

Environmental Review

Project:	Sydney Metro Western Sydney Airport (SMWSA)
Title and number of the assessment:	ER-WSA-002 Patons Lane: utility under-grounding https://icentral.tdocs.transport.nsw.gov.au/otcs/cs.exe/app/nodes/168991548
Prepared by:	Sydney Metro
Applicable to:	Sydney Metro and AEW contractors
Type of assessment:	Assessment under: EP&A Act 1979, Division 5.2. EPBC Act 1999, Part 8 and 9.
Planning approval number (where relevant):	SSI_10051 Infrastructure approval (NSW) EPBC 2020/8687 (Cth).
iCentral number:	SM-22-00010776

1. Proposed works and justification

An environmental review is applicable to design changes which are consistent with the conditions of approval and would have no additional impacts on the community and/or the environment. This environmental review is required to demonstrate compliance with the conditions of approval and Sydney Metro Western Sydney Airport (SMWSA) Environmental Impact Statement (EIS), Submissions Report and EPBC Act Final Environmental Impact Assessment of off-airport proposed action (off-airport EIA). A description of activities is listed in Table 1 and an assessment provided in Section 2.

Table 1 Description of proposed works

Description	Overview
Location of works	Patons Lane, Orchard Hills The location of the works is shown in Figure 1 below.
Scope of works	The scope of works includes: <ul style="list-style-type: none"> - installation of approximately 350 metres of underground high voltage cable, and - installation of seven 15 metre deep earth rods to provide earthing systems for the underground electricity distribution network along Patons Lane, Orchard Hills <p>The underground cable works would be completed with trenchless methods (under bore). Earth rods would be installed using a water jet and drill.</p>
Justification for works	The SMWSA EIS outlined the approach that would be taken to identifying and selecting additional construction related elements of the project, including utility works. The utility works along Patons Lane are required to underground the existing over-head high voltage (HV) mains along Patons Lane, crossing the future rail alignment, to provide temporary power to the stabling and maintenance facility (SMF). The existing overhead wiring does not meet the necessary clearance requirements, may present a safety issue during construction, and hinder construction access to site and therefore needs to be relocated underground.

Timeframe for works	Q1 2022
Work hours, workforce and equipment / machinery	<p>The works are expected to be completed during standard construction hours. Up to 15 workers could be working onsite at any one time.</p> <p>Equipment required would include:</p> <ul style="list-style-type: none">• Excavators (8-13t)• Horizontal directional drilling rigs and mud recycling• Bed bore machine• Light vehicles• 8-13t tipper• Hand tools• Water jet and drill.

