



artefact

9 April 2020

Fei Chen
Graduate Project Manager
Tactical Group

Dear Fei,

Re: Non-Aboriginal Heritage Assessment: Moorebank Precinct West Stage 3

Artefact Heritage (Artefact) has been engaged by Tactical Group (Tactical), on behalf of the Sydney Intermodal Terminal Alliance (SIMTA), to prepare this non-Aboriginal heritage assessment to inform the Moorebank Precinct West (MPW) Stage 3 Environmental Impact Assessment.

SIMTA has been issued Development Consent (SSD 5066) for MPW Stage 1 and (SSD 7709) for MPW Stage 2, under Part 4, Division 4.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act), to construct and operate an intermodal terminal (IMT) and associated warehouses on the western side of Moorebank Avenue, Moorebank (the MPW site). It is understood that as part of MPW Stage 3, SIMTA propose to progressively subdivide the WPW site and establish a temporary works compound and associated road and underground utilities on the southern half of the MPW site.

The purpose of this report is to provide a non-Aboriginal heritage assessment for the proposed works in accordance with the Planning Secretary's Environmental Assessment Requirements (SEARs) issued for MPW Stage 3 (SSD 10431) on 20 March 2020. The report would inform the MPW Stage 3 EIS and confirm if the impacts will be consistent with the approved SSD 5066 and SSD 7709. A separate Aboriginal heritage assessment has also been prepared to inform MPW Stage 3.

MPW Stage 3 Location

The MPW site is generally bounded by the Georges River to the west, Moorebank Avenue to the east, the East Hills Railway Line to the south and the M5 Motorway to the north (Figure 1). It is located on Moorebank Avenue, Moorebank and currently forms Lot 1 in Deposited Plan (DP) 1197707. The MPW site also contains Lot 100 DP1049508, which is located north of Bapaume Road and west of Moorebank Avenue.

MPW Stage 3 would see Lot 1 in DP 1197707 progressively subdivided into nine smaller lots (Figure 1 and Figure 2). The majority of the warehousing footprint and northern half of the operational area for MPW Stage 2 would be subdivided into Lot 5 and Lot 6, and the southern half of the construction area would be progressively subdivided into Lot 7 to Lot 10. Along Moorebank Avenue, the IMT facility area would become Lot 12 (Terminal), and the south-eastern side of the operational area would become Lot 13 (SME Rail Corridor). The remaining portion of Lot 1 in DP 1197707, the MPW Stage 2 conservation area, would become Lot 11 (Biodiversity Area). Lot 100 DP1049508 would remain as it is.

The proposed temporary works compound, temporary road, permanent road, and associated underground utilities would primarily be located within the proposed subdivided Lot 8 to Lot 11 (see Figure 2).

This MPW Stage 3 assessment is for progressive subdivision and construction of a temporary works compound and associated ancillary infrastructure only. With the exception of the temporary works compound and associated roads and underground utilities, MPW Stage 3 subdivision does not include ground-disturbing activities. Ground-disturbing activities are approved under MPW Stage 1 (SSD 5066) and MPW Stage 2 (SSD 7709).

Figure 1: Location of the MPW Stage 3 site in relation to the MPW Stage 2 construction area

