STATEMENT OF ENVIROMENTAL EFFECTS

PROPOSED STAGE 3 RESTORATION WORKS TO CARRINGTON HYDRAULIC ENGINE HOUSE

PORT OF NEWCASTLE APRIL 2022



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Document Control Sheet

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В	Amended Draft	12/04/2022	LD	ZS (DW EJE) & (JA PoN)
С	Final	14/04/2022	LD	ZS

Limitations Statement

This report has been prepared in accordance with and for the purposes outlined in the scope of services agreed between ADW Johnson Pty Ltd and the Client. It has been prepared based on the information supplied by the Client, as well as investigation undertaken by ADW Johnson and the sub-consultants engaged by the Client for the project.

Unless otherwise specified in this report, information and advice received from external parties during the course of this project was not independently verified. However, any such information was, in our opinion, deemed to be current and relevant prior to its use. Whilst all reasonable skill, diligence and care have been taken to provide accurate information and appropriate recommendations, it is not warranted or guaranteed and no responsibility or liability for any information, opinion or commentary contained herein or for any consequences of its use will be accepted by ADW Johnson or by any person involved in the preparation of this assessment and report.

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1.0 Introduction

1.1 INTRODUCTION

ADW Johnson Pty Ltd has been commissioned by Port of Newcastle Operations Pty Limited as trustee for the Port of Newcastle Unit Trust ABN 97 539 122 070 (Port of Newcastle (PoN)) c/- EJE Architecture (EJE) to prepare a Development Application (DA) and accompanying Statement of Environmental Effects (SOEE) for the proposed Stage 3 Restoration Works to the Carrington Hydraulic Engine House (CHEH) at 106 Bourke Street, Carrington (Lot 30 DP 1190075 & Lot 219 DP 1195310). The estimated cost of the works is \$1,500,000.

1.2 DEVELOPMENT APPLICATION DETAILS

STATEMENT OF ENVIRONMENTAL EFFECTS PREPARED BY:		
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Contact:	Zac Smurthwaite – Senior Town Planner Ph: (02) 4978 5100 Fax: (02) 4978 5199 Email: <u>zacs@adwjohnson.com.au</u> Website: <u>www.adwjohnson.com.au</u>	
PROJECT DETAILS:		
Applicant Name:	Port of Newcastle	
Applicant Address:	Level 4, 251 Wharf Road, Newcastle NSW 2300	
Property Description:	Lot 30 DP 1190075 & Lot 219 DP 1195310 106 Bourke Street, Carrington	
Project Description:	Proposed Stage 3 Restoration Works	
PROJECT TEAM:		
Project Manager: EJE Architecture		
Town Planner:	ADW Johnson	
Architect:	EJE Architecture	
Heritage:	EJE Heritage	
Geotechnical:	RCA Australia	
BCA:	EJE Heritage	
Hygienist:	Verico	
Access:	Lindsay Perry Access	



1.3 BACKGROUND & BRIEF OVERVIEW OF THE PROPOSED DEVELOPMENT

Constructed in 1877-78, the Carrington Hydraulic Engine House is a face brick and sandstone structure built originally to house hydraulic engines and machinery used to operate cranes on the adjacent wharfs. The building is monumental in stature, effectively three stories in height although only encompassing a single void internally.

The CHEH site (being Lot 30 DP 1190075 & Lot 219 DP 1195310) is owned by NSW Treasury through a holding company named Port of Newcastle Lessor Pty Ltd (Port Lessor). Port Lessor has granted a 98-year lease of its land around the shipping port, including the Engine House to the Port of Newcastle (PoN). PoN is responsible for its day-to-day operations and management as is the Proponent of the development at the Carrington Engine House building.

The history of the previous uses of the buildings on the site are contained within the Statement of Heritage Impact (SoHI) included as **Appendix C** to this report. The CHEH is currently vacant and the main Engine Room sealed off from human access due to an asbestos hazard present within this room. The public plaza is open and in use for casual public visitors.

The condition of the exterior facades and accumulator towers is good, having been the subject of two conservation projects during 2018-2019 and 2021-2021. These projects are summarised as follows:

- A large-scale masonry conservation, repair and reconstruction works package was undertaken to the south façade and accumulator towers in 2018-2020, along with the creation of a public plaza to the south side of the building. Work included masonry conservation, repair and reconstruction, reconstruction of the accumulator tower roofs and upper brickwork, reconstruction to original details of boiler room windows, removal of termite damaged beams to accumulator towers, plant growth removal and limited cleaning of the facade, repointing, stone repair and addition of lead cappings to the pediment, some cornices and stone details. Underpinning of the north-east corner of the building was also undertaken in 2019 to resolve localised settlement in this area.
- In 2020, the Port of Newcastle undertook extensive asbestos removal works internally, with all parts of the building now clear of asbestos hazard, except for the main engine room. The engine room has been cleaned of asbestos from the ceiling down to the level of the floor grates, but with remnant asbestos material present in the openings of the floor grates and embedded within the sub-floor cavity fabric itself.
- In early 2021, masonry conservation works to the north, east and west facades began, aiming to make the shell of the building weathertight and vermin proof so that future stages of conservation work can be completed on the internal spaces. The project included reconstruction of the north generator room window to original details, repointing, stone repair and replacement, addition of lead cappings, lead paint removal and general masonry cleaning. Repair of termite damage to western boiler room roof timbers has also been undertaken, with further termite treatment planned. Other works include protective paint treatment to the existing structural steel in the non-original north side opening, and construction of a lightweight CFC clad infill wall with interpretive artwork to this north façade.



An asbestos hazard is currently present within the floor grates and sub-floor cavity floor surface of the main Engine Room of the building (refer **Figure 1** below), which prevents any human access to the space without appropriate PPE and decontamination procedures in place. Temporary seals are in place around all openings in this room. The building thus is unable to be used for any purpose while this hazard remains.



Figure 1: Photograph of Asbestos Hazard within Floor Grates.

An additional hazard is the poor structural integrity of the original steel floor framing in this room, with almost all columns supporting the cast-iron grates being corroded through more than 90% of their sectional area at their base (refer **Figure 2** below). The main Engine Room floor section is as such non-trafficable in its current condition, and at extreme risk of collapse with any movement or interventions in the space.



Figure 2: Photograph of Corroded Steel Columns.





The proposed restoration works are detailed in **Section 2.0** of this report, and comprise the encapsulation of the asbestos hazard underneath a floating concrete slab. The proposed concrete slab also vastly improves the useability and flexibility of the room for an adaptive re-use as it provides a safe, level and trafficable floor surface, which the extant building does not currently have. The proposal also includes the construction of an accessible entry ramp to the interior of the Engine Room and interpretive landscaping features on both the subject site and on Lot 219 DP 1195310.

1.4 PURPOSE OF THE REPORT

This Statement of Environmental Effects (SOEE) has been prepared pursuant to Clause 4.12(9) of the Environmental Planning and Assessment Act 1979 (EP&A Act) and accompanying Regulation. Its purpose is to:

- Describe the proposed development;
- Identify and summarise the relevant controls which guide assessment of the proposal;
- Provide information on the site and its context; and
- Review the key issues associated with the proposal to aid in assessment by the Consent Authority and other relevant authorities.

Consideration has been given to Council's guidelines in preparing this Statement of Environmental Effects as well as the full range of other relevant legislation and development guidelines.

1.5 CONSULTATION

PoN representatives attended a meeting with the Department of Planning, Industry & Environment (DPIE) on 13 December 2021 regarding the proposed Stage 3 Restoration Works. At this meeting, DPIE provided preliminary and high-level comments in relation to the proposal to assist PoN with the preparation of the subsequent DA. These comments are provided in **Table 1** below, which also provides a location within this report where the comments are addressed.

Table 1: DPIE Meeting Comments

DPIE COMMENTS	LOCATION OF RESPONSE
Contamination Report – A preliminary site investigation (PSI) in accordance with <i>State Environmental Planning Policy No. 55</i> – <i>Remediation of Land</i> (SEPP 55) must be submitted with the application. This report will identify the presence of any contamination, suitability for use and whether there are is a need for any remediation works. It would be prudent to undertake the investigations over the whole building to avoid any difficulties in ensuring the site is able to satisfy SEPP 55 requirements without impact to the proposed works or future uses. To this end, nominating a potential future land use in the PSI would assist the Department in its assessment of the proposal against SEPP 55.	Section 4.0, 5.3 & 5.4 and Appendix E and F of this report.
Geotechnical Report – This should include relevant soil testings to	Section 5.3 & 5.4 and
determine the soil composition and its suitability for	Appendix D and E of this
construction.	report.
Building Code of Australia (BCA) Report – A BCA report prepared by a suitably qualified person is required to determine whether the building and proposed works would meet the requirements of the BCA. This would be for not only the proposed access ramp	Section 5.5 of this report.



DPIE COMMENTS	LOCATION OF RESPONSE
to the building and structural works, but would also ensure that the building is suitable for potential uses in the future (or would identify the works that would be required prior to a future use commencing, including referring to clause 93 and/or clause 94 of the Environmental Planning and Assessment Regulation 2000 Assessment).	
Heritage Impact Assessment (HIA) – As the site is identified as a state significant heritage item approval from the NSW Heritage Council would be required (i.e. Integrated Development). A Heritage Impact Assessment, prepared by a suitably qualified person, is required to accompany the application. It may be warranted for the HIA to cover the potential re-use of the building to ensure. The Department would request details of any consultation that has occurred with Heritage NSW.	Section 5.2 and Appendix C of this report.
Supporting information from Hygienist – The Department would request information from the hygienist referred to in our meeting that demonstrates that encapsulating the floor would remove the hazard and be safe for human occupation.	Section 5.3 and Appendix F of this report.
Potential Re-Use – The Department would request a preliminary indication of the proposed future use of the building (subject to a future approval). This would assist in the Department ensuring that the works and assessment of this proposed development would not be in conflict with any potential future uses.	Section 2.3 and Appendix H and F of this report.



2.0 Proposed Development

2.1 OBJECTIVES OF THE PROPOSAL

The main objective of the proposal is to encapsulate the existing asbestos hazard within the main engine room of the CHEH and provide a new accessible entry ramp at the front entrance to the building. These works will provide the best possible chance for the CHEH to be adaptively repurposed in the future.

2.2 DESCRIPTION OF PROPOSED DEVELOPMENT

Following two previous stages of conservation works to the exterior of the building between 2018-2021. Port of Newcastle have been working with EJE Heritage and required specialist consultants to develop a strategy to remediate an asbestos hazard currently present within the main Engine Room of the building. An options matrix has been developed to describing the various methodologies investigated for remediation of the asbestos hazard, and detail the outcome of these investigations, which have led to the section of the option chosen for the proposed Stage 3 restoration works, a copy of this Options Analysis is provided within **Appendix H**.

