

Sydney Metro WSA - SSTOM - OHE - Kent Road Watermain - Environmental Review 002

SMWSASSM-PLD-OHE-SN150-SP-RPT-000001

Parklife Metro D&C

Version Control

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Signature	
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Planning Approval Environmental Review Form

SM-22-00008046

Sydney Metro – Metro Body of Knowledge (MBoK)

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Table of Contents

Environmental Review	3
1. Proposed works and justification.....	3
2. Consistency with Conditions of Approval	7
3. Environmental review	13
4. Recommendation.....	17
5. Certification.....	17
6. Endorsement	18

Environmental Review

1. Proposed works and justification

An environmental review is applicable to design changes which are consistent with the conditions of approval and would have negligible impacts on the community and/or the environment. This environmental review is required to demonstrate compliance with the conditions of approval and the Sydney Metro – Western Sydney Airport (SM-WSA) Environmental Impact Statement (EIS) and Submissions Report. 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	<p>The work will occur:</p> <ul style="list-style-type: none"> • Along Kent Road between Caddens Road and the M4 overpass, generally on the west road verge of Kent Road • Along Kent Road between the south side of the M4 overpass to the Orchard Hills precinct, generally on the east road verge of Kent Road <p>The location of works is as shown in Figure 1 below and in the detailed Figures in Appendix A. All work would be located within the road reserve. The work area along Kent Road is generally flat with a fall to local road drainage.</p>
Scope of works	<p>The scope of work includes investigation stage and construction stage work for the Kent Road Watermain. The scope of work does not include watermain work along Kent Road where work is within the existing approved construction footprint.</p> <p>Investigations</p> <p>Utility investigations will supplement initial desktop studies and ‘Dial Before You Dig’ (DBYD) information. The works will provide positive confirmation of utility locations to finalise design and ensure safety of workers during construction. Work will include:</p> <p><u>Utility investigations</u></p> <ul style="list-style-type: none"> • Field inspection and survey • Electronic detection and location and ground penetrating radar (GPR) • Pothole (x1) and trench (x9) to expose existing services as per utility providers DBYD guidelines <p><u>Geotechnical investigations</u> and soil testing are necessary to satisfy Sydney Water design requirements.</p> <ul style="list-style-type: none"> • Additional geotechnical bores <p>Construction</p> <p><u>Watermain construction</u></p> <ul style="list-style-type: none"> • Standard open trench pipelaying construction methods to be used between Caddens Road and the Orchard Hills precinct. • Connect to the existing watermain north and south of the Kent Road M4 overpass (It is noted that there is an existing twin watermain within the bridge deck of the Kent Road overpass. Sydney Water has identified this section of watermain has appropriate capacity for water supply from Caddens Road. No work is therefore required to cross the M4 motorway).