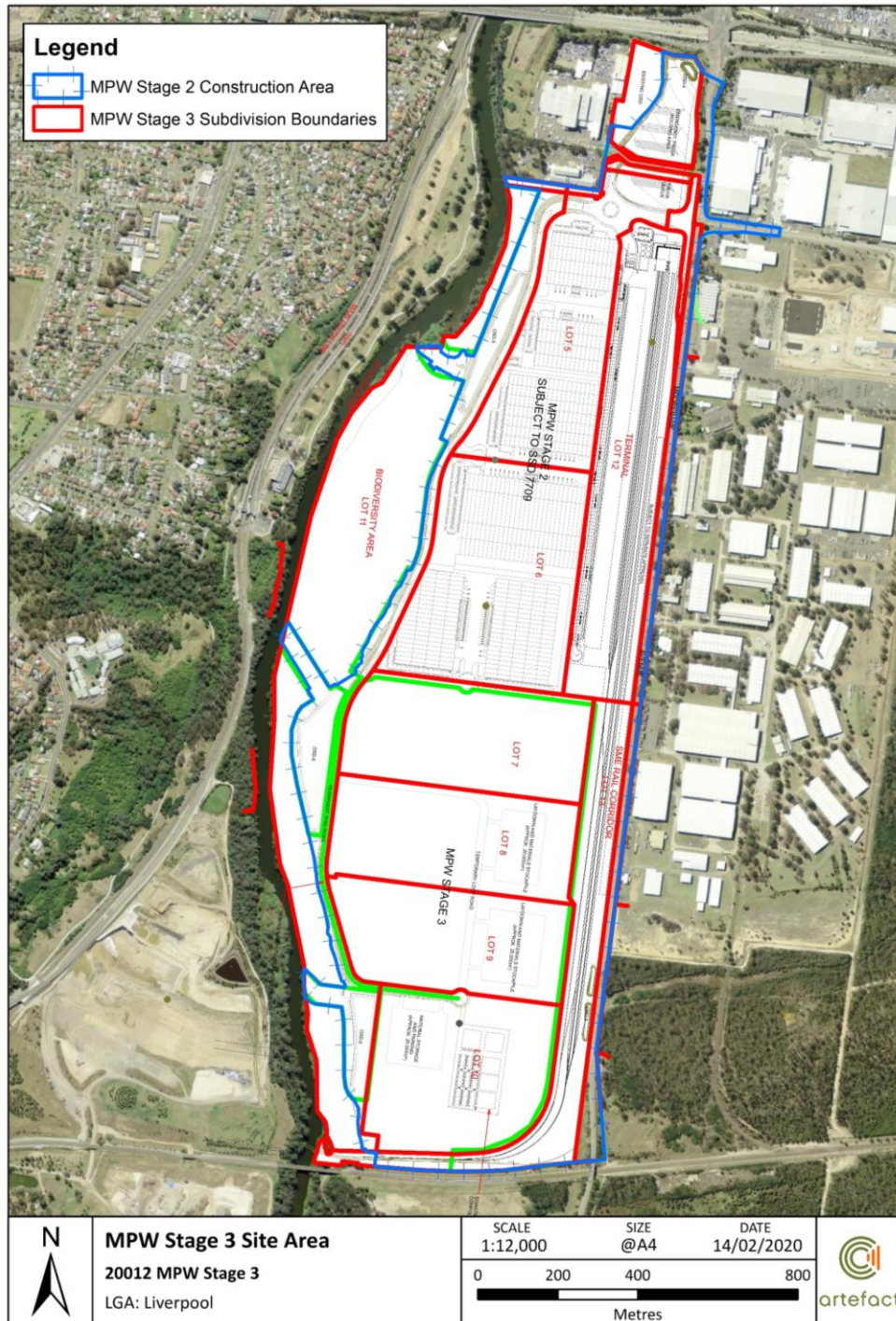
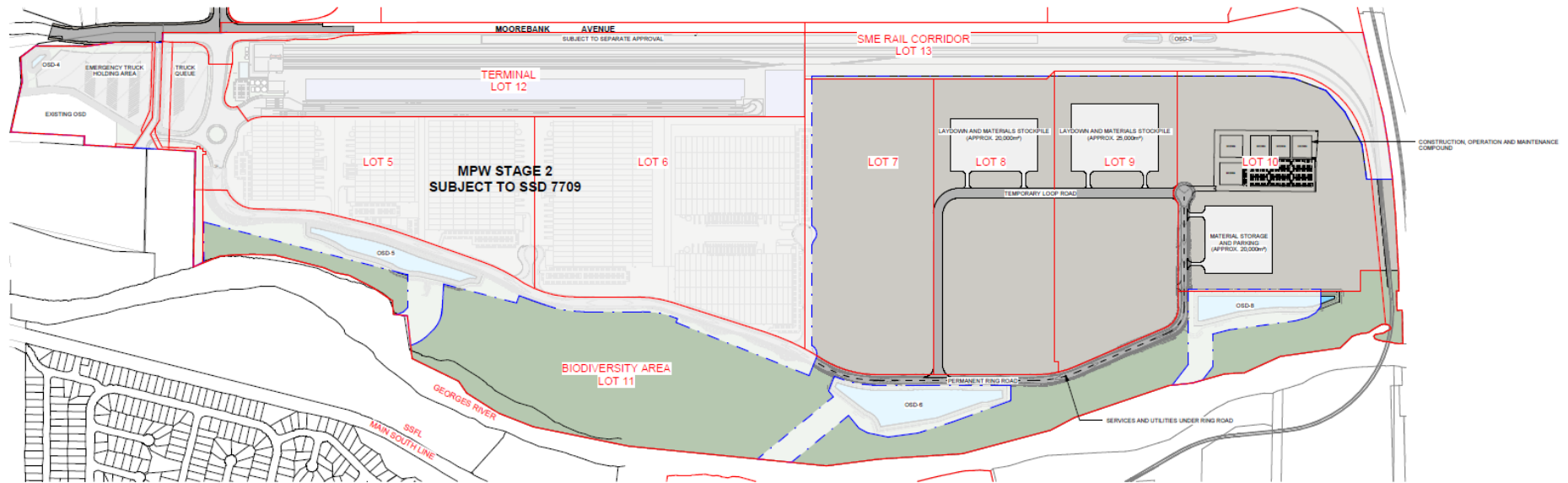


Figure 2: Layout of the proposed MPW Stage 3 progressive subdivisions and location of the proposed temporary works compound



Authorship

This report was prepared by Jayden van Beek (Senior Heritage Consultant) with management input and review from Josh Symons (Principal).

Legislative Context

Commonwealth Heritage Legislation

Environment Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) includes 'national heritage' as a matter of National Environmental Significance and protects listed places to the fullest extent under the Constitution. It also establishes the National Heritage List (NHL) and the Commonwealth Heritage List (CHL).

There are no CHL or NHL places in the MPW Stage 3 area.

On 27 September 2016 a referral made to the Minister for the Environment under sections 130(1) and 133 of the EPBC Act for MPW Stage 2 was approved.

State Legislation

Environmental Planning and Assessment Act 1979

The *Environmental Planning and Assessment Act 1979* (EP&A Act) establishes the framework for cultural heritage values to be formally assessed in the land use planning, development assessment and environmental impact assessment processes. The EP&A Act consists of three main parts of direct relevance to cultural heritage; Part 3 which governs the preparation of planning instruments, Part 4 which relates to development assessment processes for local government (consent) authorities, and Part 5 which relates to activity approvals by governing (determining) authorities.

Part 3, Division 3.4 deals with the development of Local Environmental Plans (LEPs). Planning decisions within Local Government Areas (LGAs) are guided by LEPs. Each LGA is required to develop and maintain an LEP that includes Aboriginal and historical heritage items which are protected under the EP&A Act and the *New South Wales Heritage Act 1977* (Heritage Act). The project site is located across the boundaries of the Liverpool City Council LGA and is covered by the Liverpool LEP 2008.

MPW Stage 1 (SSD 5066) and MPW Stage 2 (SSD 7709) were assessed and determined under what was then Part 4.1 of the EP&A Act, which established an assessment and approval regime for SSD. MPW Stage 3 is consistent with the SSD requirements under Part 4, Division 4.7 of the EP&A Act and the Matters of Consideration under Section 4.15. Section 4.41 of the EP&A Act specifies that approvals or permits under Part 4 or section 139 of the Heritage Act are not required for approved SSD projects.