The proposed development includes alterations and additions, including remediation to the former CHEH building, specifically the works will include:

- Engine room asbestos encapsulation;
- New accessible entry ramp; and
- Interpretive landscaping features.

Engine Room Asbestos Encapsulation

Through a rigorous options analysis process, the encapsulation of the asbestos hazard underneath a floating concrete slab has been selected as the best overall solution to the current issues the building faces (as opposed to removal of the asbestos material from the site entirely). The proposed slab also vastly improves the useability and flexibility of the room for adaptive re-use as it provides a safe, level and trafficable floor surface, which the extant building does not currently have.

The proposed scope of works of the asbestos encapsulation project within the engine room is thus generally described chronologically as follows:

- Site preparation works, including the installation of a decontamination unit (location to be confirmed by contractor), and the installation of propping to the corroded steel floor structure;
- Installation of fifteen (15) new cast concrete pad footings around the corroded base of all existing corroded steel floor columns as per structural engineer's documentation as permanent supports;
- Application of permanent clear PVA spray seal to all extant floor grates and sub-floor base in-situ to prevent spread of the asbestos contaminated dust during the works and provide a back-up encapsulation system to the hazard;
- Demolition and clean out within the sub-floor and existing floor structure to facilitate the new slab & services, including but not limited to:
 - Cleaning out light non-original debris;
 - Demolition/trimming down of existing steel columns, loose timber beams and wall plates, and some masonry fabric, where they would intersect with the new slab & ramps;





- Cast iron grates within entry door niche are carefully lifted where they intersect with the proposed slab. These are used to replace grates lost and/or broken across other parts of the floor;
- Raised concrete plinths to be grinded/trimmed down where they protrude above new floor slab; and
- Demolition of contemporary lightweight timber gangways across floor.
- Installation of new services to sub-floor cavity including:
 - Industrial LED feature lighting (to highlight view of cavity through new glass floor panels);
 - HEPA grade mechanical air exhaust system to sub-floor cavity;
 - Nine (9) "Floor Box" electrical outlets within the proposed floor slab, each with multiple conduits and draw wires allowing the provision for 240v power outlets, three-phase power outlets, data and comms cabling; and
 - Three (3) 100mm/110mm future services conduits running between an existing opening in the sunken floor section of the Engine Room, and the (non-contaminated) base of the eastern accumulator tower.
- Installation of a new 2kw Solar PV array, proposed to be located on the building's north roof at its east end. This solar system will semi-permanently power the mechanical ventilation system and sub-floor lights (as the building is not currently connected to mains power);
- A new semi-permanent main switch board, solar inverter and battery system are proposed to be wall mounted in the base of the eastern accumulator tower;
- Creation of an air-tight seal around the walls of the sub-floor cavity to ensure encapsulation of the asbestos hazard, sealing masonry openings with equivalent brick, sandstone or mortar, and sealing pipe openings with a permanent flexible mastic seal;
- Creation of two (2) new fully sealing and lockable maintenance access hatches to the sub-floor area within the two existing sub-floor air vents that are not to be occupied by the mechanical ventilation units;
- Creation of custom replica steel grilles to the hatches and the mechanical ventilation units based on design of original 1877 vent grilles;
- Installation of new 150mm concrete floor slab across engine room, air-sealed at all edges, supported on permanent formwork as per structural engineer's details. The floor slab is designed for future flexibility in uses. The slab includes three (3) trafficable glass viewing windows through to points of interest in the subfloor, all to be illuminated with feature lighting;
- Application of metallic penetrating stain finish to concrete floor in pattern to interpret the location of concrete engine buttress and masonry cross walls below the slab at 1:1 scale;
- Reinstatement of decontaminated floor grates to original position above slab in entry niche with a glass cover plate over; and
- Removal of decontamination unit and all temporary asbestos seals from the engine room.

New Accessible Entry Ramp

The proposed accessible entry ramp is to be constructed in tandem with the proposed new concrete slab in the engine room. The scope of works for the proposed ramp is described generally as follows:

• Clearing out of light (non-historic) debris from the base of the western accumulator tower;



- Removal of timber components of existing doorway between tower and engine room, and widening/lowering of the existing door opening within the original masonry wall to achieve accessible clearances required for compliant ramp. Bricks will be salvaged for re-use;
- Portion of extant accumulator guide rail where it conflicts with the new door will be cut out;
- Bottom edge of existing (non-original) timber door leaves will be trimmed approximately 40mm to accommodate new metal landing decking coming through doorway;
- Base of tower will be lined with geofabric, and filled with 200mm of industrial blue metal gravel;
- Visually interesting components of previous building fabric will be salvaged (under direction of Heritage Architect) from existing stockpile in eastern boiler room;
- Installation of new steel framed "Webforge" open metal deck landing within the full floorplate of the accumulator tower above the gravel and historic display. Feature LED lighting to be installed below the decking to highlight fabric interpretation on gravel below;
- The Accumulator Tower landing connects through the new enlarged door opening in the tower wall (with new sandstone still) to an integrated concrete ramp within the engine room floor slab; and
- Installation of compliant 1:14 grade accessible entry ramp to exterior of building, beginning in alignment with the western façade of the building and running parallel to the southern façade walls to turn and enter the western Accumulator Tower via its existing large hinged doors at the existing sill level.

Interpretive Landscaping Features

This application proposes new interpretive landscaping features in line with the concept proposals of the Interpretation Strategy for the ongoing promotion of the Carrington Hydraulic Engine House's historic significance in the community.

The proposed interpretive landscaping features include the following:

- Four (4) interpretation plaques on sandstone plinths at the site of the heritage listed "Hydraulic Crane Bases" (No. 7-10) on Lot 219 DP 1195310 (refer **Figure 3** below); and
- Stainless steel interpretive landscaping feature on low sandstone bench on the southern side of the forecourt of the CHEH.

These works proposed new interpretive landscaping features as part of the overall works are considered exempt development in accordance with Chapter 5, Section 5.24 and Schedule 10 of SEPP (Transport and Infrastructure) 2021 (addressed in **Section 4.0** of this report), however consideration has been given to them in any event to ensure a complete assessment of this application. Details of the interpretive landscape features are provided in the Development Plans in **Appendix B** and shown in **Figure 3** below:





Figure 3: Aerial Image of the CHEH Site and Crane Bases.

Crane Base Plaques

A specific request from Heritage NSW during the production of the Conservation Management Plan (CMP) and Interpretation Strategy was that devices be included related to the historic crane bases east of the building that are encompassed within its heritage listing. The proposed development includes four (4) low-level bronze plaques, mounted to reclaimed pieces of original sandstone from earlier stages of the CHEH works, which will identify the historic cranes bases and their year of construction. As the site of the crane bases is an internal area of the working port and not publicly accessible, the design of these plaques is intentionally simplified and without detailed historical information. The intent of their design is rather to mark the heritage status of the crane bases visually amongst the other working infrastructure of the port foreshore.



Stainless Steel Interpretive Feature

An element of the Interpretation Strategy identified a need for responders to look outward away from the building, and consider its historic connection to the man-made geography of the port, specifically The Dyke and its shipping berths, and the view across the harbour to the port city of Newcastle.

The proposed works include a low-level acid-etched stainless steel artwork sign, depicting a historic photograph of ships berthed at the Dyke, also mounted to reclaimed original sandstone.

The device is a simple addition to the existing building courtyard, but develops its interpretation potential with its orientation directing views away from the building rather than toward it, thus expanding the responder's interpretation of the historic context of the site.

Development plans have been prepared by EJE Architecture and are included as **Appendix B** of this document.

2.3 POTENTIAL FUTURE RE-USE

In preliminary correspondence, the Department has requested an indication of the Port of Newcastle's (PON) future plans for adaptive re-use of the building (subject to future approval) to assist in assessment of the current proposal as indicated in **Table 1** of this report.

During previous conservation and repair of the Carrington Hydraulic Engine House, conversations have occurred with a variety of parties enquiring about possibilities for potential adaptive re-use of the building. There is considerable community interest in seeing the structure inhabited.

The proponent does not want to prejudice the interest of any potential future tenants and associated land uses by proposing a land use at this stage. At present, there is no confirmed agreement with any potential tenant, and as such a specific re-use proposal cannot be defined. The completion of the works sought as part of this application will provide flexibility for any potential user (further to relevant agreements with PON) to make further applications for use of the building.

It is noted that in all potential uses postulated above, DA compliant access throughout the building, and removal of the asbestos hazard present in the Engine Room will be required.

Any future proposed land use will be subject to a separate development application.



2.4 DOCUMENTATION

The following documentation has been provided to support the proposed development and includes the following:

- Certificate of Title and Deposited Plan Appendix A
- Proposed Development Plans (EJE Architecture) Appendix B
- Statement of Heritage Impact (EJE Heritage) Appendix C
- Conservation Management Plan (EJE Heritage) Appendix D
- Geotechnical Assessment (RCA Australia) Appendix E
- Hygienist Advice (Verico) Appendix F
- Access Assessment (Lindsay Perry Access) Appendix G
- Options Analysis (EJE Heritage) Appendix H
- Waste Management Plan (City of Newcastle Pro-Forma) Appendix I





3.0 Project Context

3.1 SITE

The subject site is described as Lot 30 DP 1190075 & Lot 219 DP 1195310 with a street address of 106 Bourke Street, Carrington. Lot 30 DP 1195310 has an area of 7,899m². The owner of the land is the NSW Treasury, through a holding company named Port of Newcastle Lessor Pty Ltd (Port Lessor). Port Lessor has granted a 98-year lease of its land around the shipping port (including the CHEH) to the Port of Newcastle (PoN).

A copy of the Certificate of Title and Deposited Plan are included in **Appendix A** of this report.

3.2 LOCALITY

The subject site is located in the suburb of Carrington, east of Wickham, north of Newcastle, and west of Stockton. Carrington is bordered by Throsby Creek to the west and The Basin to the south, and the Hunter River to the east (Newcastle Harbour).

The site is within walking distance to Newcastle Harbour and associated foreshore areas.

The following maps show the location of the subject site within the broader context of Newcastle and the local context of Carrington.



Figure 4: Locality Map of the Subject Site within the Broader Context of Newcastle (SIX Maps).





Figure 5: Locality Map of the Subject Site within the Local Context of Wickham (SIX Maps).

The site is located within close proximity to Wickham and Honeysuckle, both of which are currently undergoing major urban renewal.

3.3 LANDUSES LOCALLY, AS WELL AS CURRENT & PREVIOUS USES ON THE SITE

The site is roughly triangular in shape, with the Engine House building in the centre, facing slightly east of south. The lot is mostly covered in grass lawns, along with a mulched embankment containing mature fig trees along the Bourke Street boundary, and a public interpretive plaza to the south side.