	<p>It is noted that the watermain construction works will also extend into the Orchard Hills precinct area which is within the existing construction footprint as assessed in the EIS. Watermain works within this area do not form part of this Environmental Review.</p>												
<p>Justification for works</p>	<p>Permanent water supply is required to the Orchard Hills Precinct. Sydney Water has issued a Notice of Requirements which requires PLM D&C to connect the Orchard Hills watermain supply to a point on Caddens Road, just west of Kent Road. As the preliminary tender design nominated a watermain connection point on Kent Road just south of the M4, additional investigations are now required to inform design. Construction of the watermain is required to meet Sydney Water technical requirements.</p> <p>The SM-WSA EIS outlines the approach that should be taken to identifying and selecting additional utility works. This review addresses that process in Section 2 below</p>												
<p>Timeframe for works</p>	<p><u>Investigations (includes non-intrusive and intrusive investigations)</u></p> <ul style="list-style-type: none"> • 5 days/ nights. Start April 2024 <p><u>Construction</u></p> <ul style="list-style-type: none"> • M4 to Caddens Road - 10 weeks which includes allowance for OOHW required for ROLs • M4 to Precinct – 6 weeks <p>Start July 2024</p> <p>Where required works will be subject to OOHW approval and road occupancy licences (ROLs)</p>												
<p>Work hours, workforce and equipment / machinery</p>	<p><u>Non-intrusive investigations</u></p> <table border="1" data-bbox="578 1150 1351 1535"> <thead> <tr> <th>Works</th> <th>Method</th> <th>Personnel and equipment</th> </tr> </thead> <tbody> <tr> <td>Survey</td> <td> -Standard survey equipment including tripod and theodolite -Hand operated detection and GPR equipment -Foot access only -Survey would include inverts of utility pits where required and pit lids to be lifted as required -No removal of vegetation for access or survey </td> <td> 2 x surveyors 1-2 light vehicles 1 x total survey station / jigger 2 x utility search operators / GPR operators More than 1 survey team may be working </td> </tr> </tbody> </table> <p><u>Intrusive investigations</u></p> <table border="1" data-bbox="578 1608 1351 1890"> <thead> <tr> <th>Works</th> <th>Method</th> <th>Personnel and equipment</th> </tr> </thead> <tbody> <tr> <td>Potholing & slit trenching</td> <td> - Traffic control and barriers as per TMP -Concrete saw for road opening -Vacuum truck or excavator as required -Expose utility and survey </td> <td> 1 x Vacuum Truck 1 x 5t Excavator 1 x Road Saw 1 x 8t Tipper 2x Traffic control vehicles 1 x Rammer 1 x Vibrating plate </td> </tr> </tbody> </table>	Works	Method	Personnel and equipment	Survey	-Standard survey equipment including tripod and theodolite -Hand operated detection and GPR equipment -Foot access only -Survey would include inverts of utility pits where required and pit lids to be lifted as required -No removal of vegetation for access or survey	2 x surveyors 1-2 light vehicles 1 x total survey station / jigger 2 x utility search operators / GPR operators More than 1 survey team may be working	Works	Method	Personnel and equipment	Potholing & slit trenching	- Traffic control and barriers as per TMP -Concrete saw for road opening -Vacuum truck or excavator as required -Expose utility and survey	1 x Vacuum Truck 1 x 5t Excavator 1 x Road Saw 1 x 8t Tipper 2x Traffic control vehicles 1 x Rammer 1 x Vibrating plate
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	-Backfill and make good surface	Survey Equipment 2-3 x Day Makers Up to 10 workers may be on site
Geotechnical borehole	-Standard method with small truck mounted drill rig (or similar) -No removal of vegetation for access or survey	As above Drill-rig

Watermain construction

Works	Method	Personnel and equipment
Excavation	-Traffic control and barriers as per TMP for each work period -Concrete saw for road opening -Excavation to required depth and placement of bedding material	1 x 5t Excavator 1 x Road Saw 1 x 8t Tipper 2-3 x Day Makers 2 x Traffic control vehicles Up to 10-20 workers may be on site
Pipelaying and backfill	-Pipes will be hand lifted or placed with excavator -Pipe joining and fixtures to be installed -Length of open trench to be minimised and backfilled on completion of section	1 x 5t Excavator 1 x Franna crane (pipe delivery) 1 x Delivery trucks 3 x Day Makers 2 x Traffic control vehicles Up to 10-20 workers may be on site
Testing and commissioning	In conjunction with Sydney Water	2 x Sydney Water truck 2 x Traffic control vehicles Up to 10 workers may be on site
Final connection and cutover (Scheduled for Jan 2025)	In conjunction with Sydney Water	2 x Sydney Water truck 2 x Traffic control vehicles Up to 10 workers may be on site

Whenever possible work would be carried out during standard work hours as set out in Condition E38 of the Conditions of Approval (CoA).

- (a) 7:00am to 6:00pm Mondays to Fridays, inclusive;
- (b) 8:00am to 1:00pm Saturdays; and
- (c) at no time on Sundays or public holidays

Out of hours works (OOHW) are anticipated due to road occupancy conditions. Where this is required Parklife Metro will scope works to prioritise use of evening works hours as far as possible within the ROL conditions

- OOH Evening 6.00pm to 10.00pm Monday to Saturday and 6.00pm to 10.00pm Sunday
- OOH Night from 10.00pm to 7.00am Monday to Friday and from 10.00pm to 8.00am Saturday, Sunday and public holidays

Any OOHW would be carried out under the SSTOM package Environmental Protection Licence (EPL), in accordance with Condition E41(c)(i) which permits different construction hours where an EPL is in force.



Figure 1 Location of works area

2. Consistency with 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 Orchard Hills Station as shown in Figure 1 above.</p> <p>The works are considered contiguous as the pipeline, once joined with the existing watermain on the Kent Road overpass, will operate as a single connecting water supply line between Caddens Road and the Orchard Hills precinct, as required by Sydney Water.</p>

Aboriginal Heritage

A review of the EIS and associated documentation identified four Aboriginal heritage items within the vicinity of Kent Road.