Secretary's Environmental Assessment Requirements

The SEARs were issued for MPW Stage 3 under Section 4.12(8) of the EP&A Act on 20 March 2020 (SSD 10431). The relevant requirements under item 9 Historic Heritage are outlined in Table 1 below and are addressed in this report. Under item 9 of the SEARs the EIS must include an assessment of the heritage impacts of the proposal and for any identified impacts the assessment must include the following:

Table 1: Relevant SEARs issued for MPW Stage 3 (SSD 10431)

SEARs	Requirement	Addressed in report
9(i)	Include a statement of heritage impact	An assessment of impacts and statement of heritage impact is outlined on is discussed on pp. 18-21
9(ii)	Be undertaken by a suitably qualified heritage consultant(s)	This report has been prepared by suitably qualified heritage consultants
8(iii)	Outline the proposed mitigation and management measures (including measures to avoid significant impacts and an evaluation of the effectiveness of the measures). Mitigation measures should include (but not be limited to) photographic archival recording and adaptive re-use of buildings or building elements on site)	Refer to Recommendations on p. 20

New South Wales Heritage Act 1977

The Heritage Act provides protection for items of 'environmental heritage' in NSW. 'Environmental heritage' includes places, buildings, works, relics, movable objects or precincts considered significant based on historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic values. Items considered to be significant to the State are listed on the State Heritage Register (SHR) and cannot be demolished, altered, moved or damaged, or their significance altered without approval from the Heritage Council of NSW.

The Heritage Act also provides protection for 'relics', which includes archaeological material or deposits. Excavation permits are issued by the Heritage Council of NSW, or its Delegate, under section 140 of the Heritage Act for relics not listed on the SHR or under section 60 for relics listed on the SHR. An application for an excavation permit must be supported by an Archaeological Research Design and Archaeological Assessment prepared in accordance with the NSW Heritage Division archaeological guidelines. Minor works that will have a minimal impact on archaeological relics may be granted an exception under section 139 (4) or an exemption under section 57 (2) of the Heritage Act.

As MPW Stage 3 is being assessed under Part 4 Division 4.7 of the EP&A Act approvals or permits issued under Part 4 and section 139 of the Heritage Act are not required.

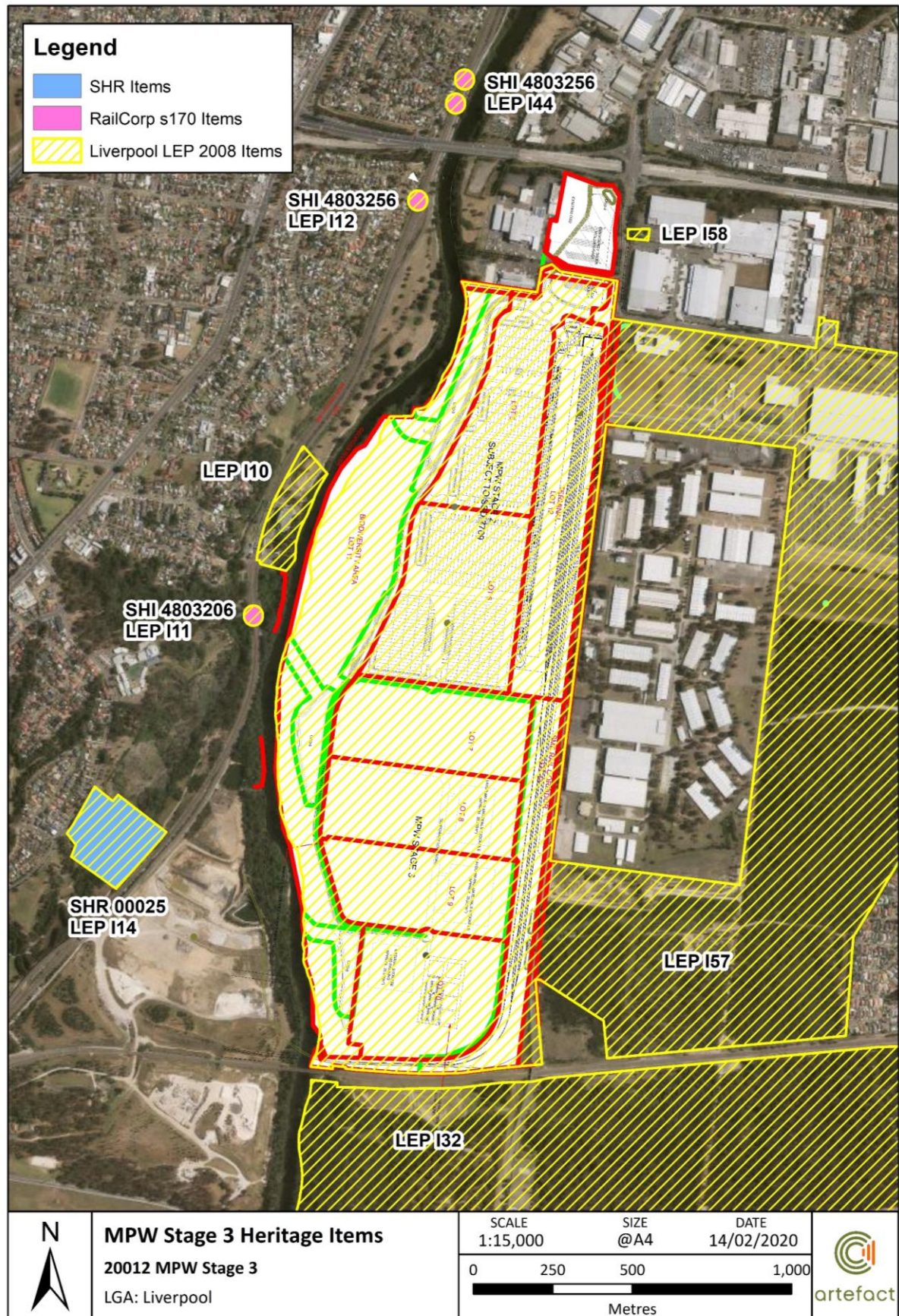
Register Searches

An updated search of the relevant statutory and non-statutory registers was conducted for this study area on 12 February 2020. The result of these searches is summarised in Table 2 below and illustrated in Figure 3.