The photograph below provides an indication of the current built form and landscaping on the site.





Figure 6: Photograph Showing the Built Form and Landscaping.

The CHEH is currently vacant and the main Engine Room sealed off from human access due to an asbestos hazard present within this room. The public plaza is open and in use for casual public visitors.

Historically, the CHEH housed the first large scale hydraulic power system to be established in Australia, providing power for the original coal loading cranes along Dyke Point. The CHEH was in operation from its construction in 1877-1878 until its decommissioning in 1967, when the newly constructed Basin Coal Loader replaced all hydraulic and electric cranes.

Currently vacant, there is only a small fraction of the original equipment still extant in the Carrington Hydraulic Engine House to date, with one small remnant motor in the generator room, some metal fixtures, gangways and ladders etc mounted to the internal walls, and various pipework and fragments of industrial archaeology extant in the engine room sub-floor cavity.

The Carrington Hydraulic Engine House is located at the apex of The Basin, on the north side of Newcastle Harbour. The building's orientation is aligned to Honeysuckle and is prominently viewed from this hospitality precinct to the south across the water. The building is separated from the water however by rail lines and wharf frontage directly to the south.

The building is physically removed from any other building within the Port of Newcastle site, and originally would have been one of the largest structures in the area, although in today's context it is dwarfed by the infrastructure of the port such as the silos and coal loaders. The building is situated adjacent to the main personnel entry to the Port of Newcastle site with an empty area of lawn between the building and this roadway.



3.4 TOPOGRAPHY & DRAINAGE

The subject site is generally flat.

The site currently drains to the existing stormwater system.

3.5 VEGETATION

The site contains a row of established trees along its western boundary, with smaller landscaping shrubs planted between the trees. The eastern and southern boundaries of the site also contain small landscaping shrubs, and turf generally covers the remainder of the site around the CHEH.

The proposed works will not impact any vegetation on the site.

3.6 MINE SUBSIDENCE

The subject site is located within a mine subsidence district (refer **Figure 7** below). As such, the proposed development application will require referral to Subsidence Advisory NSW.



Figure 7: Extract from NSW Planning Portal Mine Subsidence District Mapping.

3.7 ACID SULPHATE SOILS

The subject site is not identified as being affected by acid sulphate soils (refer **Figure 8** below).





Figure 8: Extract from NSW Planning Portal Acid Sulphate Soils Mapping.

3.8 BUSHFIRE

The subject site is not identified on the NSW Planning Portal Bushfire Prone Land Map as being bushfire prone land.

3.9 EUROPEAN HERITAGE

The Carrington Hydraulic Engine House (CHEH) is an item listed on the State Heritage Register (refer to **Figure 9** below).

The site is not listed as an item of local heritage significance, nor is it located within a heritage conservation area.







Figure 9: Extract from NSW Planning Portal Heritage Mapping.

European Heritage is discussed further in **Sections 4.0 & 5.0** of this report.

3.10 ABORIGINAL HERITAGE

A desktop search of the Aboriginal Heritage Information Management System (AHIMS) on 14 January 2022 found no Aboriginal sites recorded within 200 metres of the subject site.

3.11 GEOTECHNICAL & CONTAMINATION

3.11.1 Geotechnical

The subsurface conditions at the site are characterised as uncontrolled fill comprising of a mixture of fine sand, gravel and cobble sized particles overlying firm to stiff clays encountered between at about 4-5m depth overlying medium dense sands. Groundwater has previously been encountered at approximately 1.5m depth.

A field investigation was carried out on 10 February 2022 and comprised:

- Hand auger boreholes at three locations (refer to **Figure 10** below) to depths of up to 0.8m; and
- Dynamic cone penetrometer (DCP) tests at the hand auger borehole locations to depths of up to 1.3m.







Figure 10: Extract from NSW Planning Portal Heritage Mapping.

The hand auger boreholes generally encountered sandy and gravelly fill materials. All hand auger boreholes and DCP tests encountered refusal on obstructions, inferred to be large particles e.g. cobbles, within the fill profile. The dynamic penetrometer test results indicated poorly compacted/loose fill material was present in the upper 0.5m of the fill profile.

Details of the subsurface conditions at the borehole locations are shown on the engineering logs within the Appendices of the Geotechnical Investigation prepared by RCA Australia which is provided within **Appendix E** of this report. Explanatory notes are also attached which define logging symbols, terms and abbreviations.

Groundwater was not encountered within the investigation depths at the time of field investigation.

A Geotechnical Assessment has been prepared by RCA Australia and is provided within **Appendix E**. Geotechnical matters are further addressed in **Sections 4.0** and **5.0** of this report.

3.11.2 Contamination

A hazardous materials survey has been carried out by Verico within the Carrington Hydraulic Engine House (CHEH) during June 2018. As part of the survey dust and dirt samples were collected and analysed for asbestos content. A total of 87 dust, dirt and debris samples were collected from areas within the CHEH and 22 of these samples were found to contain asbestos fibre (Ampcontrol Report – Port of Newcastle, Carrington Hydraulic Engine House, Dust Sampling Report Rev 3, June 2018).





As outlined in Section 1.3 above. in 2020, the Port of Newcastle undertook extensive asbestos removal works internally, with all parts of the building now clear of asbestos hazard, except for the main engine room. The engine room has been cleaned of asbestos from the ceiling down to the level of the floor grates, however, inspections have found that there were asbestos fragments embedded in the sub-floor floor surface and potentially contaminated dirt and debris was present within the cast iron floor grates.

Due to the very difficult nature of removal work required to safely decontaminate the floor grates and remove the embedded asbestos fragments from the floor surface, previous work has ceased so that alternative options can be considered.

The Engine Room has been sealed, and access was only allowed under controlled conditions using appropriate personnel protective equipment.

The asbestos cement fragments embedded in the sub-floor floor surface are bound in a solid bituminous like material and can be considered as bonded asbestos material, and therefore will only become a hazard to health if acted upon by mechanical action that will disturb the asbestos fibres.

Any asbestos fibres within the dirt and debris associated with the cast iron floor grates will not be bonded and can be liberated into the air if disturbed. This material can be considered as friable asbestos containing material.

An Asbestos Removal Summary has been provided by Verica and is included as **Appendix F**. Contamination matters further addressed in **Sections 4.0** and **5.0** of this report.

3.12 TRAFFIC, ACCESS & ROAD NETWORK

The site is located on Bourke Street, at the eastern extent of Cowper Street North. The site is bound by the PoN access road to the north and a PoN operated rail corridor to the south. Pedestrian access to the site is via the Bourke Street and Cowper Street North intersection (refer **Figure 11** below).







Figure 11: Google Maps Street View Showing the Site in its Immediate Context.

Cowper Street North connects the subject site to the Carrington Local Centre approximately 300m west of the site and intersects with Hannell Street approximately 1km west of the site. Hannell Street provides connections northbound to Industrial Drive and southbound towards the Newcastle City Centre.

The site does not currently comprise any vehicular access, however ample kerbside parking is provided along Bourke Street. Additionally, during the construction phase of the proposed development, work vehicles may enter the site via Bourke Street (refer **Figure 12** below).







Figure 12: Bourke Street Kerbside Car Parking.

The perimeter of the subject site does not comprise any footpaths, however the landscaped road verge is of sufficient width to comfortably accommodate pedestrians, and parallel parking is located along both sides of Bourke Street and Cowper Street North.

The site has sound access to public transport options, with a bus service available along Cowper Street North, approximately 350m west of the site, providing a route from Newcastle West to Wallsend via the subject stop on Cowper Street North.

Additionally, active transport is a highly viable transport option throughout Carrington, and the Throsby Creek shared path is located approximately 650m west of the site via Howden Street and 1km via Cowper Street North, which provides safe and efficient connections to the Newcastle City Centre and the greater Newcastle area (refer **Figure 13** below).







Figure 13: City of Newcastle Cycleways Map.

3.13 COASTAL ZONE

The site is mapped as being located within the coastal environment area and coastal use area under State Environmental Planning Policy (Resilience and Hazards) 2021 (refer **Figures** 14 and 15 below). The site is not mapped as being part of any coastal wetlands or littoral rainforest (or proximity) area.







Figure 14: Extract from NSW Planning Portal Coastal Environment Area Mapping.



Figure 15: Extract from NSW Planning Portal Coastal Use Area Mapping.





Coastal management matters described within State Environmental Planning Policy (Resilience and Hazards) are addressed in **Section 4.0** of this report.

3.14 UTILITY SERVICES

The subject site is currently serviced by water and sewer infrastructure within the area. Due to the current status of the building restoration works it is not connected to power, however both power and telecommunications are available to the site and able to be readily connected.

3.15 OBSERVATIONS FROM THE SITE CHARACTERISTICS & LOCALITY

The subject site is located within Carrington, at the edge of the Port of Newcastle Lease Area. The area is characteristically unique, comprising a range of industrial, commercial and residential land uses, and offers an intriguing insight into Newcastle's port history. The site is in proximity to recreation, shops and services offers, with Young Street (Carrington's Local Centre) approximately 300m west of the site.

The buildings on site are currently vacant and have no existing use, resulting in the site being underutilised in its current state. The site exhibits few constraints and any constraints can be managed as part of the proposed works.

The site has sound access to public transport services, the surrounding road and pedestrian networks, the Newcastle CBD, essential services and recreational facilities. The site has been identified in SEPP (Three Ports) as being 'SP1 Special Activities' zoned land.

The site is capable of accommodating the proposed development without significant environmental impacts. The proposed development is essential for the subject site's longterm prosperity.





4.0 Planning Controls

4.1 ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

The EP&A Act provides the framework for environmental planning and development approvals and includes provisions to ensure that the potential environmental impacts of a development are assessed and considered in the decision-making process.

As outlined previously, the proposed development is permissible with consent in the SP1 Special Activities zone in accordance with former State Environmental Planning Policy (Three Ports) 2013, now Chapter 5 of State Environmental Planning Policy (Transport and Infrastructure) 2021. The proposal is subject to assessment under Part 4 of the EP&A Act and seeks development consent from the Minister for the proposed works.

Integrated Development

The proposed development triggers the requirement for integrated approval under Division 4.8 of the *Environmental Planning* & Assessment Act 1979 for the following purposes:

• Approval to erect improvements within a mine subsidence district under Section 22 of the Coal Mine Subsidence Compensation Act 2017.

The proposed development site has been mapped within a mine subsidence district for underground coal mining (refer to **Figure 8**) and therefore requires integrated approval from the Subsidence Advisory NSW.

• Approval under Section 57(1) of the Heritage Act (NSW) 1977 regarding the building works, to carry out the above development on the land on which the Carrington Hydraulic Engine House is situated.

A Section 60 Application is required to be submitted to NSW Heritage for approval by the Port of Newcastle prior to works commencing.