AHIMS site	Description	Site Status and mitigation measures
45-5-4424 – Kent Road North 13	Site is described as an artefact, located east of Kent Road	Destroyed No additional mitigation
45-5-4429 - M4 North 1	Site is described as an artefact, located east of Kent Road	Destroyed No additional mitigation
45-5-4423 - GSS	Artefact scatter	Valid (partial impact) Site to be marked on ECM and included in induction as a 'No-go zone'
45-5-4431 Kent Rd South 12B	Site is described as an artefact,	Destroyed No additional mitigation



A search of the Aboriginal Heritage Information Management Sydney (search date 1/2/24) confirmed no new sites in the vicinity of work.

It is noted that Aboriginal Heritage Impact Permit (AHIP C0000637), for upgrades to Kent Road and Gipps Street at Claremont Meadows, was granted 5 November 2014. This permit authorised impacts to the AHIMS sites above. The extent of the AHIP is shown in Appendix A.

In accordance with Revised Environmental Mitigation Measure (REMM) AH9 works within the bounds of existing Aboriginal Heritage Impact Permit areas will be undertaken in accordance with the conditions of those permits and with permission from the relevant Aboriginal Heritage Impact Permit holder, as discussed further below

As seen in the Figures in Appendix A the existing utility corridor is highly disturbed (utilities including telecommunications, electrical, gas, sewer and water). The work area is within the road reserve and including in the formed batters of the M4 on and off ramps. As noted in the construction methodology, most of the watermain works will be in areas where pavement / concrete will need to be removed.

The extent of disturbance and evidence of prior investigation in this location (through the AHIP process) indicates a very low probability of unknown Aboriginal objects occurring in the work area. The Unexpected Heritage Finds Procedure would be implemented during work.

	<p>Non-Aboriginal Heritage</p> <p>No non-Aboriginal heritage items have been identified in the vicinity of the work area. The Unexpected Heritage Finds Procedure would be implemented during work.</p>
	<p>Flora and Fauna</p> <p>Small stands of vegetation, described as thinned Cumberland Plain Forest, are located approximately 10-15m west of the works area on Kent Road and within the embankments of the east and westbound slip roads to the M4. (as shown in the ECM in Appendix B). Cumberland Plain Woodland is listed as Critically Endangered under the Biodiversity Conservation Act 2016.</p> <p>The remainder of the vegetation along the route consists of planted groundcover in the landscape strip separating Kent Road from the pedestrian path and a planted embankment approximately 130m long from the M4 north along Kent Road, consisting of <i>Acacia sp.</i> and weedy groundcover as shown in the photographs below.</p> <p>The work will avoid removal of trees or significant vegetation. No works have been identified in the tree protection zones of any trees along the work area.</p> <p>No-go zones, as shown on the ECM, will be communicated to the workforce to ensure no inadvertent damage to sensitive vegetation.</p> <p>Restoration of any disturbed landscape areas will be in accordance with Project and TfNSW requirements.</p> <div data-bbox="834 1136 1360 1417" style="border: 1px solid black; text-align: center;">  </div> <p style="text-align: center;">Kent Road looking north to Caddens Road</p> <div data-bbox="834 1465 1360 1747" style="border: 1px solid black; text-align: center;">  </div> <p style="text-align: center;">Kent Road looking south to M4</p>