Table 2: Updated register search results

Item Name	Register	Significance	Location in relation to the MPW Stage 3 site
Australian Army Engineers Group	Liverpool LEP 2008 (Item 57)	Local	Within
Kitchener House (formerly "Arpafeelie")	Liverpool LEP 2008 (Item 58), Register of the National Estate (ID 102578)	Local	Adjacent
Casula Powerhouse (former power station)	Liverpool LEP 2008 (Item 10)	Local	Adjacent
Railway Viaduct	RailCorp s170 (Database No. 4803206), Liverpool LEP 2008 (Item 11)	Local	Adjacent
Casula (Woodbrook Rd & Congressional Dr) Viaducts	RailCorp s170 (Database No. 4803256), Liverpool LEP 2008 (Item 12), Liverpool LEP 2008 (Item 44)	Local	Adjacent
Glenfield Farm	SHR (00025), Liverpool LEP 2008 (Item 14), Register of the National Estate (ID 3289)	State and local	Adjacent
Holsworthy Group	Liverpool LEP 2008 (Item 32)	Local	Adjacent

Figure 3: Heritage items in the vicinity of the MPW Stage 3 site



Historical Context

Pre-Military Occupation and Use

Thomas Moore

Land grants in the area of Moorebank date to 1798, but it was not until 1805 that Thomas Moore acquired land along the eastern bank of Georges River. Over the next 15 years Moore received almost 8000 acres of land in grants, in addition he built a home for he and his wife Rachel the site of which is situated in Thomas Moore Park, Whelan Avenue, Chipping Norton. Moore partook in agricultural activities on his land. Before his death, Moore transferred his Moorebank estate of approximately 6,400 acres, together with lots he owned in the township of Liverpool, to the church to be held in trust. He similarly left his house and grounds to the church for the establishment of a college for young Protestant men, which later became the Moore Theological College, which was transferred to Newtown in 1891.

A Church of England Estate

Up to and after the property was sold in the mid-1880s, many tenants undertook farming and rural pursuits on the land.

Western Side of Georges River

On the western side of the George's River, Eber Bunker was initially granted 400 acres of land which he named Collingwood. Dairy and tenant farming were undertaken on the property.

Collingwood Estate

Following Bunkers' death his land underwent significant change as a result of disposal and development. This area was developed as a golf course in the later twentieth century, and has also seen the recent construction of the Southern Sydney Freight Line.

Military Occupation and History

Military use of the Liverpool area in the 19th Century

From 1811 the Liverpool area was subject to extensive Defence involvement. From 1870 annual training military camps were routinely held at Richmond, Campbell Fields, Windsor, the Royal National Park, and Campbelltown.

First Military Use of Moorebank Estate

1894 saw the first military use of Moorebank Estate with artillery, cavalry, light horse, engineer and medical units being used for training in mock military engagement.

Liverpool Manoeuvre Area

Brigadier-General J.M. Gordon submitted a plan to the Military Board for a tract of land, including Moorebank, to be resumed for military purposes. Lord Kitchener, after being invited by the government to Australia, spent time staying in a still extant cottage on the eastern side of Moorebank Avenue, the cottage is listed on the NSW State Heritage Inventory. Up to 1915 the following military buildings were established:

- A Military Isolation Camp;

- Mobilisation Stores;
- Small Arms Ammunition Stores;
- A rifle range; and
- Official Moorebank Parade Ground.

World War I: Liverpool Camp

Liverpool Camp was utilised by the Australian Imperial Force (AIF) to train new recruits during World War I. Internees at the Old Army Camp at Holsworthy were made to quarry sandstone, build stone structures and construct a branch of the railway line.

The Inter War Period

The end of World War I saw the buildings at Liverpool Camp used infrequently. Training camps continued to be intermittently held. After 1920 more buildings were erected, including:

- New Mobilisation Stores;
- Training Depot for instructors and new recruits;
- Magazine;
- Explosive Store;
- Laboratory test house; and
- Isolation store.

During the 1930s Moorebank was used as a Voluntary Trades School. In 1933 a railway line was opened for the purpose of sand mining as part of the Moorebank Sand Company, but was no longer in use by May 1938, and the light rail line was later removed during World War II. Despite this activity, most of Moorebank was bushland until the late 1930s. Building activity in the 1930s included:

- The erection of two brick stores at the Department of the Interior; and
- The Central Training Depot was re-opened after being closed for 17 years.

World War II: Engineers at Moorebank

A military school of engineering was temporarily established at the Liverpool Military Camp. In 1940 the new military school of engineering established the field engineering wing at Moorebank, training camp buildings were built at Moorebank. Other developments in the early war years included:

- No 1 Training School;
- A Mechanisation Centre or Depot;
- An ordinance store workshop and vehicle store at the depot;
- Stormwater, sewerage and fire services for the facility; and
- The 8th Division Supply Column.

Post War: Decline and Redevelopment in the 1940s and 1950s

A three phase rehabilitation and redevelopment of the SME site began in the late 1940s until the late 1950s. A chapel was established, with the first service being held on Christmas Day 1957, it was succeeded a decade later by a purpose built chapel. Other development included:

Phase 1:

- 1949: Temporary wartime huts were replaced by substantial barracks;
- 1950: Extra accommodation buildings were brought in from others in the Liverpool area; and
- 1953: New centralised mess and kitchen.

Phase 2:

- Late 1952: 9 two storey timber framed and clad barracks building, completed in 1953;
- 1952: Imported prefabricated houses to serve as married quarters, completed in early 1953;
- Bridging Hard and Boat Harbour built at the wet gap area on the river;
- ARMCO Hut two Sydney Williams huts built in the Bridging Store area;
- Light Rail Line constructed built from the Bridging Store area to the wet bridging gap; and
- 1953: Kennels, classrooms and dog stores built for dog training.

Phase 3:

1953: Construction commenced on the Trades Training Wing, consisting of an administrative building, engineering workshops, carpentry workshops, and thirteen lecture and demonstration rooms

- 1955: Two brick instructional buildings were erected;
- 1955-56: Two brick Q stores for SME and two for 7 Independent Field Squadron;
- 1955-56: Brick Administrative Building;
- 1955-57: Soldiers' Club constructed;
- 1955: Building nos. 20 and 22, which had been erected during WWII, were converted into training buildings; and
- 1956: Officers' mess erected.

Expansion in the 1960s and 1970s

Development during this time included:

- A mock Vietnamese village;
- Two new double storey barracks; and
- A new chapel.

Development and Organisational Changes from the 1980s onwards

Development during this time included:

- A major rebuild of SME's buildings and facilities;
- The 2nd Training Group, the Eastern Region Cadet Wing and the Education Wing moved from Ingleburn to SME; and
- During 2003-5 a Vietnam War Memorial was erected at Steele Barracks (previously known as the School of Military Engineering).