4.2 STATE PLANNING CONTROLS

A review of all State Environmental Planning Policies has been undertaken and the following policies are applicable to the proposed development.

4.2.1 State Environmental Planning Policy (Transport and Infrastructure) 2021

Chapter 2 – Infrastructure

Chapter 2 of State Environmental Planning Policy (Transport and Infrastructure) 2021 (SEPP (Transport and Infrastructure)) aims to facilitate the effective delivery of infrastructure across the State of NSW.

• <u>Section 2.97 Development adjacent to rail corridors</u>

The proposed development will not have any adverse effects on rail safety, does not involve the placing of a metal finish on a structure, and does not involve the use of a crane in air space above the rail corridor. As such, it is not expected that the proposal will require referral to NSW Trains.





• Section 2.98 Excavation in, above or adjacent to rail corridors

This clause applies to development that involves the penetration of ground to a depth of at least 2m below ground level (existing) on land within 25m of a rail corridor.

The proposed works are being undertaken within an existing building and will not involve any earthworks or works that require penetration of the ground to a depth of at least 2m below existing ground level. As such, the subject development application will not require referral to NSW Trains.

• Section 2.121 Traffic Generating Development

The proposed works do also not constitute traffic generating development and referral to TfNSW is not required.

Chapter 5 – Three Ports – Port Botany, Port Kembla and Newcastle

Chapter 5 Three Ports of (SEPP (Transport and Infrastructure)) contains the principal environmental planning instrument that sets the land use planning and assessment framework for appropriate development at the Port Botany, Port Kembla and the Port of Newcastle ports.

The proposed development is consistent with the overarching aims of SEPP (Transport and Infrastructure) Chapter 5, Part 5.1 which are addressed in the following table:

SEPP (Transport and Infrastructure) Chapter 5 Aims			
Aim	Complies?		
(a) to provide a consistent planning regime for the development and delivery of infrastructure on land in Port Botany, Port Kembla and the Port of Newcastle,	✓ The proposed development is consistent with this objective.		
(b) to allow the efficient development, re- development and protection of land at Port Botany, Port Kembla and the Port of Newcastle for port purposes,	✓ The proposal will facilitate the efficient use of the site for future use, following completion of the proposed works.		
(c) to identify certain development within the Lease Area as exempt development or complying development,	✓ Not applicable to the proposed development.		
(d) to specify matters to be considered in determining whether to grant consent to development adjacent to development for port purposes,	✓ The proposed development addresses the matters for consideration outlined within the SEPP.		
(e) to provide for development at Port Botany that does not, by its nature or scale, constitute an actual or potential obstruction or hazard to aircraft,	✓ Not applicable.		
(f) to identify certain development as State significant development or State significant infrastructure,	✓ Not applicable.		
(g) to ensure that land around the Lease Area is maintained for port-related and industrial uses, including heavy industry on land around Port Kembla.	✓ The proposed development will not compromise the use of the site for port related purposes.		





The proposed development is identified on the Three Ports Land Application and Lease Area Map and SEPP (Three Ports) therefore applies to the proposed development.

Zoning & Permissibility

The subject site is zoned SP1 Special Activities in accordance with former Three Ports SEPP, now SEPP (Transport and Infrastructure) (refer **Figure 16** below).



Figure 16: SEPP (Transport and Infrastructure) Three Ports Zoning Map.

The objectives of the SP1 zone are addressed in the following table:

SP1 Special Activities – Zone Objectives			
Objective	Complies?		
To provide for special land uses that are not provided for in other zones.	✓ The proposal will allow for the future use of the site in accordance with the SP1 zone.		
To provide for sites with special natural characteristics that are not provided for in other zones.	\checkmark Not applicable to the proposed works.		
To facilitate development that is in keeping with the special characteristics of the site or its existing or intended special use, and that minimises any adverse impacts on surrounding land.	The proposal is consistent with the site's natural characteristics and will not result in adverse impacts on the land adjoining the site. The site is located at the edge of the Port of Newcastle Lease Area, and the proposal will facilitate the re- use of the site to connect the Lease Area to the Carrington Local Centre.		
To maximise the use of waterfront areas to	✓		





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accommodate port facilities and industrial, maritime industrial, freight and bulk storage premises that benefit from being located close to port facilities.	The subject site is not waterfront front land.
To enable the efficient movement and operation of commercial shipping and to provide for the efficient handling and distribution of freight from port areas through the provision of transport infrastructure.	✓ The proposed development will have no impact on the efficient movement and operation of commercial shipping, nor will it affect the handling and distribution of freight from port areas.
To provide for port related facilities and development that support the operations of Port Botany, Port Kembla and the Port of Newcastle.	✓ The proposed restoration works allow for the future re-use of the site that will support the operations of the Port of Newcastle.
To facilitate development that by its nature or scale requires separation from residential areas and other sensitive land uses.	✓ The subject site is already established a separated from surrounding residential land uses.
To encourage employment opportunities.	✓
	The proposal works will contribute to employment opportunities during the works and also allow the building to be used for future uses which will in encourage and allow for new employment opportunities.

The proposed development is for building alterations and additions defined as a "building work" under the Environmental Planning and Assessment Act 1979.

'Building work' is defined as follows:

"building work means any physical activity involved in the erection of a building."

'Erection of a building' includes:

- (a) The rebuilding of, the making of alterations to, or the enlargement or extension of, a building, or
- (b) the placing or relocating of a building on land, or
- (c) enclosing a public place in connection with the construction of a building, or
- (d) erecting an advertising structure over a public road, or
- (e) extending a balcony, awning, sunshade or similar structure or an essential service pipe beyond the alignment of a public road,

but does not include any act, matter or thing excluded by the regulations (either generally for the purposes of this Act or only for the purposes of specified provisions of this Act).

The proposed encapsulation of the existing asbestos hazard within the main engine room of the CHEH is defined as 'remediation' under Chapter 4 of SEPP (Resilience and Hazards) 2021.

remediation means—

(a) removing, dispersing, destroying, reducing, mitigating or containing the contamination of any land, or

(b) eliminating or reducing any hazard arising from the contamination of any land (including by preventing the entry of persons or animals on the land).





The proposed development is to encapsulate the existing asbestos hazard within the main engine room of the CHEH and provide a new accessible entry ramp at the front entrance to the building. These works will provide the best possible chance for the CHEH to be adaptively repurposed in the future.

The existing CHEH has been vacant for some time, and currently does not contain an identified land use. There is no land use proposed as part of this development application.

The proponent does not want to prejudice the interest of any potential future tenants and associated land uses by proposing a land use at this stage. Any future proposed land use will be subject to a separate approval (if required). Any future application for land use will need to address permissibility within the SP1 zone, and address all planning controls relevant to that specific land use.

Building alterations and additions and remediation are permissible within the SP1 zone with the consent of the Minister, for land identified within the Lease Area.

The CHEH and site is listed as a Heritage Item of State Significance, as such Section 5.31, of Chapter 5 Three Ports applies.

Section 5.31(2) requires development consent for any of the following:

- (a) demolishing or moving a heritage item,
- (b) altering a heritage item that is a building by making structural changes to its interior,
- (c) erecting a building on land on which a heritage item is located.

The proposed Stage 3 Restoration Works to encapsulate the existing asbestos hazard within the main engine room of the CHEH and provide a new accessible entry ramp at the front entrance to the building. Development consent is required to be sought for the proposed works in accordance with Section 5.31(2)(b). The proposed works permissible within the SP1 zone with the consent of the Minister.

Specific SEPP (Transport and Infrastructure) Chapter 5 Sections

Section 5.6 – Consent Authority

In accordance with Clause 8, the consent authority for development within the Lease area or land that is unzoned is the Minister. The subject site is located within the Port of Newcastle Lease Area (refer **Figure 17** below) and the subject application will therefore be determined by the Minister.







Figure 17: SEPP (Transport and Infrastructure) Three Ports Lease Area Map.

Section 5.15 – Demolition Requires Development Consent

The proposed development seeks development consent for demolition, in line with this clause.

Section 5.20 – Earthworks

In accordance with this clause, development consent is required for the purpose of earthworks. In order to accommodate the proposed development, minor ancillary earthworks are proposed.

The proposed earthworks associated with new concrete plinth footings around the base of the existing steel columns within building are considered to minor and will result in only very minor disturbance to the ground surface and are consistent with the following matters required to be considered in accordance with Section 5.20(3)(a)-(i).

Section 5.24 – Exempt Development

These works proposed new interpretive landscaping features as part of the overall works are considered exempt development in accordance with Section 13 of Schedule 10. The works involve the installation of landscape structures.

The implementation of the interpretive landscape features shows compliance with the policies of the Conservation Management Plan and Interpretation Strategy, and supports both public and private understanding of the historic context of the site. As such, it is considered to be of minimal environmental impact as exempt development and consistent with Section 5.24(3)(d) and Section 13 of Schedule 10 of Chapter 5 of this SEPP.





Section 5.31 – Heritage Conservation

The provisions of Section 5.31 are addressed in the table below.

Section 5.31 – Heritage Conservation			
Provision	Comment		
 (1) Objectives The objectives of this clause are as follows— (a) to conserve the heritage significance of heritage items and heritage conservation areas, including associated fabric, settings and views, (b) to conserve archaeological sites, (c) to conserve Aboriginal objects and Aboriginal places of heritage significance. 	The purpose of the proposed development is to conserve and celebrate the heritage item on the site, which will facilitate the item's future adaptive re-use. Additionally, an AHIMS search of the subject site indicates that there are no Aboriginal Places or Sites within 200m of the site. As such, the proposed development is consistent with the objectives of this clause.		
(2) Requirement for consent			
Development consent is required for any of the following— (a) demolishing or moving a heritage item, (b) altering a heritage item that is a building by making structural changes to its interior, (c) erecting a building on land on which a heritage item is located.	Development consent is sought for the proposed works in accordance with Section 5.31(2)(b).		
(3) When consent not required			
not required if— (a) the applicant has notified the consent authority of the proposed development and the consent authority has advised the applicant in writing before any work is carried out that it is satisfied that the proposed development— (i) is of a minor nature or is for the maintenance of the heritage item, and (ii) would not adversely affect the heritage significance of the heritage item, or (b) the development is limited to the removal of a tree or other vegetation that the Council is satisfied is a risk to human life or property, or (b1) the development is making changes to the exterior of a heritage item, including in the case of a building making structural changes to the development is exempt development is exempt 	Not applicable. Consent is to be sought for the proposed works.		
(4) Effect of proposed development on heritage significance The consent authority must, before granting consent under this clause in respect of a heritage item, consider the effect of the proposed development on the heritage significance of the item concerned. This subclause applies regardless of whether a	The effect of the proposed development on heritage significance is addressed within the Statement of Heritage Impact in Appendix C and in Section 5.2 of this report.		





