited to items within drawings listed in this report only.

Construction is to be in accordance with the recommendations made in this access report to ensure compliance.

Any dimensions quoted throughout this report and within Australian Standards are CLEAR dimensions, not structural. This needs to be considered during construction to account for wall linings and the like.

The recommendations throughout this report reflect the professional opinion and interpretation of Lindsay Perry Access Pty Ltd. This may differ from that of other consultants.

1 Project Background

The project is a heritage restoration within the 1877 Carrington Hydraulic Engine House building, a state heritage listed building. This stage of works (Stage 3) applies to the main engine room, where a new floating floor slab across the top of the existing floor grates and large engine buttresses is being introduced to seal off the sub-floor cavity which presents an active asbestos hazard.

Figure 1 | Existing Building

2 Reviewed Documentation

Documentation prepared by EJE Architecture has been reviewed as follows:

dwg no.	drawing name	revision
A000	Cover Sheet & Site Plan	A
A101	Sub Floor – Existing / Demolition Plan	A
A102	Ground Floor – Existing / Demolition Plan	A
A111	Sub Floor – Proposed Plan	A
A112	Ground Floor – Proposed Plan	A
A113	Roof - Proposed Plan	A
A202	Ground Floor – Slab Setout Plan	A
A501	South & West Elevations Existing	A
A511	South & West Elevations Proposed	A
A551	Sections Existing	A
A561	Sections Proposed	A
A801	Engine Room Internal Elevations Existing	A
A802	Gen Room Internal Elevations Existing	A
A811	Engine Room Internal Elevations Proposed	A
A814	Gen Room Internal Elevations Proposed	A
A901	Construction Details	A

3 Legislation

Access assessment has been made against Access Legislation including:

- The Commonwealth Disability Discrimination Act 1992 (DDA)
- Disability (Access to Premises (Buildings)) Standards 2010
- Access Code for Buildings 2010
- The National Construction Code Building Code of Australia Volume 1 2019, Amendment 1 (BCA)
  - Section D2.14 / D2.15 / D2.17 – landings, thresholds and slip resistance
  - Section D3 – Access for People with Disabilities
- Australian Standard AS1428.1 (2009) Amendment 1 & 2, – Design for Access and Mobility
- Australian Standard AS1428.4.1 (2009) Amendment 1 – Design for Access and Mobility: Means to assist the orientation of people with vision impairment – Tactile ground surface indicators

A summary of the requirements of relevant legislation follows.

The Disability Discrimination Act 1992

The DDA requires independent, equitable, dignified access to all parts of the building for all building users regardless of disability. The DDA makes it unlawful to discriminate against a person on the grounds of disability.

The Disability (Access to Premises) Standards

The Disability (Access to Premises - buildings) Standards 2010 (the Premises Standards) commenced on 1 May 2011. Any application for a building approval for a new building or upgrade of an existing building on or after that date triggers the application of the Premises Standards.
The Premises Standards include an **Access Code** written in the same style as the Building Code of Australia.

The National Construction Code / Building Code of Australia (Volume 1)

The Building Code of Australia (BCA) is contained within the National Construction Code (NCC) and provides the minimum necessary requirements for safety, health, amenity and sustainability in the design and construction of new buildings (and new building work in existing buildings) throughout Australia. The BCA is a performance-based code.

The BCA for Class 5 & 6 buildings requires access for people with disabilities to and within all areas normally used by the occupants.

AS1428 – Design for Access and Mobility

- Australian Standard AS1428.1 (2009) Amendment 1 & 2, – Design for Access and Mobility contains access requirements that are mandatory for the provision of access for persons with a disability and is referred by BCA
- Australian Standard AS1428.4.1 (2009) Amendment 1 – Design for Access and Mobility: Means to assist the orientation of people with vision impairment – Tactile ground surface indicators

4 New Work and The Affected Part

When considering access for people with disabilities within an existing building that is to be altered, the Disability (Access to Premises) Standards 2010 “new work” and “affected part” provisions need consideration.

The Disability (Access to Premises – Buildings) Standards apply to **...a new part, and any affected part, of a building,** to the extent that the part of the building is...a Class 3, 5, 6, 7, 8, 9 or 10 building (Clause 2.1).

New work is defined as follows (Clause 2.1 (4)):

- An extension to the building or a modified part of the building.