Existing Approvals

MPW Stage 1 Non-Aboriginal (Historic) Heritage Technical Paper

In 2014 Navin Officer Heritage Consultants prepared a non-Aboriginal (Historic) heritage assessment report as part of the EIS for MPW Stage 1 Early Works (SSD 5066). The assessment identified the potential impacts to heritage items and potential archaeological resources within the site. The MPW Stage 1 site included the entirety of the proposed MPW Stage 3 site.

The recommendations and conditions outlined in the Minister's Conditions of Approval (MCoA), Revised Environmental Management Measures (REMMs), and EIS non-Aboriginal (Historic) Heritage Technical Paper for MPW Stage 1 are outlined in Table 3 to Table 5 below.

The assessment and recommendations in this report are based on the assumption that all of the recommended mitigation measures and requirements outlined for MPW Stage 1 have been conducted during MPW Stage 1 and MPW Stage 2.

Table 3: Minister's Conditions of Approval for MPW Stage 1 Early Works

MCoA	Requirement
B6	The Applicant shall not harm, modify or otherwise impact any heritage items outside the subject site
B8	<p>Prior to the commencement of Early Works affecting non-Aboriginal sites MHPAD1 and MHPAD2, the Applicant shall undertake any further archaeological excavation works recommended by the results of the non-Aboriginal archaeological investigation program.</p> <p>Within 12 months of completing the above work, unless otherwise agreed by the Secretary, the Applicant shall submit a report containing the findings of the excavations, including artefact analysis, and the identification of a final repository for finds, prepared in consultation with the OEH (Heritage branch) and to the satisfaction of the Secretary</p>
B9	Prior to the commencement of Early Works affecting the CUST Hut, RAAF STRARCH Hangar, the Dog Cemetery and Commemorative Gardens, the Applicant shall prepare a report in consultation with the Heritage Council of NSW, the local Council and the local Historical Society which considers the options for mitigation of these items. In relation to the Dog Cemetery, consultation should also occur with the School of Military Engineering's Explosive Detection Dog's Unit. The report shall include the archival recordings and the historical research, where required, to the Secretary, the Heritage Council of NSW, the local Council and the local Historical Society

(c) a Construction Heritage Management Plan to ensure construction impacts on Aboriginal and non-Aboriginal heritage will be appropriately avoided, minimised and managed. The Plan shall be developed in consultation with OEH, the relevant Council, the NSW Heritage Council (for non-Aboriginal State heritage items) and the relevant Local Aboriginal Land Councils (for Aboriginal heritage), and include, but not necessarily be limited to:

(ii) in relation to non-Aboriginal heritage:

- a) identification of heritage Items directly and indirectly affected by the Early Works;
- b) consideration of methods to prevent damage to any retained heritage items, including:
 - I. procedures for identifying minimum working distances to retained heritage items (including, at minimum, vibration testing and monitoring),
 - II. detailed options for alteration of construction methodology should preferred values for vibration be exceeded, and
 - III. commitment to implementing those options if preferred values for vibration are likely to be exceeded;
- c) details of management measures to be implemented to prevent and minimise impacts on heritage items (including further heritage investigations, archival recordings and/or measures to protect unaffected sites during construction works in the vicinity);
- d) details of monitoring and reporting requirements for impacts on heritage items;
- e) procedures for dealing with previously unidentified heritage objects, (including cessation of works in the vicinity, assessment of the significance of the item(s) and determination of appropriate mitigation measures including when works can re-commence by a suitably qualified and experienced archaeologist in consultation with the OEH, NSW Heritage Council and the Secretary, assessment of the consistency of any heritage impacts against the approved impacts of the SSD, and, where relevant, notification of the Heritage Council of NSW in accordance with section 146 of the Heritage Act 1977; and
- f) heritage training and induction processes for construction personnel (including procedures for keeping records of inductions and obligations under this approval including site identification, protection and conservation of non-Aboriginal cultural heritage; and

(iii) mechanisms for the monitoring, review and amendment of this plan

D20

Table 4: Revised Environmental Management Measures for MPW Stage 1 Early Works

REMM	Requirement
13A	Road names within the School of Military Engineering (SME) would be retained where possible
13B	Continued commemoration of significant events and individuals would be considered through the naming of buildings, streets and the rail bridge proposed for construction as part of the project
13C	Where reasonable and feasible options exist for avoiding impacts on one or more identified items, preference would be given to conserving items of Commonwealth or State significance
13D	Where avoidance of impacts on a heritage item is not reasonable or feasible, mitigation works inclusive of archival recordings, salvage of archaeological deposits, relocation of significant elements of the built environment and/or adaptive reuse would be undertaken
13E	A European heritage interpretation strategy would be developed in close consultation with local historical societies, former and current staff and military personnel
13F	No impacts would occur within the potential archaeological deposits (PAD) boundaries (MHPAD1 and MHPAD2) without prior archaeological salvage, as these sites contain archaeological deposits, inclusive of in-situ building remains, that are assessed to be of local significance in the context of the history of military housing and training at Moorebank
13G	In addition to archival recording of the Transport Compound Workshop (B99), consideration would be given during the detailed design stage to the in-situ conservation or adaptive reuse of this structure within the Project site. This would assist with mitigation of heritage impacts on the structure itself and the Moorebank Cultural Landscape as a whole
13H	In addition to archival recording, the Dog Cemetery (MH1) would be repositioned and the individual graves interred. This would be carried out in accordance with the wishes of the SME's Explosive Detection Dogs unit and respecting the social value of the site
13I	In addition to archival recording, consideration would be given during detailed design to the in-situ conservation of the Commemorative Garden (MH6). If in-situ conservation is not possible, the plaques and planting should be relocated to an alternative location on public display within the Project
13J	For the southern rail access, heritage item Railway viaduct, Main Southern Railway Line (item 12) should be noted on all plans and maps during construction and all care taken to avoid this item
13K	The Unanticipated Discoveries Protocol (detailed in Appendix 7 of Technical Paper 11 – European Heritage Impact Assessment in Volume 8) would be followed in the event that heritage items or relics or suspected burials are encountered during excavation works
13L	The Unanticipated Discoveries Protocol (detailed in Appendix 7 of Technical Paper 11 – European Heritage Impact Assessment in Volume 8) would be followed in the event that historical maritime items or relics are encountered during bridge works within the Georges River

Further consideration would be given to options for the retention and/or relocation and adaptive reuse of the CUST Hut and the RAAF STRARCH Hangar to mitigate impacts on heritage values associated with these structures and to broaden their cultural landscape.