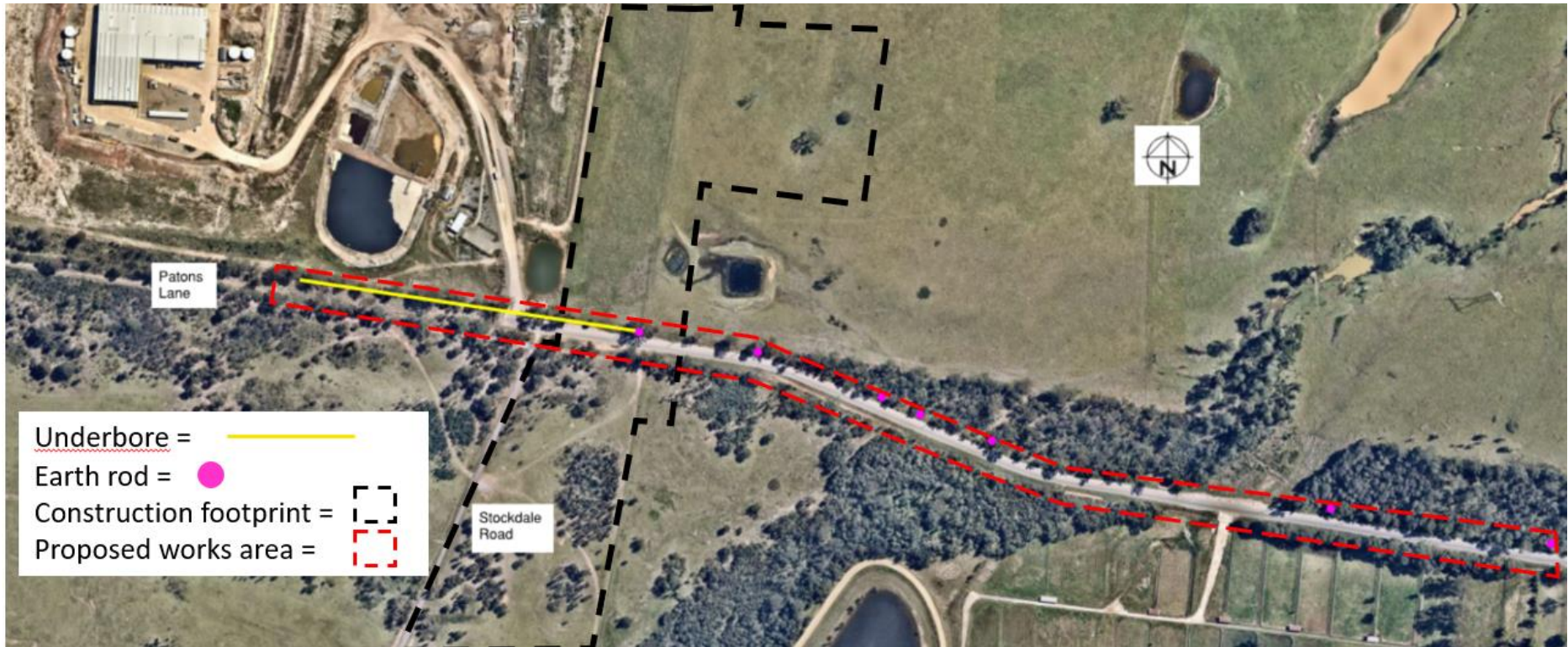


Figure 1 Location of works area,

2. Conditions of Approval

The following table outlines whether the proposed changes would be consistent with the relevant Conditions of Approval.

Table 2 Comparison of the proposal with relevant elements of the Approved Project

Relevant elements of the Approved Project	Proposed Change
<p>Section 8.11.5 of the EIS allows for additional utility works that are required outside of the construction footprint for the project provided the works are consistent with the following performance criteria:</p> <ul style="list-style-type: none"> the works connect to the construction footprint or to a point adjacent to the construction footprint the works have no direct impact on heritage items (including areas of archaeological sensitivity), threatened species, populations or ecological communities beyond the impacts assessed in the Environmental Impact Statement the works can be carried out and managed consistent with the performance outcomes identified in Chapter 27 (Synthesis) or as revised. 	<p>Construction footprint</p> <p>The works connect to the construction footprint from Patons Lane, shown in Figure 1.</p> <p>Non-Aboriginal heritage</p> <p>A search of the State Heritage Register (SHR), Section 170 Heritage and Conservation Registers and Penrith Local Environmental Plan on 1 February 2022 identified one non-Aboriginal heritage item in the vicinity of the works:</p> <ul style="list-style-type: none"> Luddenham Road alignment – local significance (item number 843 under the Penrith Local Environment Plan 2010) <p>Luddenham Road alignment is an item of local heritage significance and is located approximately 230 metres east of the nearest earth rod. No impacts are expected due to the distance between the proposed works and the heritage item.</p> <p>Aboriginal heritage</p> <p>A search of the Aboriginal Heritage Information Management System (AHIMS) on 1 February 2022 identified one site in the vicinity of the works.</p> <p>Sydney Metro also completed utilities investigation for these works in 2021 which included the preparation of a heritage memo (attached). The heritage memo identified one registered Aboriginal site in the vicinity of the works:</p> <ul style="list-style-type: none"> 45-5-5412 – comprises a Potential Archaeological Deposit (PAD) located [REDACTED]. The PAD extends 660 metres by 150 metres across level ground elevated above old channels of South Creek within a large semi-rural property utilised for animal grazing. The PAD displays moderate potential to contain intact subsurface archaeological deposits. <p>One earth rod is located [REDACTED] but would be contained to the road reserve which has been disturbed through road construction, and as a result is considered to be of low archaeological potential. There is no work within the registered PAD so the proposed works are unlikely to have a direct impact on Aboriginal heritage items.</p>

Relevant elements of the Approved Project	Proposed Change
	<p>Biodiversity</p> <p>A search of the SEED Portal undertaken on 31 January 2022 identified areas of PCT849 (Greg box Forest Red Gum grassy woodland on flats of the Cumberland Plain, Sydney Basin) and PCT835 (Forest Red Gum - Rough-barked Apple grassy woodland on alluvial flats of the Cumberland Plain, Sydney Basin Bioregion) along the alignment.</p> <p>The project team have confirmed that impact on vegetation would be minimal, with under boring used to avoid vegetation removal. As no vegetation removal is required the works are consistent with the direct impacts described in the EIS. The proposed works may increase noise, dust, erosion and sedimentation, and cause the introduction of weeds. This is consistent with the indirect impacts described in the EIS.</p> <p>Performance Outcomes</p> <p>The works can be carried out and managed consistent with the performance outcomes (POs) as revised in the SMWSA Submissions Report including:</p> <ul style="list-style-type: none"> • Safe and efficient routes are provided for pedestrians, cyclists and road users at/near construction sites • Safe access to properties and businesses is maintained during construction, unless alternatives are agreed with property owners and businesses • Impacts on areas of archaeological sensitivity potential and significance are avoided or minimised, where practical • Minimise or where possible avoid impacts on threatened flora and fauna species, and ecological communities listed under the Biodiversity Conservation Act 2016 (NSW) and Environment Protection and Biodiversity Conservation Act 1999 (Cth)
<p>SSI CoA A1 – The Proponent must carry out the CSSI in accordance with the terms of this approval and generally in accordance with the:</p> <p>(a) Sydney Metro – Western Sydney Airport Environmental Impact Statement dated 21 October 2020; and</p> <p>(b) Sydney Metro – Western Sydney Airport Submissions Report submitted April 2021.</p>	<p>The proposed works will be carried out generally in accordance with the SMWSA EIS (s8.11.5).</p>
<p>SSI CoA E2 – Minimising clearing of native vegetation</p>	<p>The project team have confirmed that impact on vegetation would be limited to minor trimming and under boring would be used to avoid vegetation removal.</p>
<p>SSI CoA E36 – The Unexpected Heritage Finds and Human Remains Procedure must be implemented</p>	<p>The proposed works will be subject to the Sydney Metro Unexpected Heritage Finds and Human Remains Procedure</p>