An **affected part** is defined as follows (Clause 2.1 (5)):

- The principle pedestrian entrance of an existing building that contains a new part; and
- Any part of an existing building, that contains a new part, that is necessary to provide a continuous accessible path of travel from the entrance to the new part.

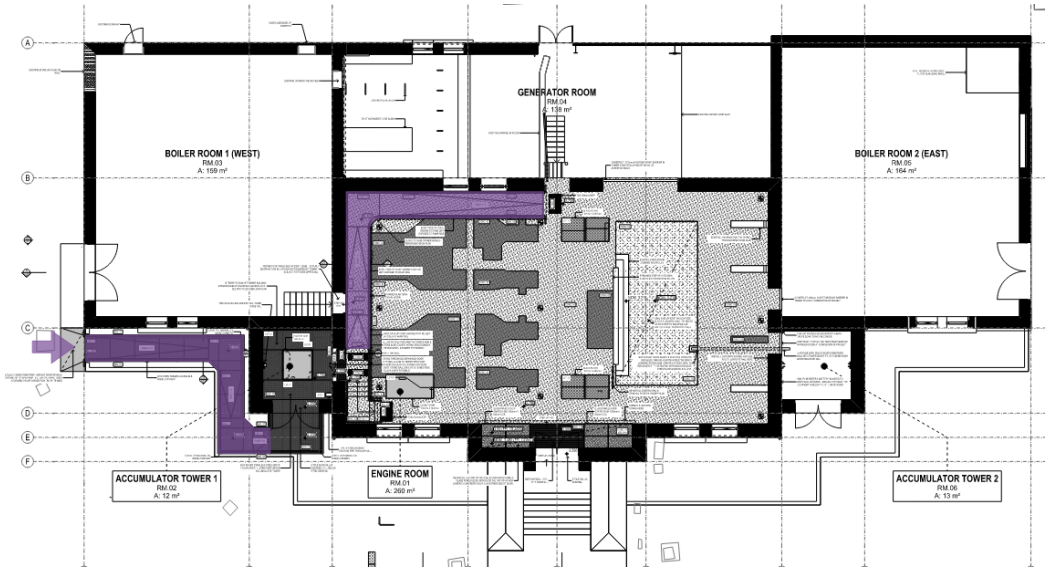

Figure 1 | The New Work & Affected Part

In this instance, the **new work** is the provision of the new floor slab and associated raps and stairs. The **affected part** is the path of travel from the accessible entrance to these areas.

Compliance Summary:

Complaint

Commentary:

Accessible ramps have been provided within the proposed works to achieve an accessible path of travel from the entry doorway to the new works which is essentially the Engine Room.

Clarifications:
The Guidelines in the Application of the Premises Standards Version 2, February 2013
(Clause A.7) states:

The Premises Standards introduce a new concept referred to as the 'affected part' of an existing building. The introduction of this defined area reflects the desire to improve general accessibility of existing buildings over time where full upgrades of a building are not taking place.

The requirement for upgrading of the 'affected part' of buildings recognises that there is little value in improving access in new parts of existing buildings if people with disability cannot get to those new parts.

Affected part means the path of travel between (and including) the principal pedestrian entrance of an existing building to the 'new part' or modified part of the building. This path of travel must provide a continuous accessible path of travel (see 'Accessway' as defined in A1.1 of the Access Code) from the principal pedestrian entrance to the new part or modified part of the building.

The definition of 'affected part' of a building is limited to the area between (and including) the principal pedestrian entrance and the new work but does not extend from the entrance to the allotment boundary or any required carparking spaces.

Note on extent of Principal Pedestrian Entrance:
The Guidelines in the Application of the Premises Standards Version 2, February 2013 (Clause A.7) advise the following:

Where new works on an existing building trigger the 'affected part' upgrade a continuous accessible path of travel is only required from the principal pedestrian entrance to the area of the new work. This does not extend to the allotment boundary. Where an access barrier, such as a step, is located at the threshold of a principal pedestrian entrance the 'affected part' upgrade would require the removal of the step.

Where an existing building (of the classes covered by the Premises Standards) is undergoing extension or modification that requires a building approval (a new part) it would be unlawful for that extension or modification to not comply with the Premises Standards. It would also be unlawful to fail to provide an accessible path of travel from the principal pedestrian entrance to the 'new part' of the building.