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heritage management document is prepared under subclause (4) or a heritage conservation	
management plan is submitted under subclause (5).	
(5) Heritage assessment	A copy of the Statement of Heritage
The consent authority may, before granting consent	Impact (SoHI) for the proposed works
to any development—	subject to this application has been
(a) on land on which a heritage item is	provided within Appendix C . The SoH
located or	recommends that the proposed works at
(b) on land that is within the vicinity of land	the State Listed CHEH are carefully
referred to in paragraph (g).	considered, thoroughly justified, and
require a heritage management document to be	appropriate for the significance of the
prepared that assesses the extent to which the	building. In terms of their Heritage Impact.
carrying out of the proposed development would	we believe that the proposed works be
affect the heritage significance of the heritage item.	approved.
(6) Heritage conservation management plans	A Conservation Management Plan has
The consent authority may require, after considering	been prepared in accordance with
the heritage significance of a heritage item and the	Condition 4.3 of DA07/1496 for two previous
extent of change proposed to it, the submission of a	stages of conservation work around the
heritage conservation management plan before	exterior and roof of the building, both
granting consent under this clause.	approved under Section 60 of the Heritage
	Act 1977.
	The Conservation Management Plan
	provides a practical and philosophical
	tramework for the long-term survival of the
	Carrington Hydraulic Engine House
(7) Demolitien of noncington of State boottoms items	building.
(/) Demolifion of nominated State nerifage items	If is understood that this development
Ine consent duthority must, before granting consent	application will be notified to Heritage
State beritage item	
(a) notify the Heritage Council about the	A Section 60 Application is required to be
application and	submitted to NSW Heritage for approval by
(b) take into consideration any response	the Port Authority prior to works
received from the Heritage Council within 28	commencing
days after the notice is sent.	commonomig.
(8) Conservation incentives	The proposed development is allowed by
The consent authority may grant consent to	this policy. However, it should be noted that
development for any purpose of a building that is a	as the CHEH is a State listed heritage item
heritage item or of the land on which such a building	and Section 5.31(8) enables the consent to
is erected, even though development for that	be granted to development for the
purpose would otherwise not be allowed by this	purpose of a building that is a heritage item
Policy, if the consent authority is satisfied that—	if the consent authority is satisfied of the
(a) the conservation of the heritage item is	various matters specified in sub-clause (a)
facilitated by the granting of consent, and	to (e).
(b) the proposed development is in	
accordance with a heritage management	It is considered that the conservation of the
document that has been approved by the	heritage item is facilitated by the granting
consent authority, and	ot consent.
(c) the consent to the proposed	In apportance with Condition 10 of the
aevelopment would require that all	In accordance with Condition 4.3 of the
heritage management desurrent in surright	Adaptive Bouse of the CUEU including the
	radium and demolition of the electrical
(d) the proposed development would not	substation EIE Heritage have been
adversely affect the heritage significance of	engaged by Port of Newcastle to propare
the heritage item including its setting and	a Conservation Management Plan (CMP)
(e) the proposed development would not	which is provided within Annendix D The
have any significant adverse effect on the	CMP has been written in tandem with





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amenity of the surrounding area.	design of this current DA proposal. The policies of the CMP allow sufficient flexibility to support conservation and make-good works to the building, such as the proposed Stage 3 restoration works for which consent is sought as part of this development application, that bring it closer to the ultimate goal of habitability and adaptive re-use.
	The SoHI has confirmed that the proposed works at the State Listed CHEH are carefully considered, thoroughly justified, and appropriate for the significance of the building. The proposed works will not have any significant adverse effect on the amenity of the surrounding area.

4.2.2 State Environmental Planning Policy (Resilience and Hazards) 2021

Chapter 2 – Coastal Management

The aim of this Policy is to promote an integrated and co-ordinated approach to land use planning in the coastal zone in a manner consistent with the objects of the *Coastal Management Act* 2016. Chapter 2 of this SEPP seeks to manage development in the coastal zone and the environmental assets of the coast by employing different management techniques to areas within the coastal zone.

The development site has been mapped within the Coastal Environment and Coastal Use Area by the SEPP. The applicable Section of Chapter 2 of the SEPP have been addressed below:

Section 2.10 Coastal Environment Area

- (1) Development consent must not be granted to development on land that is within the coastal environment area unless the consent authority has considered whether the proposed development is likely to cause an adverse impact on the following:
 - (a) the integrity and resilience of the biophysical, hydrological (surface and groundwater) and ecological environment,
 - (b) coastal environmental values and natural coastal processes,
 - (c) the water quality of the marine estate (within the meaning of the Marine Estate Management Act 2014), in particular, the cumulative impacts of the proposed development on any of the sensitive coastal lakes identified in Schedule 1,
 - (d) marine vegetation, native vegetation and fauna and their habitats, undeveloped headlands and rock platforms,
 - (e) existing public open space and safe access to and along the foreshore, beach, headland or rock platform for members of the public, including persons with a disability,
 - (f) Aboriginal cultural heritage, practices and place,
 - (g) the use of the surf zone.





Comment:

The proposal involves works will have a negligible ecological impact and the proposal will not adversely impact the integrity and resilience of the biophysical environment. The existing stormwater management systems will remain in place. No changes to public access are proposed. The proposed works will not impact coastal processes, Aboriginal heritage or use of the surf zone.

- (2) Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that:
 - (a) the development is designed, sited and will be managed to avoid an adverse impact referred to in subclause (1), or
 - (b) if that impact cannot be reasonably avoided—the development is designed, sited and will be managed to minimise that impact, or
 - (c) if that impact cannot be minimised—the development will be managed to mitigate that impact.

Comment:

The proposed works are limited with within the existing building.

Section 2.11 Development on land within the coastal use area

- (1) Development consent must not be granted to development on land that is within the coastal use area unless the consent authority—
 - (a) has considered whether the proposed development is likely to cause an adverse impact on the following—
 - (i) existing, safe access to and along the foreshore, beach, headland or rock platform for members of the public, including persons with a disability,
 - (ii) overshadowing, wind funnelling and the loss of views from public places to foreshores,
 - (iii) the visual amenity and scenic qualities of the coast, including coastal headlands,
 - (iv) Aboriginal cultural heritage, practices and places,
 - (v) cultural and built environment heritage, and

Comment:

The proposal does not include any physical changes or change or use and is not likely to cause an adverse impact on any matter identified in Section 2.11(1).

(b) is satisfied that—

- (i) the development is designed, sited and will be managed to avoid an adverse impact referred to in paragraph (a), or
- (ii) if that impact cannot be reasonably avoided—the development is designed, sited and will be managed to minimise that impact, or
- (iii) if that impact cannot be minimised—the development will be managed to mitigate that impact, and

Comment:

The proposed works do not include any physical changes or change or use and is not likely to cause an adverse impact on any matter described above.

(c) has taken into account the surrounding coastal and built environment, and the bulk, scale and size of the proposed development.



Comment:

No physical changes are proposed to the site, which remains compatible with the surrounding coastal and built environment.

Section 2.12 Development in coastal zone generally—development not to increase risk of coastal hazards

Development consent must not be granted to development on land within the coastal zone unless the consent authority is satisfied that the proposed development is not likely to cause increased risk of coastal hazards on that land or other land.

Comment:

No works are proposed and the proposal will not cause any increased risk of coastal hazards on the site or other land.

Chapter 4 – Remediation of Land

Chapter 4 of this SEPP introduces state-wide planning controls for the remediation of contaminated land. The policy states that land must not be developed if it is unsuitable for a proposed use because it is contaminated. If the land is unsuitable, remediation must take place before the land is developed.

Section 4.6 of SEPP 55 requires contamination and remediation to be considered in determining a development application.

Through a rigorous options analysis process, the encapsulation of the asbestos hazard underneath a floating concrete slab has been selected as the best overall solution to the current issues the building faces (as opposed to removal of the asbestos material from the site entirely), however there is no proposed remediation of land associated with the development.

The proposed works are required to be undertaken to ensure the building is suitable for future intended uses once identified.

A Geotechnical Assessment and Asbestos Removal Summary have been prepared to consider the proposed works and are provided within **Appendix E** and **F**. Contamination is discussed in **Section 5** below.

4.2.3 State Environmental Planning Policy (Planning Systems) 2021

The aims of Chapter 2 of this Policy are to identify development that is State significant development, State significant infrastructure and critical State significant infrastructure; and to confer functions on Joint Regional Planning Panels to determine development applications.

The proposed development application does not trigger SSD, SSI, Critical SSI status or Regional Development.





4.3 **REGIONAL PLANNING CONTROLS**

4.3.1 Hunter Regional Plan 2036

The NSW Government has developed the Hunter Regional Plan 2036 as an overarching framework to guide land use planning priorities and infrastructure funding decisions in the Hunter region over the next 20 years.

The Plan sets priorities and provides a direction for regional planning decisions. It focuses on new housing and jobs, and targets growth in strategic centres and renewal corridors close to transport to deliver social and economic benefits. It sets in place line-of-sight land use planning for the region, regional districts like the Greater Newcastle metropolitan area and each council area.

The vision of the Hunter Regional Plan 2036 is for the Hunter to be the leading regional economy in Australia with a vibrant new metropolitan city at its heart. To achieve this vision, the NSW Government has acknowledged the growing importance of Greater Newcastle and set the following regionally focused goals:

- Goal 1: The leading regional economy in Australia;
- Goal 2: A biodiversity-rich natural environment;
- Goal 3: Thriving communities; and
- Goal 4: Greater housing choice and jobs.

BROADMEADOW Subject Site MWNUNTER SPITAL NEWCASTLE CITY CENTRE KOTARA Strategic Centre University Growth Area 111 Urban Renewal Corridor Centre Inter-regional Road Indicative Greater Newcastle Transport Gateway Residential and Employment Land Metropolitian Area National Park and Reserve Hospital New Road Link /State Forest

Figure 18 below provides the indicative boundaries of the Greater Newcastle area and identifies the location of the subject site within the Newcastle area.

Figure 18: Extract from Hunter Regional Plan 2036 – Greater Newcastle area.





Goal 3, Direction 19 aims to identify and protect the region's heritage. This direction highlights the success of interpreting and adaptively reusing built heritage items in giving new communities a new lease on life. This attracts tourism and subsequently contributes to the local economy.

It is considered that the proposed restoration works to the CHEH is consistent with this direction of the Hunter Regional Plan 2036. The restoration will encapsulate an asbestos hazard, which is currently preventing the re-use and occupation of the site. As such, the proposal facilitates future interpretation and adaptive re-use of the CHEH, which has substantial heritage value, and will likely attract tourism and contribute to the local economy when completed.

The proposed development is consistent with the relevant goals and directions of the Hunter Regional Plan 2036.