Relevant elements of the Approved Project	Proposed Change
SSI CoA E120 – Minimising impacts to utilities infrastructure and disruptions of services.	Sydney Metro are responsible for advising local residents and businesses that may be affected before any planned disruption of services. The design has been reviewed and approved for construction by Endeavour Energy and would be completed by an accredited services provider.
SSI CoA E128 – Erosion and sediment controls must be implemented and maintained consistent with the Blue Book	Erosion and Sediment Control Plans (ESCPs) will be developed for all active worksites in accordance with the Managing Urban Stormwater: Soils and Construction Volume 1 (Landcom 2004) (known as the 'Blue Book'). These will be progressively updated to reflect current site conditions.
EPBC 2020/8687	Not considered further as the works would not impact protected matters or extend into or affect Commonwealth Land.

3. Environmental review

The following table provides a risk review of the potential environmental impacts of the proposed changes.

Table 3 Environmental review

Environmental review	Yes / No	Description of impacts (including consideration of safeguards required by the Approved Project)
Is the proposal to take place outside of the construction footprint of the project	Y	The majority of proposed works would take place adjacent to the construction footprint of the project, however, the EIS considers such works as discussed above. Impacts would be consistent with those assessed in the EIS, are anticipated to be localised, and can be managed appropriately by the existing conditions of approval, revised environmental mitigation measures (REMMs) and performance outcomes.
Is the location of works within the existing EPL premise boundary	N/A	An EPL is not required for the Advanced and Enabling Works (A&EW) scope.
Will the works take longer than 2 weeks to complete	Y	The proposed works are expected to take three months.
Does the work require OOHW approval	N	The proposed works can be completed during standard construction hours, no OOHW are proposed.
Will the works impact an EEC or threatened species	N	The project team have confirmed that impact on vegetation would be limited to minor trimming of trees. This would include threatened ecological communities PCT849 (Greg box Forest Red Gum grassy woodland on flats of the Cumberland Plain, Sydney Basin) and PCT835 (Forest Red Gum - Rough-barked Apple grassy woodland on alluvial flats of the Cumberland Plain, Sydney Basin Bioregion). If required, minor trimming works would be undertaken by a suitably qualified professional to ensure the health and survival of the tree. Under boring would be used to avoid vegetation removal.
Will works impact on native vegetation	N	Impact on vegetation would be limited to minor trimming. Under boring methods will be used to avoid vegetation removal.

Will the works impact on habitat trees	N	Impact on vegetation would be limited to minor trimming. If required, trimming works would be undertaken by a suitably qualified professional to ensure the health and survival of the tree. Under boring methods will be used to avoid vegetation removal.
Will clearing of non-EECs or ground disturbance be of High / moderate condition vegetation. What is the area of impact	N	No clearing is required.
Will the works result in medium / high noise or vibration impacts Will noise and vibration impacts on sensitive receivers be greater than that predicted in the EIA	N	The nearest residential receiver is approximately 270 metres east of the earth rod works and over one kilometre from under-boring works. The proposed works would take place during standard construction hours, trenching works would be located further from receivers than the main construction works identified in the EIS, and the earth rod works would be closer but would not result in any material change to the potential construction noise and vibration impacts predicted in the EIA. Impacts would be managed in accordance with the Construction Noise and Vibration Standard.
Will the works result in Medium/ High air quality impacts	N	The works would involve under boring and installing earth rods and would have a small disturbance area and are not expected to result in medium or high air quality impacts.
Will the activity be located adjacent to or in close proximity to sensitive receivers	N	The works would be located adjacent to an industrial receiver, but the nearest residential receiver is approximately 270 metres east of the works.
Will works impact on an Aboriginal / European heritage site different to that predicted in the EIA	N	One earth rod is located [REDACTED] but would be contained to the road reserve which has been disturbed through road construction, and as a result is considered to be of low archaeological potential. There is no work within the registered PAD. No known European heritage sites are likely to be impacted.
Are works within 10m of a watercourse	N	An unnamed creek does cross Patons Lane but the works would not occur within 10 metres of this creek.
Are works in an area of known contamination	N	The works are not within an area of known contamination.
Will the works result in temporary or long-term traffic impacts	Y	Construction activities would likely result in potential delays caused by: <ul style="list-style-type: none"> • Works that occur outside one of the access points for an industrial facility • A small increase in construction traffic on the local road network There are no anticipated long-term traffic impacts and access to properties would be maintained at all times. Temporary impacts would be localised and can be managed appropriately by the existing conditions of approval, REMMs and performance outcomes.
Will the works result in visual impacts to sensitive receivers	N	The nearest residential receiver is approximately 270 metres east of the works and all permanent works would be underground. As such, no visual impact is expected.
Will the works involve significant earthworks	N	The works would involve under boring and installing earth rods and would have a small disturbance area.