	<p>Performance Outcomes</p> <p>The works can be managed consistent with relevant performance outcomes (POs) as revised in the SMWSA Submissions Report including:</p> <ul style="list-style-type: none"> • Safe and efficient routes will be 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 • Construction noise and vibration impacts on local communities (including airborne noise and ground borne noise and vibration) will be managed in accordance with the Noise and Vibration Management Sub-plan - SMWSASSM-PLD-1NL-PC-PLN-000024, (which includes reference to the Construction Noise and Vibration Standard and the Interim Construction Noise Guideline) and the Project EPL conditions. • The work will 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 E2 – Minimising clearing of native vegetation</p>	<p>The project team have confirmed that clearing of trees or significant vegetation would not be required as works will be undertaken in the carriage way of the road, the cleared road reserve area and mown grassed areas (adjacent to M4 on and off ramps).</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>
<p>SSI CoA E41(c)(i) By Approval, including Where different construction hours are permitted or required under an EPL in force in respect of the CSSI;</p>	<p>Any OOHW required will be undertaken in accordance with the approved Parklife Metro Noise and Vibration Management Sub-plan - SMWSASSM-PLD-1NL-PC-PLN-000024. The works will be subject to the SSTOM package EPL no. 21807, and will be approved as per the requirements of this EPL, which permit out of hours works in accordance with Condition E41(c)(i).</p> <p>In accordance with Condition E47, a DNVIS would be prepared where works are required to be undertaken outside of standard construction hours and result in exceedances of the applicable NML or exceed the vibration criteria. A DNVIS will be prepared for these works as the preliminary noise assessment indicated exceedances of the evening and nighttime NMLs</p> <p>Condition E42, Out-of-Hours Work (OOHW) Protocol, is therefore not applicable to these works.</p>

<p>SSI CoA E64 – The CSSI must be constructed and operated with the objective of minimising light spill to surrounding properties. All lighting associated with the CSSI must be consistent with the requirements of:</p> <ul style="list-style-type: none"> ASINZS 4282:2019 Control of the obtrusive effects of outdoor lighting, relevant Australian Standards in the series ASINZS 1158 - Lighting for Roads and Public Spaces; NASF Guideline E: Managing the Risk of Distractions to Pilots from Lighting in the Vicinity of Airports; and NASF Guideline C: Managing the risk of wildlife strikes in the vicinity of airports. <p>Mitigation measures must be provided to manage residual night lighting impacts to protect properties adjoining or adjacent to the CSSI, in consultation with affected landowners.</p>	<p>Any night lighting required during OOHW will be managed in accordance with the appropriate guidelines to minimise light spill and impacts to sensitive receivers as outlined in the approved Visual Amenity Management Sub-plan SMWSASSM-PLD-1NL-PC-PLN-000027.</p>
<p>SSI CoA E99 – The Unexpected Contaminated Land and Asbestos Finds Procedure must be implemented throughout construction.</p>	<p>The Contamination and Asbestos Unexpected Find Procedure has been prepared as part of the approved Soil and Water Management Sub-plan SMWSASSM-PLD-1NL-PC-PLN-0000. The Procedure will be implemented throughout the work</p>
<p>SSI CoA E110 – Access to all utilities and properties must be maintained during works, unless otherwise agreed with the relevant utility owner, landowner or occupier.</p>	<p>The design has been determined in accordance with Sydney Water requirements through an approved Water Service Coordinator. Parklife Metro community consultation team will consult with residential landholders along the watermain route in accordance with the approved Community Communications Strategy – Delivery SMWSASSM-PLD-1NL-PC-PLN-000065.</p>
<p>SSI CoA E120 – Minimising impacts to utilities infrastructure and disruptions of services</p>	<p>The design has been finalised in accordance with Sydney Water requirements through an approved Water Service Coordinator. Construction works with the potential to cause disruption to supply may occur during the testing and commissioning phase and during final cutover. These works will be undertaken in conjunction with specialised Sydney Water crews. Parklife Metro will work with Sydney Water during these phases and implement standard Sydney Water process and procedures to minimise the potential for any unplanned service disruption.</p>
<p>SSI CoA E128 – Erosion and sediment controls must be implemented and maintained consistent with the Blue Book</p>	<p>A work-specific Erosion and Sediment Control Plans (ESCPs) will be developed for the work in accordance with the approved Soil and Water Management Sub-plan - SMWSASSM-PLD-1NL-PC-PLN-000020. All ESCPs are prepared and implemented in a manner consistent with currently accepted Best Management Practice (i.e. Managing Urban Stormwater: Soils and Construction 4th Edition Landcom, 2004 (Blue Book))</p>

An Aboriginal Heritage Impact Permit (AHIP) No. C0000636 was issued 5 November 2014 to Roads and Maritime Service (RMS) for the Werrington Arterial Road Stage 1 M4 Motorway - Great Western Highway Project. The land to which this AHIP applies also encompasses the Kent Road watermain works. Construction of the Werrington Arterial Road Stage 1 works (as shown in the Figure below) were completed in 2017.