4.3.2 Draft Hunter Regional Plan 2041

The Draft Hunter Regional Plan 2041 forms part of the five (5) year review of the Hunter Regional Plan 2036, and resets priorities for the area to ensure continued progress and prosperity for the Hunter community for the next 20 years. The Plan sets the strategic land use framework for continued economic transformation in one of Australia's most diverse and liveable regions.

Under this Plan, the regional vision for the Hunter is as follows:

"The leading regional economy in Australia, connected to and caring for Country, with a vibrant metropolitan city and sustainable 15-minute neighbourhoods at its heart."

The proposed development is consistent with this vision, noting it will contribute to a vibrant metropolitan city through the restoration of a historic Port of Newcastle icon that will facilitate its potential future re-use.

The proposed development is also entirely consistent with objective 3 within the Plan, which aims to create a 15-minute region made up of mixed, multi-modal, inclusive and vibrant local communities.

Objective 3 places particular focus on reaching everyday needs within 15 minutes by walking or cycling, and more infrequent or specialised needs within 30 minutes through the same active transport modes. The proposed development is consistent with this objective, noting that it is located approximately 300m east of the Carrington Local Centre, within a 15-minute walk for all Carrington residents and parts of Maryville and Wickham.

The proposed development is generally consistent with the vision and relevant objectives of the Draft Hunter Regional Plan 2041.

4.3.3 Greater Newcastle Metropolitan Plan 2036

The Greater Newcastle Metropolitan Plan 2036 is a priority action of the above referenced Hunter Regional Plan 2036. The vision set out for the greater Newcastle area in the plan is:

Australia's newest and emerging economic and lifestyle city, connected with northern NSW and acknowledged globally as:



- dynamic and entrepreneurial, with a globally competitive economy and the excitement of the inner city and green suburban communities;
- offering great lifestyles minutes from beaches or bushland, the airport or universities, and from the port to the lake; and
- a national leader in the new economy, with smarter cities and carbon neutral initiatives, and with collaborative governance that makes it a model to others in creating and adapting to change.

The Plan sets out strategies and actions that will drive sustainable growth across Cessnock City, Lake Macquarie City, Maitland City, Newcastle City and Port Stephens communities, which together make up Greater Newcastle.

The port area is identified in Outcome 1 of the Greater Newcastle Metropolitan Plan 2036 as a key metropolitan asset. It provides opportunities to grow the service economy, and increase the diversity and resilience of the economy. The proposed development supports this outcome by encapsulating an asbestos hazard and providing compliant access to a historic building within the Port of Newcastle, thus facilitating the future growth and diversification within the Port.

The site is identified within the Dyke Point Precinct in the Port of Newcastle Catalyst Area (refer **Figure 19** below). Within this precinct, the plan seeks to investigate options for land uses that support the future growth and diversification of trade whilst working with operators and industry to minimise impacts on residential communities. It is considered that the proposed restoration works align with the objectives of the Dyke Point Precinct.







Figure 19: Extract from Greater Newcastle Metropolitan Plan 2036 Catalyst Area Port of Newcastle.

The Plan identifies priorities to provide convenient access to jobs for rapidly expanding communities. The proposal will generate opportunities for the future re-use of the site for employment generating purposes and is well located within close proximity to existing residential areas within greater Newcastle.

The proposed development is consistent with the Greater Newcastle Metropolitan Plan 2036.





4.4 LOCAL PLANNING CONTROLS

4.4.1 Newcastle Local Environmental Plan 2012

The subject site is not identified on the Newcastle Local Environmental Plan 2012 (NLEP) Land Application Map and as such the proposed development is not subject to the provisions of the NLEP.

4.4.2 Newcastle Development Control Plan 2012

Newcastle Development Control Plan provides detailed provisions relating to matters of environmental planning significance for Newcastle to be taken into consideration by City of Newcastle when exercising its environmental assessment and planning functions under the EP&A Act. The DCP relates to land which the NLEP applies or land outside of the Port of Newcastle Lease Area and therefore is not applicable to the proposed development. Notwithstanding this, the guiding design and planning considerations of the relevant chapters of the DCP have been consulted as part of the design of the proposed works.

4.4.3 Other Relevant Policies, Strategies & Controls

Port of Newcastle Port Master Plan 2040

The Port Master Plan 2040 was prepared by the Port of Newcastle to communicate current and future development and trade opportunities. The Port of Newcastle's vision is to maintain Newcastle's position as one of the leading and most efficient global-scale ports, and to facilitate continued growth and development of existing and new trades in a sustainable manner.

The strategy seeks to grow and diversify the port and trade base to meet the demands of customers. The following goals underpin the Strategy:

- Promote the capacity of the Port and the supply chain to support the economy.
- Utilise the existing road and rail transport assets to improve freight efficiency.
- Facilitate new trades and supply chains.
- Support the development of new facilities and enabling infrastructure.
- Protect the Port and transport corridors from urban encroachment.

The subject site is located within the Carrington Precinct. Land within this precinct is comprises a coal terminal, two major grain terminals, mineral concentrate imports and exports, a cruise terminal, tug and helicopter bases, and ship building facilities. Carrington is also well-serviced by road and rail infrastructure, including a designated B-double heavy vehicle truck route. The proposed works will not inhibit any of the abovementioned uses or infrastructure.

The CHEH is identified within the master plan as being of significance to both the local community and the State of New South Wales. The master plan states that PoN actively manages this asset to support conservation outcomes within an operational context. The proposed works are consistent with this, noting that the proposed conservation outcome will support the future reuse of the site.

The proposed development is consistent with the vision and goals established by the Port Master Plan.





Newcastle Local Strategic Planning Statement

The Local Strategic Planning Statement (LSPS) is City of Newcastle's (CN) plan to guide land use planning over the next 20 years. The LSPS implements priorities from the Community Strategic Plan and Newcastle 2030, and brings together land use planning actions in other adopted strategies.

The LSPS also gives effect to the State Government strategic directions for the Hunter region, outlined in the Hunter Regional Plan 2036 and the Greater Newcastle Metropolitan Plan 2036. The LSPS outlines 15 Planning Priorities to achieve the land use planning vision for Newcastle and will inform decisions on any changes to the planning rules in Newcastle Local Environmental Plan 2012 and the Development Control Plan 2012.

Planning Priority 10 outlines the preference for development to respond to the desired local character of our communities. The proposed development is consistent with this planning priority, noting that Carrington is a unique local centre with a mix of residential, commercial and industrial uses, with a number of historic industrial buildings including the CHEH. The restoration of this building will facilitate its future re-use, which will celebrate and protect the heritage structure, in line with Carrington's desired local character.

Planning Priority 11 seeks to protect and celebrate our heritage. This planning priority states:

"The City is largely defined by its rich industrial history showcased through its iconic architecture such as the civic buildings, warehouses, railway workshops, tram sheds and historic homes which are highly valued by our community."

The proposal aims to protect and enhance the state heritage listed item, which will in turn maintain Carrington's Port identity. It is considered that the proposal is consistent with the aims of Planning Priority 11.

The port area is identified as a catalyst area within the LSPS, with growth and diversification of trade the driver behind this. The LSPS states:

"The diversification of the Port is critical to the economic growth of Newcastle as well as the State of NSW."

Planning Priority 15 of the strategy seeks to facilitate the growth and diversification of the Port to increase job opportunities while minimising environmental and amenity impacts on surrounding lands. The proposed development is consistent with this planning priority. The proposal will result in the restoration of a historic building at the edge of the Port of Newcastle Lease Area, which will connect the Port to the Carrington Local Centre and subsequently improving the amenity of this interface. It will also allow for the diversification of the Port once the future use is operational.

The proposal is consistent with the Newcastle LSPS.

Newcastle 2030 – Community Strategic Plan 2018-2028

The Newcastle 2030 Community Strategic Plan is based on the aspirations, knowledge and values of the Newcastle community. The Community Strategic Plan (CSP) is a shared community vision to inform actions over the next 10 years.





The vision under the CSP is as follows:

"We will celebrate our cultural heritage and history, protect our natural environment and support our people to thrive and prosper. As an inclusive community, we will strive for equal rights and access for all. We will face challenges with integrity, innovation and creativity. Support business growth, education and employment opportunities. We will be a leading lifestyle city with vibrant public places and spaces, connected transport networks and unique urbanism. This will be achieved within a framework of open and collaborative leadership."

The proposed restoration works directly align with the CSP vision, noting that it will celebrate Newcastle's cultural heritage and history through facilitating the future use of an iconic building in the context of the City's industrial history.

The proposal is also consistent with the CSP strategic direction of a liveable built environment. This direction seeks to provide an attractive city that is built around people and reflects the city's sense of identity, and it is considered that the proposed works protect the industrial identity of Carrington and contributes to an attractive city.

Heritage Strategy 2020-2030

The Heritage Strategy is a strategic framework to guide CoN's approach to the management of heritage matters in the Newcastle local government area over the next ten years.

The Heritage Strategy identifies actions and services that when implemented are commensurate with the Newcastle Heritage Policy, best practice, legislative responsibilities and community expectations. It thus identifies the vision statement for heritage at CN, sets out the context, identifies the core themes and the objectives, outcomes and measures of these themes.

The vision for heritage in Newcastle is:

"In 2030, the City of Newcastle will be a leader in local government heritage management by providing outstanding services to the community in a manner which is economically and environmentally sustainable and respects the diversity and significance of local heritage to the people of Newcastle.

The City of Newcastle's heritage assets under its care and control will be well regulated and managed with identification, preservation, conservation, celebration and promotion of the city's rich cultural heritage, based on the principles of the Burra Charter and best practice.

Thereby reinforcing the city's attractiveness as a heritage tourism destination and strengthening its reputation as a smart, liveable and sustainable global city."

A Statement of Heritage Impact (SOHI) has been prepared by EJE Heritage and is provided in **Appendix C** of this report. This SOHI recommends that the proposed works at the State Listed Carrington Hydraulic Engine House are carefully considered, thoroughly justified, and appropriate for the significance of the building. In terms of their *Heritage Impact*, EJE Heritage recommend that the proposed works be approved.





5.0 Development Issues

5.1 ZONING & PERMISSIBILITY

As indicated in **Section 4** of this report, the subject site is zoned SP1 Special Activities under State Environmental Planning Policy (Three Ports) 2013. The proposed works are consistent with the objectives of the SP1 Zone.

The proposed works are permissible with consent within the SP1 zone and are consistent with the relevant aims and controls of the SEPP. The Minister is the consent authority for the proposed works.

5.2 EUROPEAN HERITAGE

A Statement of Heritage Impact (SoHI) has been prepared by EJE Heritage (refer to **Appendix C**).