4. Recommendation

Based on the above assessment, and with reference to the SMWSA EIS and Submissions Report, including the conditions of approval and associated CEMP and plans, it is recommended that:

✓	The proposed change is consistent with the Approved Project as described in the SMWSA EIS and Submissions Report including the conditions of approval, has negligible impacts on the community and environment and no further assessment is required.
	The proposed change is likely to be consistent with the Approved Project as described in the SMWSA EIS and Submissions Report, however more than a negligible impact on the community and environment may result and further assessment in the form of a Planning Approval Consistency Assessment form is required to be completed and submitted to the Planning team for the proposed design/ construction change.
	The proposed change is not consistent with or substantially the same as the Approved Project and is considered a radical transformation. A new planning pathway should be considered.

5. Certification

The above information provides a true and fair review of the proposed works.

Prepared by (signed):

[Redacted signature]

Date: 15.02.2022

Name: [Redacted name]

Position: Manager Planning Approvals



6. Endorsement

I have reviewed the above review and provide the following endorsement:

✓	The proposed design/construction change is consistent with the SMWSA EIS and Submissions Report, has negligible impacts on the community and environment and no further assessment or modification of the planning approval is required.
	The proposed design/construction change is likely to be consistent with the SMWSA EIS and Submissions Report, however more than negligible impacts are expected on the community and environment and further assessment is required.
	The proposed design/construction change constitutes a project modification and requires further assessment and approval.

This endorsement is conditional on the following:

1. All works will be carried out in accordance with the SMWSA EIS and Submissions Report and the Project Conditions of Approval.
2. All works will be carried out in accordance with the approved Construction Environmental Management Plan and any relevant sub plans.
3. All works will be carried out in accordance with any additional management measures identified in the Environmental Review, unless otherwise noted by this endorsement.

Comments (if any):	Avoidance of any vegetation impacts needs to be emphasised to design and construction teams
Signed:	
Endorsed by:	
Date:	15/02/2022

Appendix A – Heritage Assessments

Our ref: PR145906-22



Date: 2 July 2021

Sydney Metro



Dear [REDACTED],

Sydney Metro Western Sydney Airport utilities investigation – The Depot

I respond to your enquiry regarding the proposed utility investigation works at The Depot in Orchard Hills. It is understood that RPS is currently undertaking utility investigation works on behalf of Sydney Metro prior to commencement of physical works associated with the proposed Sydney Metro – Western Sydney Airport.

These utility investigation works were not addressed in the previously prepared *Sydney Metro – Western Sydney Airport Environmental Impact Statement (2020)* (EIS) because investigation works are being undertaken as exempt development as defined by *the State Environmental Planning Policy (Infrastructure) 2007* (ISEPP) under the *Environmental Planning and Assessment Act 1979*. As such, an Aboriginal and non-Aboriginal preliminary heritage advice is required prior to investigation works proceeding.

This brief letter:

- outlines the known and potential Aboriginal and non-Aboriginal heritage values on an Environmental Control Map (ECM),
- highlights the requirements of the *National Parks & Wildlife Act 1974* and the *Heritage Act 1977* and
- provides an assessment of the impact that the proposed works may have on heritage values.

This heritage assessment is limited to a desktop assessment. No site inspection of the proposed investigation area was undertaken. This advice has been prepared with reference to:

- Sydney Metro - Western Sydney Airport Environmental Impact Statement (2020)
- Sydney Metro – Western Sydney Airport Technical Paper 4 – Non-Aboriginal heritage (Artefact 2020)
- Sydney Metro - Western Sydney Airport Technical Paper 5 – Aboriginal heritage (AECOM 2020)
- Sydney Metro – Western Sydney Airport Aboriginal heritage and non-Aboriginal heritage fieldwork investigation data supplied by Sydney Metro
- Sydney Metro - Western Sydney Airport Aboriginal Cultural Heritage Management Plan (M2A 2021)

Proposed works

The proposed utility investigation works at The Depot requires the excavation of eight (8) trenches using a vacuum truck. The investigation works are designed to confirm the presence or absence of underground utilities. It is understood that in the case of Trench DP3 and DP4, these are specifically to confirm no utilities are present. The proposed investigation works would be undertaken within existing road reserves of Patons

Lane (DP1, DP2 and DP5) and Luddenham Road (DP7– DP8), Orchard Hills. Trenches DP3 and DP4 would be undertaken around 100 metres north of Paton Road and DP6 around 10 metres west of Luddenham Road. The investigation trenches would be approximately 150 millimetres wide and up to 2 metres long. They would extend to the depth that services are identified and/or to a maximum depth of 1.8 metres.

Proposal area

The proposed Depot investigation area is set within a gently undulating plain dissected with watercourses. It is characterised as agricultural land to the north and south of Patons Lane, with low density residential/small farms to the south east along Luddenham Road. Remnant native vegetation is present along either side of Patons Lane for the length of the proposal area. An ephemeral stream crosses Patons Lane. The stream is a tributary of South Creek whose main branch runs around 500 metres east of the proposal area. Trench DP2 and DP3 are situated adjacent to the ephemeral stream corridor, while Trench DP4 is located around 100 metres east of the stream corridor.