5 Access and Approach

The approach to the building needs to be considered when considering access for persons with a disability. The BCA has three requirements for the approach to the building for persons with a disability.

An accessible path of travel is required to the building entrance from the allotment boundary at the main points of pedestrian entry, from accessible carparking areas and from any adjacent and associated accessible building.

In this instance, the approach to the building has been considered as follows:

- from the allotment boundary at the pedestrian entrance along Cowper Street North to the accessible building entrance.

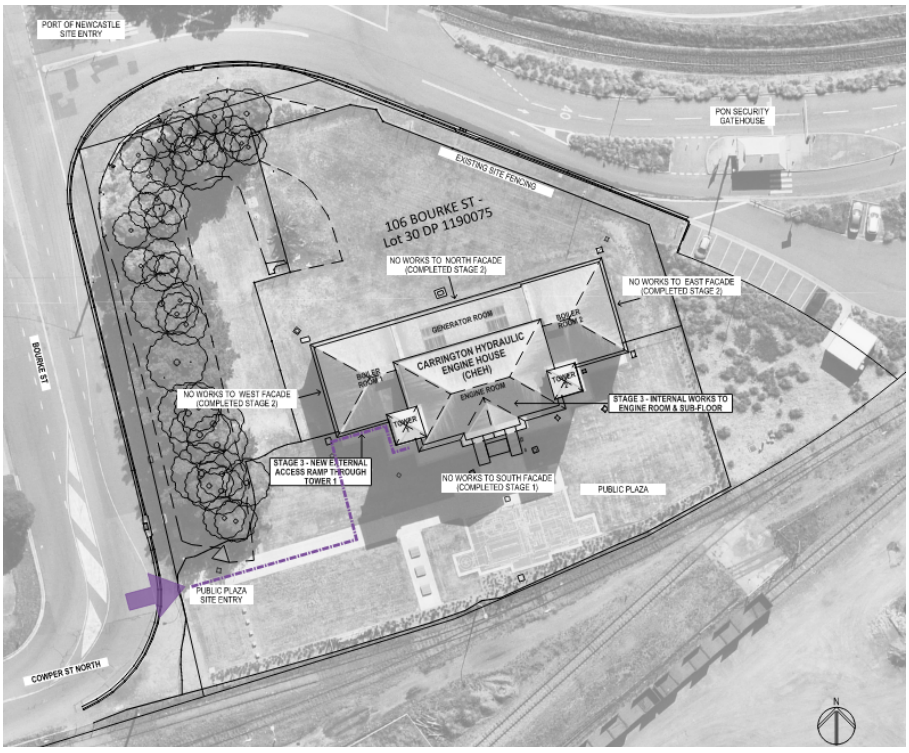

Figure 2 | Overall Site Plan

5.1 Approach from Allotment Boundary

The BCA requires that a continuous accessible path of travel be provided from the allotment boundary at the main points of pedestrian entry to the main entrance.

Compliance Summary:

Complaint

Commentary:

A new accessible ramp is provided as a part of the approach to the accessible building entrance.

5.2 Accessible Ramp

An accessible ramp forms a part of the accessible path of travel to the building from Cowper Street North.

Compliance Summary:

Compliant | To be confirmed | Not yet Compliant

Commentary:

The accessible ramp is provided in three sections with a 90° change in direction between each section. The overall configuration meets current accessibility requirements – the nominated gradient is 1:14; the clear width of the ramp exceeds 1000mm between handrails; handrails with extensions are provided to both sides; landing offers complying wheelchair turning areas.

The provision of tactile indicators to this ramp is subject to further design as noted in the documentation.

Accessibility Requirements:

Access requirements for the accessible ramp are as follows.

a. Ramp to comply with AS1428.1, Clause 10.3. Maximum allowable gradient of the ramp is 1:14, minimum clear width to be 1000mm and maximum length between landings to be 9m (for 1:14 gradient).

b. Accessible ramp is to have a maximum rise of 3.6m (BCA Clause 3.11).

c. The ramp is required to be set back a minimum 900mm from the property boundary (AS1428.1, Clause 10.3 (f)). This allows tactile indicators and handrail extensions to occur within the boundary and not protrude into the footpath area.

d. Provide handrails, with extensions, to both sides of the ramp to comply with AS1428.1, Clause 12. Handrails to have an external diameter between 30-50mm to assist persons with a manual disability such as arthritis. Handrails are required on both sides of the ramp to cater for left and right-handed disabilities.