The Statement of Heritage Impact has been undertaken in accordance with the NSW Heritage Office publications, Assessing Heritage Significance and Statements of Heritage Impact, together with the Australia ICOMOS, The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance 2013.

The site's statement of significance, as per the item's State Heritage Register listing, is as follows:

The Hydraulic Engine House and Crane Bases Nos. 7, 8, 9 and 10, Carrington, are of state heritage significance for their strong association with the port-related application of hydraulic and electrical power in NSW. As relics of an industrial wonder of their age, the Hydraulic Engine House and Crane Bases Nos. 7, 8, 9 and 10 form part of a group collectively illustrating the early application and progress of technologies historically important in the economic development of NSW. They are specially associated with the development of coal handling in Port Hunter, the largest coal port in the Southern Hemisphere and one of great importance in the development of the NSW coal industry. The Hydraulic Engine House and Crane Bases Nos. 7, 8, 9 and 10 are the only examples of their type in NSW, and at both state and national levels constitute the most complete example of a coal loading system predating the introduction of conveyor belt-based loading technology.

The Hydraulic Engine House and Crane Bases Nos. 7, 8, 9 and 10 are of state heritage significance for their association with Sir W.G. Armstrong and Company Ltd. and Cowans, Sheldon and Co. Ltd, engineering companies of world importance; with NSW government engineers Edward Orpen Moriarty; Cecil Darley; John Whitton; Percy Allan and Orlando Brain, and potentially with NSW government architect James Barnet and Edmund Spencer, one of his assistants; and with the public and private sector workers who constructed, operated and maintained the Bullock Island coal handling complex. Although some of the fabric has been depleted or removed over time, both the Hydraulic Engine House and Crane Bases Nos. 7, 8, 9 and 10 are of state heritage significance for their design, materials and setting. They may also be of state heritage significance as constituting landmarks of the public sector-driven transformation of Port Hunter from a swampy estuary to a deep-water harbour of national importance. The Hydraulic Engine House and Crane Bases Nos. 7, 8, 9 and 10 are of state heritage significance in yielding scientific and archaeological information as to the nineteenth century transfer of hydraulic technology from the UK to NSW.





The SoHI confirms that the following aspects of the proposal respect or enhance the heritage significance of the item or area for the following reasons:

- The existing asbestos hazard within the Engine Room is preventing any option for adaptive re-use of the building, or even inspection of the building by potentially interested parties. Remediation of this hazard strongly supports the heritage significance of the item, paving the way for an adaptive re-use that will drive value, care and maintenance of the building for the long term.
- The proposed works have been selected via robust multi-disciplinary options analysis, aiming to achieve the best outcome for the building's fabric, its heritage stature, its proponent, and any future building user.
- Permanent elements of Heritage Interpretation are in-built within the scheme, which do not rely on a future user to be executed. These include:
 - Interpretation of the concrete engine buttresses within the new floor slab via metallic penetrating stain. The metallic component references the significant metal machinery once present in the space. The interpretation of the engine buttresses at 1:1 scale within the slab continues an interpretation theme from the existing southern plaza, which represents the original hydraulic layout of the Engine Room also at 1:1 scale.
 - Visual interpretation of sub-floor fabric through glass floor panels with feature lighting.
 - Reuse of elements of original fabric, such as the re-used cast iron metal floor grates within the entry niche, and the re-installed metal handrail beside the sunken floor.
 - Exposure of the side walls of the engine buttresses in parts of the integrated concrete ramp.
 - Display of elements of original building fabric (salvaged carved stone, industrial metal componentry etc), beneath the glass floor of the tower landing.
- The implementation of the interpretive landscape features shows compliance with the policies of the CMP and Interpretation Strategy, and supports both public and private understanding of the historic context of the site.

The following aspects of the proposal could detrimentally impact on the heritage significance of the item or area for the following reasons:

- Introduction of the new internal floor slab removes physical and visual connection between an occupant of the room, and the original heritage fabric of the building (being the cast iron floor grates, the concrete engine buttress, and the remnant industrial componentry of the sub-floor cavity. Having said this, in the existing state of asbestos contamination within the Engine Room, there is also no physical or visual connection to these features. The proposal includes interpretation devices within the new slab to allow connection to these features through means other than physical, and so improves the current situation and hence does not detract from the building's heritage significance.
- Removal/demolition/modification of items of original fabric such as masonry walls around the perimeter of the Engine Room, and steel and timber beams in the subfloor will affect the integrity of the item. The proposal directs to keep all steel componentry that is cut/modified on site within the sub-floor cavity so that it is not removed from the site (for future study), and all brickwork removed is noted to be retained for re-use wherever possible. A thorough archival quality 3D internal and external scan of the building has been undertaken to record the condition of the fabric to ensure its previous format is recorded for future study.



- Introduction of the external ramp affects the symmetry of the front façade of the building. A through study of options for integration of an accessible entry to the building has determined that this proposal is the best and most sympathetic way of providing compliant accessible entry to the building which will help attract a future user for the building, which will in turn support its heritage significance in the long term. The ramp is intentionally constructed in an industrial design to sit comfortably with the building's history and context, but will also be clearly a contemporary addition given its stainless-steel fabric.
- Introduction of the Photovoltaic Panels to the roof of the building will be visually out of
 place with the heritage fabric. We note the panels are only considered to be
 "semipermanent" as a stop-gap to run the mechanical ventilation system before the
 building is connected to mains power. The panels are located as discreetly as possible
 away from public view of the building. It is also noted the building has always had a
 strong association with cutting edge industrial technology specifically in power
 generation, which is continued with use of solar energy through this stage of the project.

The following actions are recommended in the SoHI to minimise disturbance and/or enhance the interpretation of the heritage significance of the item or area:

- All conservation works should be undertaken by experienced specialists and overseen by a Conservation Architect.
- Regular site photography during construction should be undertaken to record the works and document any new original building details observed.
- The Item's Conservation Management Plan and Heritage Interpretation Strategy should be made available to any potential tenants interested in the building early in negotiations to highlight the heritage significance of the Item and make them aware of potential opportunities and constraints.

Once the chief glory of Newcastle's industrial heartbeat, the Carrington Hydraulic Engine House building saw a period of declined in its integrity and condition in the decades following its redundancy in the 1960's.

A structure of cultural, architectural and historical significance, there is clear community interest in the Engine House building, and desire by the asset owners, The Port of Newcastle to return the building to a feature of the suburb and city of which residents can be proud.

While monumental and picturesque when viewed from the exterior, via the recently completed south-side public plaza, or at the apex of the Basin across the harbour from Honeysuckle, the Carrington Hydraulic Engine House needs a long-term adaptive re-use internally to regain its full potential as a significant historic icon. The Port of Newcastle is resolved to achieve this aim in the future, with works as proposed in this application furthering progress to the goal.

Conservation works beginning in 2018 and continuing in stages to the time of writing have made a significant step in remediating the neglected condition of the building.

Asbestos remediation works undertaken in 2020 have ensured that all internal spaces of the building are safely accessible, except the main engine room, which is a significant barrier preventing adaptive re-use of the building. The proposed works will remove this barrier, and while necessarily introducing non-original fabric to the heritage structure, overall result in a positive outcome for the heritage significance of the building, being a safe and habitable space that is ready for re-use.





A robust options analysis package has been presented with the SoHI that explains the decision-making process by which the proposal has been developed. Early communication by EJE Heritage and PoN with NSW Heritage through concept presentation meetings and discussions has also ensured that the proposal is reviewed and checked against Heritage stakeholder requirements.

Lengths have been taken to ensure permanent methods of heritage interpretation are included in the proposal, whilst also allowing sufficient flexibility for a range of future use typologies, so as not to restrict the future options for the building's activation.

EJE Heritage recommends that the proposed works at the State Listed Carrington Hydraulic Engine House are carefully considered, thoroughly justified, and appropriate for the significance of the building. In terms of their *Heritage Impact*, EJE believe that the proposed works be approved.

Conservation Management Plan

In accordance with Condition 4.3 of the Concept Approval (DA07/1496) for the Adaptive Reuse of the CHEH including re-roofing and demolition of the electrical substation, EJE Heritage have been engaged by Port of Newcastle to prepare a Conservation Management Plan (CMP) which is provided within **Appendix D**. The purpose of the CMP is to provide a practical and philosophical framework for the long-term survival of the Carrington Hydraulic Engine House building, and associated historic crane bases (No's 7,8,9 & 10).

The Port of Newcastle and EJE Heritage have engaged in detailed discussion with Heritage NSW regarding the production of this 2021 Revision of the CMP, updating the document from its previous 2005 version. Discussions were facilitated by Senior Heritage Officer Mr Isaac Clayton of Heritage NSW and included representatives from Roads & Maritime NSW. Heritage NSW provided feedback on the CMP over several draft versions, with revisions made until all parties were satisfied with the efficacy of the document. It has now been issued formally as the active working heritage policy document for the proponent's management of the building.

The CMP has been written in tandem with design of this current DA proposal. The policies of the CMP allow sufficient flexibility to support conservation and make-good works to the building, such as the proposed Stage 3 restoration works for which consent is sought as part of this development application, that bring it closer to the ultimate goal of habitability and adaptive re-use. The Statement of Heritage Impact provided within **Appendix C** has specifically considered and assessed the appropriateness of the works in the Heritage context, and analyses their adherence to the policies of the CMP.

The next appropriate time for an update of the CMP would be as proposed by its own policies (at 5-yearly intervals) or if very significant new works or change of use of the building was proposed in the future.

5.3 HAZARDOUS MATERIALS

An Internal Asbestos Removal Summary prepared by Verico, and an Asbestos Register prepared by Port of Newcastle are attached at **Appendix F** of this report.

These documents provide a summary of all asbestos removal that has occurred within the Carrington Hydraulic Engine House to date.





A hazardous materials survey was carried out within the CHEH during June 2018. As part of the survey dust and dirt samples were collected and analysed for asbestos content. Of the 87 dust, dirt and debris samples taken, 22 were found to contain asbestos fibre.

Remediation was staged to address areas of the building individually. The remediation areas were sealed, and a decontamination unit was installed to allow decontamination of workers and materials leaving the remediation areas. All debris was removed from floors and ledges. All areas, including walls, roof trusses, beams, ledges and floors were vacuumed and wet wiped to remove dust and debris.

Following the removal, the area was visually inspected by the occupational hygienist. When the removal was found to be satisfactory, dust swab samples were taken from surfaces throughout the remediation area. All swab samples must return results of 'no asbestos detected' for clearance to be given. A PVA sealant was then applied to all surfaces. Clearance air monitoring was then carried out within the remediation area. Clearance air monitoring must return results of less than 0.01 fibres per millilitre of air (less than the detectable limit of the analytical method). An asbestos clearance certificate was then issued for that area.