Aboriginal archaeology

Aboriginal Heritage Information Management System (AHIMS)

A search of the AHIMS revealed **no previously registered Aboriginal sites** to be present within the proposed investigation area (Figure 1).

Four AHIMS sites, 45-5-5409, 45-5-5410, 45-5-5412 and 45-5-5413, are located within 400 metres of the proposal area. According to the AHIMS site cards:

- 45-5-5409 comprises two silcrete distal flakes identified on an erosion scour [REDACTED]. The site has been disturbed by the road cutting and tree planting.
- 45-5-5410 comprises a single silcrete flake identified [REDACTED]. The site is considered to be in a disturbed context due to house and driveway construction and the installation of subsurface NBN services.
- 45-5-5412 comprises a Potential Archaeological Deposit (PAD) located [REDACTED]. The PAD extends 660 metres by 150 meters across level ground elevated above old channels of South Creek within a large semi-rural property utilised for animal grazing. The PAD displays moderate potential to contain intact subsurface archaeological deposits. However, no Aboriginal objects associated with this site are included on the site card, or appear to have been identified at the time of the site's recording. The PAD does not extend into the proposed investigation works area, which is contained to the disturbed road reserved.
- 45-5-5413 comprises an isolated artefact identified at [REDACTED] within a heavily eroded and disturbed context. However, the site extent includes land east of Luddenham Road, as it is considered to have moderate archaeological potential due to limited visible disturbance and location on slope and flat landforms above a former channel of South Creek that is now a billabong.

Sydney Metro – Western Sydney Airport Aboriginal heritage fieldwork investigation data

A review of *Sydney Metro Western Sydney Airport Aboriginal heritage fieldwork investigation data* (Figure 1) was consistent with the AHIMS search and indicated **no previously registered Aboriginal sites** to be present within the proposed investigation area.

Only the location of Trench DP1 was assessed in the EIS or the *Sydney Metro – Western Sydney Airport Technical Paper 5 – Aboriginal heritage* (AECOM 2020). The remaining Depot trench locations were excluded from the EIS and AECOM's (2020) investigation. Trench DP1 is included in an Aboriginal Cultural Heritage Management Plan (ACHMP) and as a result is subject to Sydney Metro (2020) *Unexpected Heritage Finds Procedure*.

Sydney Metro - Western Sydney Airport Technical Paper 5 - Aboriginal heritage

AECOM's (2020) investigation of the area immediately west of the proposed investigation area concluded:

- Archaeological sensitivity was identified at multiple points between Orchard Hills and Luddenham. This was due to low levels of past disturbance (based on aerial imagery) and multiple water channels crossing through the area, including Blaxland Creek, an unnamed tributary of South Creek and various unnamed tributaries. The banks either side of these water courses are likely to contain artefact bearing deposits.
- Deerubbin LALC noted that the water channels crossing through this area had cultural significance as part of the larger cultural landscape, connected by water courses which were used in the past as pathways and resource gathering areas.

Sydney Metro – Aboriginal Cultural Heritage Management Plan

M2A (2021) identified two Areas of Unverified Aboriginal Archaeological Sensitivity, the largest where the WSA site crosses Blaxland Creek. These areas were assessed as potentially retaining moderate-to-high potential for the presence of Aboriginal objects in surface and subsurface contexts. Recommendations were made that these areas be subject to a field survey and test excavation program prior to the commencement of construction.

Visual inspection

RPS Senior Heritage Consultant, [REDACTED], and RPS Heritage Manager, [REDACTED] inspected the proposed investigation area on 22 June 2021. The purpose of the inspection was to determine the Aboriginal archaeological sensitivity of Trenches DP 3 and DP4.

Trenches DP3 and DP4 are located in an overhead power line electricity easement around 80 metres north of Patons Lane. The Trenches are located along the boundary of the road reserve with private property on the edge of remnant native vegetation (Plate 1). A free standing air quality monitoring station is currently situated within the vicinity of the proposed Trench DP3 (Plate 2 and Plate 3). The monitoring station appears to be connected through an above ground cable to a generator located on the road verge of Patons Lane (Plate 4 and Plate 5). A free standing solar panel is currently situated within the vicinity of proposed Trench DP4 (Plate 6 to Plate 8).

While ground surface visibility was poor due to dense tall grass cover, no visible evidence of subsurface utilities or significant ground disturbance was identified during the inspection in the vicinity of proposed Trenches DP3 and DP4. No Aboriginal objects were identified during the visual inspection of Trenches DP3 and DP4.