e. Where ramp is not enclosed, provide kerb rails in accordance with AS1428.1. The height of kerb rails is to be less than 65mm or greater than 150mm above the finished surface level. This is to ensure that the foot plate of a wheelchair cannot become lodged on the kerb rail.

f. Provide tactile indicators at the top and bottom of the ramps to comply with BCA Clause D3.8 and AS1428.4. Tactile indicators to be detectable, durable, non-slip and have a minimum 30% luminance contrast to the background colour. For discrete tactile indicators, 45% luminance contrast is required (60% where two-tone indicators are used).

6 Interior

The interior of the building is primarily the engine Room that provides an open space. An entry vestibule (existing condition) is provided. A new ramp and stair provide access between the entry vestibule and the Engine Room that is an open shell.

6.1 Accessible Entrance

In a building required to be accessible, an accessway must be provided through the principal pedestrian entrance, and not less than 50% of all pedestrian entrances including the principal pedestrian entrance.

Compliance Summary:

Compliant

Commentary:

The existing double doors provide adequate clear opening width and a level threshold.

Accessibility Requirements:

The following access requirements apply to the entrance.

a. Entrance to comply with AS1428.1(2009), Clause 13 as part of the accessible path of travel.

b. Doors are to have a minimum clear opening width of 850mm to comply AS1428.1(2009), Clause 13.2 as part of the accessible path of travel. Where double door sets are provided, one door leaf is to be capable of being held in the closed position to provide door opening widths and circulation to comply with AS 1428.1.

c. Entrance doorways to have complying circulation areas as illustrated in AS1428.1(2009), Figure 31. Circulation areas to have a maximum crossfall of 1:40.

d. Doorways to have minimum 30% luminance contrast as described in AS1428.1(2009), Clause 13.1.

e. Door threshold to be level to provide seamless entry as part of the accessible path of travel. Maximum allowable construction tolerance is 3mm for compliance with AS1428.1(2009), 5mm where beveled edges are provided between surfaces.

f. Door to have hardware within the accessible height range of 900-1100mm above the finished floor level (AS1428.1(2009), Clause 13.5)

6.2 Extent of Access Generally – BCA

Access for people with disabilities is required to and within all areas normally used by the occupants.

Compliance Summary:

Compliant

6.3 Circulation Areas

BCA (Clause D3.3) requires the provision of turning spaces and passing areas to corridors to enable wheelchair circulation throughout a building.

Turning spaces 1540mm wide by 2070mm long are required within 2m of the end of corridors to enable a wheelchair to turn through 90° and passing areas 1800mm wide by 2000mm long are required every 20m along a corridor unless there is a clear line of sight.

Within corridor areas, 1500x1500mm is required to facilitate a 90° turn by a wheelchair. This must be accommodated within accessible areas.

Compliance Summary:

Compliant

6.4 Accessible Ramp

AS1428.1 defines an accessible ramp as having a gradient between 1:19 and 1:14

Compliance Summary:

Compliant configuration

Commentary:

The accessible ramp is provided in two sections with a 90° change in direction between each section. The overall configuration meets current accessibility requirements – the nominated gradient is 1:14; the clear width of the ramp exceeds 1000mm between handrails; handrails with extensions are provided to both sides; landing offers complying wheelchair turning areas; tactile indicators are provided top and bottom.

Accessibility Requirements:

Access requirements for the ramps are as follows.

a. Ramp to comply with AS1428.1, Clause 10.3.

b. Maximum allowable gradient of the ramp is 1:14, minimum clear width to be 1000mm and maximum length between landings to be 9m (for 1:14 gradient).

c. Where the ramp intersects with an internal corridor, the ramp shall be set back in accordance with AS1428.1 Figure 16 to allow adequate space for handrail extensions and tactile indicators.

d. Provide handrails, with extensions, to both sides of the ramp to comply with AS1428.1, Clause 12. Handrails to have an external diameter between 30-50mm to assist persons with a manual disability such as arthritis. Handrails are required on both sides of the ramp to cater for left and right handed disabilities.

e. Where ramp is not enclosed, provide kerb rails in accordance with AS1428.1. The height of kerb rails is to be less than 65mm or greater than 150mm above the finished surface level. This is to ensure that the foot plate of a wheelchair cannot become lodged on the kerb rail.

f. Provide tactile indicators at the top and bottom of the ramps to comply with BCA Clause D3.8 and AS1428.4.1. Tactile indicators to be detectable, durable, non-slip and have a minimum 30% luminance contrast to the background colour.