Removal was staged in the following order:

- Boiler room 2 2/7/2018 to 17/7/2018, Clearance issued 14/8/2018;
- Generator room 12/7/2018 to 23/8/2018, Clearance issued 31/8/2018;
- Front door enclosure 31/07/2018 to 03/08/2018, Clearance issued 14/8/2018;
- Boiler room 1 02/07/2018 to 16/07/2018, Clearance issued 29/8/2018;
- West accumulator tower 31/7/2018 to 9/8/2018, Clearance issued 9/8/2018;
- East accumulator tower 25/10/2018, Clearance issued 10/1/2019; and
- Engine Room 27/11/2019 to 7/2/2020, Clearance not achieved.

Within the Engine Room, initially all accumulated dirt and debris was removed from the subfloor area. Then scaffolding was installed to enable access to the roof trusses and the upper walls. Working from the upper levels down, all surfaces were vacuumed and wet wiped to remove all dirt, dust and debris. As each level was cleaned the area was visually inspected by the occupational hygienist. When the removal was found to be satisfactory, dust swab samples were taken from surfaces throughout the level. When all swab samples from the level returned results of 'no asbestos detected' then cleaning of the next level down was commenced. Air monitoring on the upper levels was conducted during cleaning of the lower levels to ensure the areas were not re-contaminated during the cleaning process.

The Engine Room was cleaned down to the ground floor level. Vacuuming of the ground floor and sub-floor areas was carried out. Inspections found that there were asbestos fragments embedded in the sub-floor floor surface and potentially contaminated dirt and debris was present within the cast iron floor grates.

Due to the very difficult nature of removal work required to safely decontaminate the floor grates and remove the embedded asbestos fragments from the floor surface, work was stopped so that alternative options could be considered.

The Engine Room was sealed, and access was only allowed under controlled conditions using appropriate personnel protective equipment.



The asbestos cement fragments embedded in the sub-floor floor surface are bound in a solid bituminous like material and can be considered as bonded asbestos material, and therefore will only become a hazard to health if acted upon by mechanical action that will disturb the asbestos fibres.

Any asbestos fibres within the dirt and debris associated with the cast iron floor grates will not be bonded and can be liberated into the air if disturbed. This material can be considered as friable asbestos containing material.

As detailed within the option analysis provided within Appendix H, the proposed works will enclose the asbestos. Material in the grates should be sealed with a PVA sealant as enclosure is not recommended for friable asbestos. Seals between the suspended concrete floor slab and the inset glass viewing windows would require regular inspection. Air ventilation system will require regular maintenance and HEPA filters changed regularly. Air extraction may achieve a negative air pressure within the sub-floor area which will prevent any contamination from escaping through incomplete seals. Control measures will be required for accessing the sub-floor area.

5.4 GEOTECHNICAL

A Geotechnical Investigation has been prepared by RCA Australia and is attached at **Appendix E** of this report. This Investigation targets the proposed steel access ramp component of the proposed development, and included a site investigation and analysis of previous geotechnical investigations undertaken for the site.

Site Conditions

As outlined in **Section 3** of this report, the subsurface conditions at the site are characterised as uncontrolled fill comprising of a mixture of fine sand, gravel and cobble sized particles overlying firm to stiff clays encountered between at about 4-5m depth overlying medium dense sands. Groundwater was previously encountered at approximately 1.5m depth.

A field investigation was carried out on 10 February 2022, which comprised hand auger boreholes and dynamic cone penetrometer (DCP) tests.

The hand auger boreholes generally encountered sandy and gravelly fill materials. All hand auger boreholes and DCP tests encountered refusal on obstructions, inferred to be large particles e.g. cobbles, within the fill profile. The dynamic penetrometer test results indicated poorly compacted/loose fill material was present in the upper 0.5m of the fill profile.

Groundwater was not encountered within the investigation depths at the time of field investigation. Groundwater conditions and levels may vary with climate and site conditions.

Results

The previous and current geotechnical investigations at the site indicate that deep foundations founded below the fill at the site are likely to be problematic due to the nature of the fill material, the depth to groundwater and the sensitivity of the building to vibrations from installation of driven piles.

The dynamic penetrometer tests carried out within the footprint of the proposed access ramp indicate that poorly compacted/loose fill material was present in the upper 0.5m of the fill profile.



Based on the site constraints and the subsurface conditions encountered, the most suitable founding strata for the proposed steel access ramp is expected to be the existing fill material below 0.5m depth and above the groundwater level previously encountered at about 1.5m depth.

Footings founded below 0.5m depth may be designed based on an allowable bearing pressure of 50kPa.

All loosened material or fall in should be removed from the base of footing excavations prior to placing concrete.

Footings proportioned for 50kPa bearing pressure are expected to settle less than 10mm.

5.5 BCA MATTERS

The proposal does not seek development consent for use (or change of use) of the Carrington Hydraulic Engine House (CHEH) building.

The future use and likely Building Class of the Engine House is at this time unknown, and confirmation of these elements would be required to dictate the relevant sections of the BCA from which to assess the structure against. As such, formal reporting on the BCA compliance of the building is not practicable at this time given the nature of the proposal.

The proposed works subject to the current Development Application are considered to be an intermediary stage of conservation works, bringing the "cold shell" of the building closer to a condition where a future application could seek occupation of the building for an adaptive re-use, addressing BCA compliance and upgrades at that time.

This application proposes a focussed scope of work to remediate the significant asbestos hazard within the building, and in tandem introduce a new a compliant accessible entry pathway into the Engine Room. These works will assist in achieving compliance with the BCA.

An Access Report have been prepared by Lindsay Perry Access and is provided within **Appendix G** and address further below.

5.6 ACCESSIBILITY

An Access Report has been prepared by Lindsay Perry Access and is provided in **Appendix G** of this report.

This report comprises a review of the Architectural Plans (provided in **Appendix B** of this report) against current accessibility 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; and



 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.

The following table provides a summary of the findings of this report:

Table 2: Disability Access Report Findings

DESCRIPTION	COMPLIANCE STATUS
New Work & the Affected Part	
New work & the affected part	Compliant
Access and Approach	
Allotment boundary to entrance	Compliant
Accessible ramp	Compliant configuration
Interior	
Accessible entrance	Compliant configuration
Extent of access generally	Compliant
Circulation areas	Compliant
Accessible ramp	Compliant configuration
Stairs	Compliant configuration
Slip resistance (ramps & stairs)	To be addressed during construction
Floor finishes	To be addressed during construction

The findings of the Disability Access Report suggest that the proposed development generally complies with relevant accessibility statutory requirements.

5.7 SOCIAL IMPACT & ECONOMIC

The following further addresses the key social and economic considerations of the proposed development:

- These works will provide the best possible chance for the CHEH to be adaptively repurposed in the future;
- The works will generate employment opportunities during the works phase and allow for employment generating opportunities once future uses have been identified for the site;
- The proposal is consistent with relevant strategic plans including Hunter Regional Plan 2036, Newcastle 2030 Community Strategic Plan, Newcastle Local Strategic Planning Statement, and Port of Newcastle Port Master Plan 2040; and
- The proposal will improve safety of the building in the interest of the community.

The proposed development is considered to provide a net social and economic benefit.

5.8 CRIME RISK MANAGEMENT

As discussed in the Section on Planning Controls Newcastle City Council has adopted a memorandum of understanding with the Newcastle Police Service for the consideration of crime in assessment of development. This proposal has been considered relative to the principles of surveillance; access control; territorial reinforcement; and space management as documented in the publication "Crime prevention and the assessment of development applications" published by the Department of Urban & Transport Planning.



Surveillance

The proposed building alterations and maintenance works will result in an increase in the use of the subject site during the construction process, creating opportunities for casual surveillance. The proposed development will also provide the best chance possible for the future reuse of the site which would likely provide further ongoing opportunities for casual surveillance associated with any future use.

Access Control

The proposed development involves internal building alterations and maintenance works to allow for future access to the building once complete.

Territorial Reinforcement

The proposed works will ensure improved security of the building, and make clear that the building is private.

The proposed works will provide the best possible opportunity for future re-use of the building and therefore reintroduction of activity onto the site, reducing the potential for crime.

Space Management

The proposed works to improve the presentation of the CHEH, noting buildings that present as being well kept are more likely to deter crime.

Overall, the proposed development will not introduce any specific elements likely to encourage crime.

5.9 WASTE MANAGEMENT

Waste management will be achieved in accordance with the following hierarchy:

- Priority 1: Avoid Waste;
- Priority 2: Re-using materials (particularly in respect of development involving major demolition works);
- Priority 3: Recycling and reprocessing materials; and
- Priority 4: Waste disposal (only if first three not possible).

The above hierarchy has been applied to both the proposed demolition and development works and the proposed use of the building and the following comments are made in relation to each of these:

Demolition

All waste / surplus building material will be recycled wherever possible. Waste disposal will only be implemented if there is no other alternative, this is not only good environmental practice but is a cost-efficient practice also.





Construction

For construction, waste disposal will be minimised and will only be implemented if there is no other alternative, again this is not only good environmental practice but also a costeffective practice.

A Site Waste Minimisation and Management Plan (SWMMP) has been prepared by EJE Architecture and is attached at **Appendix I** of this report.

Statement of Environmental Effects - Proposed Stage 3 Restoration Works to Carrington Hydraulic Engine House 106 Bourke Street, Carrington – Lot 30 DP 1190075 (Ref: N:\240303\Planning\DA Prep\SoEE Carrington Hydraulic Engine House Restoration Works 140422.docx)





6.0 Conclusion

This Statement of Environmental Effects and supporting documentation comprehensively demonstrates that the proposed Stage 3 Restoration Works to encapsulate the existing asbestos hazard within the main engine room of the CHEH and provide a new accessible entry ramp at the front entrance to the building are considered to be appropriate works within the subject site when tested against the relevant heads of consideration detailed within Section 4.15 of the Environmental Planning & Assessment Act 1979.

The proposal can be supported based on the following:

- The proposed works are permissible within the SP1 zone with the consent of the Minister, for land identified within the Lease Area.
- The proposed works to encapsulate the existing asbestos hazard within the main engine room of the CHEH and provide a new accessible entry ramp at the front entrance to the building, will provide the best possible chance for the CHEH to be adaptively repurposed in the future.
- The Statement of Heritage Impact provided within **Appendix C** prepared by EJE Heritage recommends that the proposed works at the State Listed Carrington Hydraulic Engine House are carefully considered, thoroughly justified, and appropriate for the significance of the building. In terms of their Heritage Impact, EJE recommend that the proposed works be approved.
- A Section 60 Application is to be submitted to NSW Heritage for approval prior to works commencing.

This statement has illustrated that the proposal will satisfy both statutory and merit-based planning considerations and that the proposed development will make a positive contribution to the site and surrounding area. It is considered that there is no matter which should preclude the approval of the proposed development.