Plate 1: View north toward approximate location of Trenches DP3 and DP4 (RPS 2021)



Plate 2: View west along fence line toward proposed location of Trench DP3 and remnant native vegetation (RPS 2021)



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Plate 3: View west across proposed location of Trench DP3 showing free standing air quality monitoring station, dense grass cover and remnant native vegetation (RPS 2021)



Plate 4: Detail of above ground cable conduit from air quality monitoring station leading to a generator (RPS 2021)



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Plate 5: View north of generator for air quality monitoring station (note above ground cable conduit) located adjacent to Patons Lane (RPS 2021)



Plate 6: View north east across approximate location of Trench DP4 showing free standing solar panel and remnant native vegetation (RPS 2021)



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Plate 7: View north east across proposed location of Trench DP4 showing dense grass cover and remnant native vegetation (RPS 2021)



Plate 8: View east along fence line toward approximate location of Trench DP 4 (RPS 2021)



Impact assessment

Discussion

No previously registered Aboriginal sites are present within the proposed investigation area. However, AHIMS site 45-5-5412, comprising a large PAD, is [REDACTED]. These Trenches would be contained to the road reserve, which has been disturbed through road construction and utility installation, and as a result are considered to be of low archaeological potential.

Trench DP1 was assessed in the EIS is unlikely to impact archaeological objects.

Trench DP2 and DP3 are located immediately adjacent to an ephemeral stream, with Trench DP4 located around 100 metres from the stream, which is a tributary of South Creek. According to AECOM (2020) and M2A (2021) these three locations would be considered Areas of Unverified Aboriginal Archaeological Sensitivity. However, the ephemeral nature of this watercourse reduces its archaeological sensitivity to moderate, as it was likely to have only been utilised seasonally.

The likely disturbed nature of the road reserve due to road and bridge construction further reduces the archaeological sensitivity of DP2. Resultantly, the archaeological sensitivity for Trench DP2 is considered low.

Neither the visual inspection or Dial Before you Dig (DBYD) data identified underground utilities or areas of significant ground disturbance within the proposed locations of Trench DP3 or DP4. The archaeological sensitivity for Trenches DP3 and DP4 is considered moderate.

The proposed investigation works is unlikely to impact Aboriginal objects within Trenches DP1, DP2, DP5 – DP8 given the low archaeological potential and the likely disturbed nature of these trench locations. However, the proposed investigation may impact Aboriginal objects within Trenches DP3 and DP4 given the moderate archaeological potential of these trench locations and their apparent undisturbed nature.

AHIMS site impact statements

AHIMS site 45-5-5409

The proposed investigation works would not impact AHIMS site 45-5-5409 as no investigation work is proposed within, or in the immediate vicinity of it.

AHIMS site 45-5-5410

The proposed investigation works would not impact AHIMS site 45-5-5410 as no investigation work is proposed within, or in the immediate vicinity of it.

AHIMS site 45-5-5412

The proposed investigation works would not impact AHIMS site 45-5-5412 as no investigation work is proposed within the site extent. [REDACTED]

[REDACTED]. Investigation works would be contained to the disturbed road reserve. Recommendations have been made to follow the *Sydney Metro Unexpected Heritage Finds Procedure* (2020) at the location of Trenches DP6, DP7 and DP8 as an additional mitigation measure.

AHIMS site 45-5-5413

The proposed investigation works would not impact AHIMS site 45-5-5413 as no investigation work is proposed within, or in the immediate vicinity of it.

Non-Aboriginal heritage

This preliminary non-Aboriginal heritage advice has been prepared with reference to the *Environmental Protection and Biodiversity Act 1999* (EPBC Act), the *Heritage Act 1977* and relevant policies of Heritage NSW including NSW Heritage Manual *Assessing Heritage Significance* and the Heritage Council's *Assessing Significance for Historical Archaeological Sites and 'Relics'*.

Where relevant, existing statements of heritage significance have been utilised, updated significance assessments have not been prepared.

Statutory heritage listings

A search of the following heritage registers was undertaken:

- World Heritage List
- National Heritage List
- Commonwealth Heritage List
- State Heritage Register
- Penrith Local Environmental Plan 2010

One heritage item, *Luddenham Road Alignment* (Penrith LEP 2010 Item No. 843) is located within the proposed investigation area (Figure 2). Trenches DP7 and DP8 are located either wholly or partially within its heritage curtilage, with Trench DP6 located immediately adjacent.

Leeholme Horse Stud Rotunda (Penrith LEP 2010 Item No. 232) is located around 200 metres north of the proposed investigation Trench DP8.

Sydney Metro – Western Sydney Airport Technical Paper 4: Non-Aboriginal heritage

The Depot investigation area was not assessed in the EIS or the *Sydney Metro – Western Sydney Airport Technical Paper 4 – non-Aboriginal heritage* (Artefact 2020).

Impact assessment

Luddenham Road Alignment (Penrith LEP 2010 Item No. 843)

The statement of significance for *Luddenham Road Alignment* as presented on the State Heritage Inventory (SHI) is:

Luddenham Road provides evidence of the early nineteenth century pastoral activities in the Penrith region, connecting the estates of Luddenham and Lee Holme owned by brothers John and Gregory Blaxland respectively. It continued to be an important link through the nineteenth century, connecting Bringelly with St Marys.

The sparsely settled landscape around Luddenham Road and the long surviving post and rail fencing continue to provide evidence of the predominant pastoral activities in the district in the nineteenth century through to the present time (2008) and give the road a high level of aesthetic appeal.¹

No archaeological potential is identified in the SHI for *Luddenham Road Alignment*. It is the alignment and intact surrounding landscape that has been assessed as significant. No former road surfaces appear to be present and no post and rail fence appears to survive within the immediate vicinity of the proposed investigation works.