Options considered for mitigation in order of preference are:

- 13M
- Relocation (either offsite or onsite) and conserve/adaptive reuse – this would be investigated further as part of the detailed design and any future development applications
 - Interpretive commemoration utilising materials/elements from the building – this may be required but would be determined by the findings from investigations in option 1 above
 - Demolition may be required but would be determined by the findings from investigations in option 1 above
 - The first preference would be to retain and adaptively reuse these items on the redeveloped Project site (within the precinct but outside the secure area, as part of the administrative facilities or similar). If this is not feasible or practicable, the second preference would be for relocation to another appropriate location, potentially with adaptive reuse

Table 5: Heritage recommendations made in the EIS non-Aboriginal Heritage Technical Paper for MPW Stage 1 Early Works

Recommendation

Further consideration is given to options for the retention and/or relocation and adaptive reuse of the CUST Hut and the RAAF STRARCH Hangar to mitigate impacts on heritage values associated with these structures and their broader cultural landscape context. The first preference would be to retain and adaptively reuse these items on the redeveloped Project Site (within the precinct but outside the secure area, as part of the administrative facilities or similar). If this is not feasible or practicable, the second preference would be for relocation to another appropriate location, potentially with adaptive reuse

Archival recording of all items of Commonwealth, State and Local significance will be required prior to any impact. This would include recording of salient physical aspects of the Moorebank Cultural Landscape

The European heritage interpretation strategy would be developed in close consultation with local historical societies, former and current staff and military personnel. The strategy could consider combining both European and Aboriginal interpretation within the Project area

No impacts should occur within the PAD boundaries of MHPAD1 and MHPAD2 without prior archaeological salvage as these sites contain archaeological deposits, inclusive of in situ building remains, that are assessed to be of local significance in the context of the history of military housing and training at Moorebank

In addition to archival recording of the Transport Compound Workshop (B99) consideration is given during the detailed design stage for the in-situ conservation or adaptive reuse of this structure within the Project. This would assist with mitigation of heritage impacts to the structure itself and the Moorebank Cultural Landscape as a whole

In addition to archival recording, the Dog Cemetery (MH1) is repositioned and the individual graves reinterred. This would be carried out in accordance with the wishes of the SME's Explosive Detection Dogs unit and respecting the social value of the site

In addition to archival recording consideration is given during the detailed design stage for the in-situ conservation of the Commemorative Garden (MH6). If in-situ conservation is not possible the plaques and planting should be relocated to an alternate location within public space within the Project

If the central rail access option is to go ahead Heritage item Railway viaduct, Main Southern Railway Line (item 11) should be noted on all plans and maps during construction and all care taken to avoid this item

If the southern rail access option is to go ahead heritage item Railway viaduct, Main Southern Railway Line (item 12) should be noted on all plans and maps during construction and all care taken to avoid this item

The unanticipated discoveries protocol at Appendix 7 would be followed in the event that historical items or relics or suspected burials are encountered during excavation works

The unanticipated discoveries protocol at Appendix 7 would be followed in the event that historical maritime items or relics are encountered during bridge works within the Georges River

1.1.1 MPW Stage 2 Non-Aboriginal (Historic) Heritage Technical Paper

In 2016 Artefact prepared a non-Aboriginal (Historic) heritage assessment report as part of the EIS for MPW Stage 2 (SSD 7709). The assessment identified the potential impacts to heritage items and potential archaeological resources within the site resulting from the construction of an IMT and associated warehousing. The MPW Stage 2 site included the majority of the proposed MPW Stage 3 site, with the exception of most of the proposed Lot 11 (Biodiversity Area) which was marked as a conservation area for biodiversity offset that was not proposed to be impacted as part of MPW Stage 2 (Figure 1). Although the warehousing area and IMT area were located within the northern half of the MPW site, the assessed construction area included the entire MPW Stage 2 site.

The recommendations and conditions outlined in the Minister's Conditions of Approval (MCoA), Revised Environmental Management Measures (REMMs), and EIS for MPW Stage 2 are outlined in Table 6 to Table 7 below. It is noted that the impact assessment excluded those heritage items subject to impact from MPW Stage 1 Early Works (SSD 5066). The recommendations in the MPW Stage 2 EIS non-Aboriginal (Historic) Heritage Technical Paper and associated MCoA for SSD 7709 are based on the identified impacts from MPW Stage 2 only. The REMMs for MPW Stage 2 remain the same as the REMMs for MPW Stage 1 (Table 4) and therefore have not been reproduced below.

The assessment and recommendations in this report are based on the assumption that all of the recommended mitigation measures and requirements outlined for MPW Stage 2 have been conducted during MPW Stage 2.

Table 6: Minister's Conditions of Approval for MPW Stage 2

MCoA	Requirement
	If any unexpected archaeological relics are uncovered:
	(a) all work in the immediate vicinity of the find must cease immediately;
	(b) OEH Heritage Division must be notified;
B150	(c) a suitably qualified and experienced archaeologist (e.g. project archaeologist) must record and assess the significance of the find with the results reported to the Planning Secretary, OEH Heritage Division, Council and the local Historical Society; and
	(d) where required, a Management Strategy is to be developed and implemented in consultation with the OEH Heritage Division