   Tactile indicators are not required at mid-landings where the handrails are continuous.

6.5 Stairs

AS1428.1 has access requirements for all stairs other than fire isolated egress stairs and is applicable in this instance.

Compliance Summary:

Compliant configuration

Commentary:

Stairs are provided in association with the accessible ramp for access between the entry vestibule and the main floor level. Handrails with extensions are provided to both sides of the stair and tactile indicators are shown at the top and bottom of the stair. Ensure that contrasting non-slip nosing strips are provided to stair treads.

Accessibility Requirements:

Access requirements for public access stairs are as follows.

a. Stair construction to comply with AS1428.1, Clause 11.1.

b. Stairs to have closed or opaque risers. Open risers cause confusion for persons with a vision impairment and may trigger conditions such as epilepsy due to light penetrating through the open risers.

c. Where the stair intersects with an internal corridor, the stair shall be set back in accordance with AS1428.1 Figure 26C/D to allow adequate space for handrail extensions and tactile indicators.

d. Provide handrails, with extensions, to both sides of the stair (AS1428.1, Clause 11.2). Handrails to have an external diameter between 30-50mm to assist persons with a manual disability such as arthritis. Handrails should be continuous around the landings where possible.

   Handrails are required on both sides of the stair to cater for left and right-handed disabilities. A central handrail is also an acceptable solution where adequate width is available.

e. Stair nosings to have minimum 30% luminance contrast strip 50-75mm wide to the top of the stair tread to assist persons with a vision impairment. The strip can be set back 15mm from the edge of the riser.

f. Stair nosings shall not project beyond the face of the riser.

g. Provide tactile indicators at the top and bottom of the stair to comply with BCA Clause D3.8 and AS1428.4.1.

   Tactile indicators to be detectable, durable, non-slip and have a minimum 30% luminance contrast to the background colour. For discrete tactile indicators, 45% luminance contrast is required (60% where two-tone indicators are used).

6.6 Slip Resistance (Stairs and Ramps)

The BCA defines the following slip resistance requirements for stairs and ramps:

Application	Surface Conditions	
	Dry	Wet
Ramp steeper than 1:14	P4 or R11	P5 or R12
Ramp steeper than 1:20 but not steeper than 1:14	P3 or R10	P4 or R11
Tread or Landing surface	P3 or R10	P4 or R11
Nosing or landing edge strip	P3	P4

Compliance Summary:

To be addressed during construction

6.7 Floor Finishes

All floor finishes are to be flush to provide an accessible path of travel throughout the different areas of the building. Maximum allowable construction tolerance is 3mm (5mm for bevelled edges) as part of the accessible path of travel. Refer to AS1428.1(2009), Clause 7.2 for further details.

Compliance Summary:

To be addressed during construction – seamless transition is achievable.

7 Conclusion

This report demonstrates that the fundamental aims of accessibility legislation are achievable within the Carrington Hydraulic Engine House – Stage 3 Engine Room Remediation located at 106 Bourke Street Carrington. Spatial planning and general arrangements of facilities will offer inclusion for all building users.

Disability is often defined as any limitation, restriction or impairment which restricts everyday activities and has lasted or is likely to last for at least 6 months. Disabilities can be very varied. They can be physical, cognitive, intellectual, mental, sensory, or developmental. They can be present at birth or can occur during a person's lifetime. They can also be permanent or temporary. In Australia, almost one in five people – 4.3 million – have a disability with one in three having severe or profound core activity limitation.

Equity and dignity are important aspects in the provision of access to buildings for all users. With respect to people with a disability, equity and dignity are sometimes overlooked in the construction of new buildings or refurbishment works. The design approach needs to maintain a high level of equity for people with disabilities and meet the performance requirements of the BCA. The performance requirements adopt two main concepts in the provision of access for people with a disability being to the degree necessary and safe movement. Both of these concepts need to be achieved within the context of equitable and dignified access.

In this respect, a wide range of disabilities needs consideration and a compromise reached between requirements of different disability groups. Measures need to be implemented to ensure inclusion of all users, not a particular disability group in isolation.