While Trenches DP7 and DP8 are located within the heritage curtilage of the item, they would have no direct physical impact on the heritage item as they would not impact significant fabric, and the archaeological potential of the item appears to be low. Trench DP6 is located outside the heritage curtilage at the junction of Luddenham Road with Patons Lane and therefore would also have no direct physical impact on the heritage item. Additionally, investigation works would be contained to the road reserve, which has likely been disturbed through road construction and utility installation.

Conclusion and recommendations

Proposed investigation works at The Depot would be contained to the road reserve. Subsurface deposits within the road reserve immediately adjacent to Patons Lane and Luddenham Road have likely been disturbed by road construction and potential utility installation.

¹ Heritage NSW 2021, Luddenham Road Alignment, available online at <https://www.hms.heritage.nsw.gov.au/App/Item/ViewItem?itemId=2260843>, accessed 31 May 2021.

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Proposed investigation works at Trenches DP1 – DP2 and DP5 – DP8 are unlikely to impact Aboriginal objects given their low archaeological potential due to the likely disturbed nature of the road reserves in which they are located.

Proposed investigation works at Trenches DP3 and DP4 may impact Aboriginal objects given the moderate archaeological potential of these Trench locations and their seemingly undisturbed nature. Recommendations have been made to mitigate potential impacts through either abandoning these Trench locations or proving their disturbed nature prior to works proceeding.

The proposed investigation works would not impact AHIMS sites 45-5-5409, 45-5-5410 and 45-5-5413 as no investigation works are proposed within, or in the immediate vicinity of these AHIMS sites.

The proposed investigation works would not impact AHIMS site 45-5-5412 as no investigation work is proposed within the site extent. The extent of the site is not considered to extend into the adjacent disturbed road reserve in which Trenches DP6, DP7 and DP8 are located. Investigation works would be contained to the disturbed road reserve. Recommendations have been made to follow the *Sydney Metro Unexpected Heritage Finds Procedure (2020)* at the location of Trenches DP6, DP7 and DP8 as an additional mitigation measure.

Investigation works within, and immediately adjacent to, *Luddenham Road Alignment* (Penrith LEP 2010 Item No. 843) would have no impact on the heritage item as works would not impact significant fabric, and the archaeological potential of the item appears to be low.

Works can proceed in relation to heritage matters at Trenches DP1 – DP2 and DP5 – DP8. No further assessment is required for Trenches DP1 – DP2 and DP5 – DP8.

Works should not proceed at Trenches DP3 and DP4. If works are required to proceed for Trenches DP3 and DP4, proof of their disturbed nature should be obtained and an updated impact assessment in regards to Aboriginal cultural heritage completed.

It is recommended:

Recommendation 1: Protection of significant fabric

Works should be undertaken with care. Works and plant equipment should remain at a minimum of distance of 2 metres to any post and rail fencing, if present, within the vicinity of proposed works to avoid inadvertent harm to significant fabric.

Recommendation 2: Works in relation to Trenches DP3 and DP4

Proposed investigation works should not proceed at Trenches DP3 and DP4.

Recommendation 3: Unexpected finds procedure

In the unlikely event that Aboriginal objects or non-Aboriginal heritage are identified during the proposed work, the *Sydney Metro Unexpected Heritage Finds Procedure (2020)* should be followed.

Trench	Location	Aboriginal archaeological sensitivity	Non-Aboriginal archaeological sensitivity	Can works proceed?	Recommendation/mitigation measures
DP1	Road reserve	Low	Low	Yes – works can proceed	Recommendation 3 - Sydney Metro unexpected finds procedure
DP2	Road reserve	Low-Moderate	Low	Yes – works can proceed	Recommendation 3 - Sydney Metro unexpected finds procedure
DP3	Floodplain adjacent to watercourse	Moderate	Low	No – work's should not proceed	Recommendation 2 – Works in relation to Trenches DP3 and DP4
DP4	Plain within 100 meters of watercourse	Moderate	Low	No – work's should not proceed	Recommendation 2 - Works in relation to Trenches DP3 and DP4

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Trench	Location	Aboriginal archaeological sensitivity	Non-Aboriginal archaeological sensitivity	Can works proceed?	Recommendation/mitigation measures
DP5	Road reserve	Low	Low	Yes – works can proceed	Recommendation 3 - Sydney Metro unexpected finds procedure
DP6	Plain	Low	Low	Yes – works can proceed	Recommendation 1 – Protection of significant fabric Recommendation 3 - Sydney Metro unexpected finds procedure
DP7	Road reserve	Low	Low	Yes – works can proceed	Recommendation 1 – Protection of significant fabric Recommendation 3 - Sydney Metro unexpected finds procedure
DP8	Road reserve	Low	Low	Yes – works can proceed	Recommendation 1 – Protection of significant fabric Recommendation 3 - Sydney Metro unexpected finds procedure

Yours sincerely,
for RPS Australia East Pty Ltd

[Redacted signature block]

Appendix B – Desktop Searches



The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of Heritage NSW AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

1	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the [NSW Government Gazette \(https://www.legislation.nsw.gov.au/gazette\)](https://www.legislation.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Heritage NSW upon request

Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not to be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Heritage NSW and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date. Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.