D151	Work in the immediate vicinity of the find may only recommence on the advice of the project archaeologist
All future Development Application shall assess heritage impacts of the proposal. The assessment shall:	
E20	<p>a) consider impacts to Aboriginal heritage (including cultural and archaeological significance), in particular impacts to Aboriginal heritage sites identified within or near the project should be assessed. Where impacts are identified, the assessment shall demonstrate effective consultation with Aboriginal communities in determining and assessing impacts and developing and selecting options and mitigation measures (including the final proposed measures);</p> <p>b) consider impacts to historic heritage. For any identified impacts, the assessment shall:</p> <ol style="list-style-type: none"> outline the proposed mitigation and management measures (including measures to avoid significant impacts and an evaluation of the effectiveness of the measures). Mitigation measures should include (but not be limited to) photographic archival recording and adaptive re-use of buildings or building elements on site); be undertaken by a suitably qualified heritage consultant(s); and include a statement of heritage impact

Table 7: Heritage recommendations made in the EIS non-Aboriginal Heritage Technical Paper for MPW Stage 2

Recommendation

Further detailed design incorporates the existing road names and places within the Proposal site to mitigate loss of significance to the Moorebank Cultural Landscape item. Continued commemoration of significant events and individuals would be considered through the naming of buildings and streets proposed for construction as part of the Proposal

The Unanticipated Discoveries Protocol (details in Appendix 7 of Technical Paper 11 – European Heritage Impact Assessment in Volume 8) would be followed in the event that non-Indigenous heritage items or relics or suspected burials are encountered during excavation works

Heritage Assessment

Proposed Works

The proposed MPW Stage 3 works would consist of the progressive subdivision of the MPW site and construction of a temporary works compound and associated ancillary infrastructure.

The proposed progressive subdivisions would be to Lot 100 DP 1197707, which comprises the majority of the MPW site. As the proposed subdivisions would be limited to redrawing the lot boundaries there would be no associated impactful site works. The progressive subdivisions would consist of the following:

- Lot 1 in DP 1197707 would be progressively subdivided into nine smaller lots, consisting of Lot 5 to Lot 13;

- Most of the northern half of the MPW site south of Bapaume Road, including the warehousing footprint, would be progressively subdivided into Lot 5 and Lot 6;
- Most of the southern half of the MPW construction area would be progressively subdivided into Lot 7, Lot 8, Lot 9, and Lot 10;
- Along Moorebank Avenue, the IMT facility area would be numbered Lot 12 (Terminal);
- The south-eastern side of the MPW site along Moorebank Avenue would be numbered Lot 13 (SME Rail Corridor);
- The remaining western portion of Lot 100 DP 1197707, the MPW Stage 2 conservation area, located alongside Georges River would be numbered Lot 11 (Biodiversity Area); and
- There would be no changes to the boundaries of Lot 100 DP1049508 north of Bapaume Road.

In addition to the proposed subdivisions MPW Stage 3 would also include the construction of a temporary works compound, including associated access roads, material storage areas, and parking. These developments would be situated at the southern end of the MPW site, within the proposed subdivided Lot 8 to Lot 11. The developments would include the following:

- A temporary laydown and materials stockpile area (measuring approximately 20, 000 m²) along the east side of Lot 8
- A temporary laydown and materials stockpile area (measuring approximately 25, 000 m²) along the east side of Lot 9
- A temporary material storage and parking area (measuring approximately 20, 000 m²) along the west side of Lot 10
- A temporary works compound in the middle of Lot 10
- A temporary loop road through Lot 8 and Lot 9 to provide access to the temporary laydown and materials stockpile areas
- A permanent ring road along the eastern side of Lot 11 (Biodiversity Area) and northern side of Lot 10 to provide access to the temporary works compound
 - Although the permanent loop road would be situated within the newly subdivided Lot 11 (Biodiversity Area), the corresponding area of Lot 100 DP 1197707 is situated within the MPW Stage 2 (SSD 7709) construction area. The extent of the MPW Stage 3 proposed works within the MPW Stage 2 conservation area would be limited to progressive subdivisions.
- Excavations for the installation of services and utilities underneath the permanent ring road.

The location and layout of the MPW Stage 3 works is illustrated in Figure 2.

Impacts to Heritage Items

The proposed MPW Stage 3 works would only be undertaken within the curtilage of Australian Army Engineers Group (Item 57), with all other heritage items in the vicinity being located outside of the MPW Stage 3 site. Of the proposed works the progressive subdivisions would be non-impactful and would not result in any impacts to the heritage item.

The proposed establishment of the temporary works compound, material storage areas, and loop road, as well as the section of permanent loop road, would have the potential to result in direct impacts to the heritage item. However, the area in question was part of the approvals for MPW Stage 1 (SSD 5066) and has already been disturbed as part of the early works and land clearing undertaken in that area. In addition, the majority of the proposed MPW Stage 3 developments would be temporary in nature and would primarily be limited to surface works, which would help to reduce the risk of impacts. Part of the section of permanent road would be established within the newly subdivide Lot 11 (Biodiversity Area), which is mostly comprised of the MPW Stage 2 conservation area where no construction impacts were approved for MPW Stage 2. However, as the new Biodiversity Area would be marginally larger than the MPW Stage 2 conservation area, the proposed location of the permanent road would be within the boundaries of the approved MPW Stage 2 construction area rather than the conservation area. As a result, MPW Stage 3 would not result in additional direct or visual impacts to the heritage items above that which was assessed and approved in MPW Stage 1 (SSD 5066) and MPW Stage 2 (SSD 7709).

The exception to this is the Holsworthy Group (Item 32). This adjacent heritage item was not included in the heritage impact assessment for either MPW Stage 1 or MPW Stage 2. There would be no direct impacts to the heritage item as it is located outside of the MPW Stage 3 site and the proposed works are located a suitable distance away from the heritage item. However, the establishment of the proposed temporary works compound would result in a visual impact while the compound is in use due to the introduction of additional visual intrusions within sight of the heritage item. The temporary works compound and ancillary facilities would be relatively minor structures however and would only impact views to and from the heritage item in that particular location, which would be small in comparison to the overall heritage item. Furthermore, the visual impacts would only be temporary and would be resolved following the removal of the temporary works compound. Overall, the proposed temporary works compound and associated ancillary facilities would result in a temporary negligible visual impact to the Holsworthy Group (Item 32) however this would not impact the overall significance of the heritage item.

Impacts to Archaeology

Previous assessments have highlighted a number of areas of potential archaeological remains within the MPW site. Of the proposed works the progressive subdivisions would be non-impactful and would not result in any impacts to potential archaeological resources.