Legend

- State Heritage Register
- Aboriginal Place
- Local Environmental Plan
 - Cluster (label denotes number)
- Aboriginal Place
 - Cluster (label denotes number)
- State Heritage Register
 - Cluster (label denotes number)
- Interim Heritage Order
 - Cluster (label denotes number)




1: 9,028




Notes

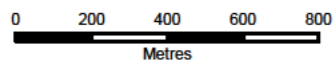
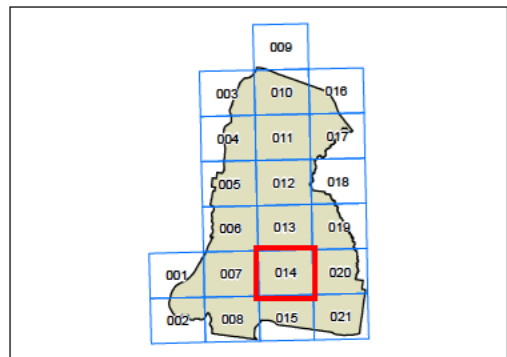
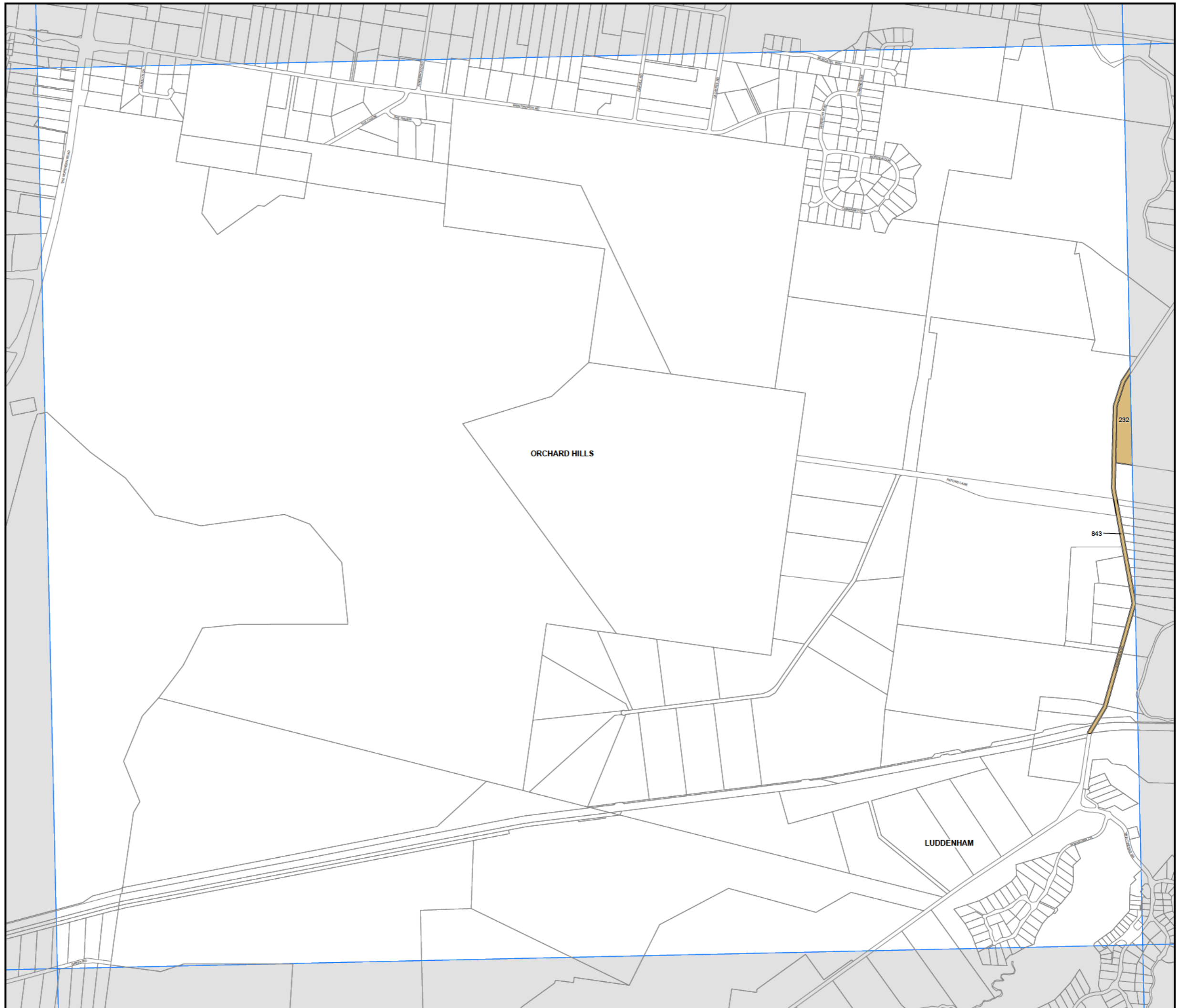
Notes

Heritage

-  Conservation Area - General
-  Item - General
-  Item - Archaeological

Cadastral

-  Cadastral 25/08/2020 © Penrith City Council





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