Ground disturbing activities would result from the construction of the temporary works compound and associated infrastructure. The main areas of archaeological potential that have previously been identified within the vicinity of the proposed works compound include MHPAD2 (Local significance) and CUST Hut (Commonwealth, State, and Local significance). The area of archaeological remains associated with the CUST Hut is located north of the proposed works compound and facilities and therefore any potential archaeological resources associated with this feature would not be impacted. However, the proposed permanent road would pass through MHPAD2. Construction activities associated with the proposed works are expected to primarily consist of surface works though, which would help to mitigate impacts to potential archaeological resources.

Impacts to both of these areas of archaeological potential were assessed as part of the approved MPW Stage 1. Test excavations conducted in MHPAD2 by Navin Officer Heritage Consultants in 2012 uncovered locally significant remains of brick paving, brick footings, walking paths and a small amount of domestic rubbish artefacts associated with the former location of WWII period buildings. As a result, a program of archaeological salvage excavation was recommended. As part of MCoA (B9) consideration for the archaeological potential of the buried earthen floor in the CUST Hut was considered during MPW Stage 1, and REMM 13F notes that salvage of archaeological deposits at MHPAD2 will take place during MPW Stage 1. In accordance with these conditions Biosis undertook

detailed archaeological investigations of MHPAD2 in November and December 2016 and of the CUST Hut in February 2017. In MHPAD2 Biosis investigated three excavation areas and uncovered a low volume of archaeological evidence which consisted of post holes, brick footings, linear features and brick building foundations associated with the 1950s documentary evidence of the site. In the CUST Hut Biosis archaeologically monitored the removal of the concrete flooring of the CUST Hut. No archaeological features were uncovered. Following the completion of the works and the preparation of the historical archaeological report (Biosis 2018), it advised that no further recording or assessment was necessary in MHPAD 2 and the CUST Hut and that archaeological works required under the MPW Stage 1 conditions of approval (SSD 5066) had been completed.

As a result of the previous investigations, it is determined that any potential impacts to archaeological resources resulting from MPW Stage 3 would not result in any additional archaeological impacts above that which was assessed and approved in MPW Stage 1 (SSD 5066). The mitigation measures and conditions outlined and undertaken for MPW Stage 1 would sufficiently mitigate any potential impacts associated with MPW Stage 3.

1.1.2 Statement of Heritage Impact

The following table provides a summary of the heritage impacts in consideration of the *Statements of Heritage Impact* guidelines by the Office of Environment and Heritage (2002).

Table 8: Summary of heritage impacts

Impact on a heritage item	Discussion
Aspects that respect or enhance the heritage significance of the heritage items	The majority of the nearby heritage items are located outside of the MPW Stage 3 site and would not be directly impacted. The progressive subdivisions would not result in any heritage impacts, as there are no associated ground-disturbing works. The proposed works compound and associated ancillary infrastructure are mostly temporary in nature and relatively small in size, and with the exception of the permanent road and underground utilities would be removed following the completion of the works to minimise any long-term impacts. Areas of archaeological potential that have previously been identified in the area, including MHPAD2 and the CUST Hut, have already been subjected to archaeological investigation and therefore impacts have been mitigated. Overall, the potential impacts associated with MPW Stage 3 would be mostly consistent with the approved impacts for MPW Stage 1 and MPW Stage 2
Aspects that would detrimentally impact on the heritage significance of the heritage items	The establishment of the MPW Stage 3 temporary works compound and associated ancillary infrastructure would result in negligible visual impacts to the nearby Holsworthy Group (Item 32). This item was not included in the heritage impact assessment for either MPW Stage 1 or MPW Stage 2. However, the impacts would be minimal and only visible from a relatively small area of the heritage item. Furthermore, the impacts would mostly be temporary and would be mitigated following the removal of the works compound
Justifications for impact	The proposed works are required as part of the ongoing operation and construction work associated with the MPW Project. There are no alternatives to the proposal

Conclusion and Recommendations

This heritage assessment has been undertaken in accordance with the SEARs issued for MPW Stage 3 (SSD 10431). This heritage assessment has determined that the MPW Stage 3 site is situated within the previously assessed areas of MPW Stage 1 (SSD 5066) and MPW Stage 2 (SSD 7709). The proposed progressive subdivisions would be non-impactful while the proposed temporary works compound and associated infrastructure would result in negligible direct and visual impacts.

This impact assessment is consistent with the impacts identified in the non-Aboriginal (Historic) Heritage Technical Papers prepared for the approved EIS for MPW Stage 1 and MPW Stage 2, with the exception of the temporary negligible indirect impact to the Holsworthy Group (Item 32) which was not considered during MPW Stage 1 and MPW Stage 2. Overall, the recommendations and conditions for MPW Stage 3 would be consistent with the existing recommendations and conditions outlined for MPW Stage 1 and MPW Stage 2, and works for MPW Stage 3 must ensure compliance with the existing approvals.

These findings are based on the assumption that all of the recommended mitigation measures and requirements outlined for MPW Stage 1 have been conducted during MPW Stage 1 and MPW Stage 2.

The following recommendations are made for MPW Stage 3 (SSD 10431):

- Ground-disturbing activities must not take place within the Biodiversity Area
- Ground-disturbing activities must not take place outside the areas approved for impacts under MPW Stage 2 (SSD 7709)
- A Non-Aboriginal Construction Heritage Management Plan (NACHMP) should be prepared for MPW Stage 3. The NACHMP must outline non-Aboriginal heritage approvals from MPW Stage 1 (SSD 5066) and MPW Stage 2 (SSD 7709) relevant to the portion of MPW Stage 3 proposed for the temporary works compound, temporary road, permanent road, and association underground utilities. The NACHMP must also include an unexpected finds procedure
- All non-Aboriginal heritage approvals from MPW Stage 1 (SSD 5066) and MPW Stage 2 (SSD 7709) relevant to the MPW Stage 3 temporary works compound must be complied with
- The temporary works compound and associated infrastructure should be removed following the completion of the works to reduce long-term visual impacts to nearby heritage items