The Review of Environmental Factors for the Werrington Arterial Road Stage 1 Project (Aurecon, November 2012) including the Cultural Heritage Assessment Report (Kelleher Nightingale Consulting, September 2012) along with the AHIP conditions have been reviewed in the context of the proposed Kent Road Watermain works.

REMM AH9 – Works within the bounds of existing Aboriginal Heritage Impact Permit areas should be undertaken in accordance with the conditions of those permits and with permission from the relevant Aboriginal Heritage Impact Permit holder. Works undertaken within the revised boundaries on Defence Establishment Orchard Hills (Commonwealth land) should be undertaken in accordance with the Defence Establishment Orchard Hills Heritage Management Plan.



Extract REF Aurecon, November 2012 scope of work

The results of the Kelleher Nightingale field survey, consultation with registered Aboriginal parties, and the subsequent assessment determined that no sub-surface testing would be required. Schedule C of the AHIP allowed harm to eight (8) Aboriginal objects which includes those identified in the table above. The AHIP did not specify any movement, salvage, community collection or other actions to be applied. The AHIP does require that any human remains must not be harmed if discovered.

	<p>The REF and subsequent Submissions Report (Aurecon, June 2013) identified the following relevant mitigation measures in relation to Aboriginal heritage:</p> <ul style="list-style-type: none"> • In the event of an unexpected find of an Aboriginal item (or suspected item), work would cease in the affected area and RMS' Regional Environmental Officer, Sydney Region and the RMS Senior Environmental Specialist (Aboriginal heritage), would be contacted for advice on how to proceed. • The 'Unexpected Finds Procedure' (RTA 2011b) would be followed in the event of the uncovering of a potential item. • RMS would advise all on-site construction personnel and contractors, of the relevant heritage legislative requirements. • All human remains in, on or under the land must not be harmed. <p>It is concluded that the proposed watermain works can be carried out in a manner consistent with the conditions and mitigation measures described in AHIP no C0000636 and associated REF. Specifically, the Sydney Metro Unexpected Heritage Finds Procedure will apply, and all workers will be made aware of Aboriginal heritage requirements.</p> <p>Sydney Metro and PLM will advise Sydney Roads of works within the bounds of the existing Aboriginal Heritage Impact Permit prior to the works occurring. Any unexpected finds in this area must also be notified to Sydney Roads.</p>
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3. Environmental review

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

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	Yes	<p>The watermain connects the Orchard Hills station area to the existing Sydney Water potable water network at Caddens Road. The connection point and size of the reticulation pipe are determined by Sydney Water requirements and document in the Notice of Requirements (NOR). The EIS considered such utility works as discussed above.</p> <p>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</p>
Is the location of works within the existing EPL premise boundary	No	<p>EPL no. 21807 has been issued to Webuild S.P.A for the Sydney Metro Western Sydney Airport - Stations, Systems, Trains, Operations and Maintenance (SSTOM) Package.</p> <p>Prior to the works commencing Parklife Metro will update the premise map boundary to include the work area required for</p>

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		the watermain works. The current project premise maps are available to view on the Parklife Metro website https://parklifemetro.com.au/project/ .
Will the works take longer than 2 weeks to complete.	Yes	The construction works will take approximately 16 weeks to complete. As the works will be undertaken in a progressive manner receivers will only be impacted for a portion of the works duration, not the full 16-week construction period. Potential community impacts will be managed through the consultation and OOHW process. Potential traffic management will be managed through the traffic management process and include consultation with the TTLG and Smart Motorways Group along with works in accordance with required ROLs.
Does the work require OOHW approval	Yes	OOHW are anticipated for the works and will be determined by ROL conditions when issued. Where OOHW are required additional assessment and approval processes would be followed, in accordance with the PLM OOHW Procedure for the project
Will the works impact an EEC or threatened species	No	The clearing of EEC and impacts to threatened species are not required. ECMs will identify areas of biodiversity sensitivity
Will works impact on native vegetation	No	The clearing of native vegetation is not required.
Will the works impact on habitat trees	No	Clearing habitat trees is not required.
Will clearing of non EECs or ground disturbance be of High / moderate condition vegetation. What is the area of impact	No	No clearing or ground disturbance in areas of high or moderate value vegetation will occur. As works will be undertaken in the carriage way of the road, the cleared road reserve area and/or disturbed grassed areas, there will be no impact to areas of high or moderate condition vegetation.
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	Yes	The area surrounding Kent Road is highly urbanised with residential receivers east and west of Kent Road on Doncaster Ave and Punjab St respectively. Ambient noise conditions are dominated by traffic along the M4 Western Motorway and Gipps Street. A preliminary noise assessment was carried out to determine the likely noise impacts from the investigation works. A basic point to point assessment was carried out on the worst-case noise scenario: 1. Concrete saw cutting, to open road pavement, with the nearest residential receiver located 20m from the work. The assessment concluded that concrete saw cutting activities would exceed the NMLs for standard, evening and night-time work hours. Sleep disturbance levels would also be exceeded. A copy of the preliminary noise assessment is included in Appendix C. To ensure appropriate management of noise impacts a DNVIS would be prepared as required for these works. Mitigation measures included in the DNVIS would be implemented and would include any additional mitigation measures (AMM) which may include: phone calls, monitoring, individual briefings, alternative accommodation, specific notification, letterbox drops, duration reduction and Project specific respite offer (RO). Other mitigation measures may include:

		<p>-scheduling of noisiest work as early as possible in the work period to minimise disturbance to residential areas</p> <p>-use of temporary noise barriers around plant and equipment</p> <p>The DNVIS would be provided to the ER prior to the commencement of work.</p>
Will the works result in medium/high air quality impacts	No	<p>Possible air quality impacts include dust and particulates generated from plant and equipment as well as excavation activities. With the implementation of mitigation measures included in the Air Quality Management Sub-Plan SMWSASSM-PLD-1NL-PC-PLN-000028 impacts would be managed.</p>
Will the activity be located adjacent to or in close proximity to sensitive receivers	Yes	<p>The works would be located adjacent to residential properties along Caddens Road, Doncaster Avenue, Punjab Street and Kent Road. There is one childcare centre (96 Doncaster Ace, Claremont Meadows)</p> <p>Works would occur progressively so the area of impact would be limited at any one time.</p> <p>Sensitive receivers would be notified of the upcoming works. Further community notification and mitigation measures would also be completed for OOHW.</p>
Would there be additional impact from what was predicted in the EIS on an Aboriginal / Historic heritage site as a result of the works	No	<p>No Aboriginal or non-Aboriginal heritage sites are likely to be impacted due to the distance between the proposed works and existing heritage sites. Heritage areas will be identified on the ECMs.</p> <p>The Unexpected Heritage Finds Procedure will be implemented for the works</p> <p>Prior to works commencing, a toolbox will be delivered to the workforce to communicate the requirements of the Unexpected Finds Procedure as well as the location of the identified AHIMS sites.</p>
Are works within 10m of a watercourse	No	<p>The proposed works do not cross any creeklines or waterways.</p> <p>Erosion and Sediment Control Plans (ESCPs) will be developed for the works in accordance with the approved Soil and Water Management Sub-plan - SMWSASSM-PLD-1NL-PC-PLN-000020 which includes. The road surface will be re-instated following the completion of the proposed works.</p>
Are works in an area of known contamination	No	<p>A search of the contaminated sites register https://app.epa.nsw.gov.au/prclmapp/searchregister.aspx did not identify any sites listed along the sewer main route. The rural history of the area may indicate the presence of potential contaminated areas from activities such as historical use and storage of herbicides and pesticides or hazardous building materials.</p> <p>As the works are predominately in the road reserve the likelihood of encountering contaminated materials is considered low.</p> <p>The Contamination and Asbestos Unexpected Finds Procedure will be implemented during the construction works as outlined in the approved Soil and Water Management Sub-plan - SMWSASSM-PLD-1NL-PC-PLN-000020.</p>
Will the works result in temporary or long-term traffic impacts	Yes	<p>Works will be within the public road reserve. The primary traffic impacts are anticipated for the works between the M4 and Caddens Road as access is required to the outside</p>

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		<p>northbound traffic lane/s of Kent Road and/or the two-way shared path. Kent Road is a sub-arterial road connecting to Gipps Street and the Great Western Highway in the north, providing access to the M4 Western Motorway in the south via ramps. Construction traffic will need to be managed to maintain reliable traffic access along Kent Road and to and from the M4 Western Motorway.</p> <p>Temporary traffic impacts are expected to be caused by lane closures required to create safe work spaces within the active road lanes and road reserve area. These lane closures will be determined by the final ROL conditions</p> <p>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.</p> <p>Appropriate traffic management planning will include consultation with the TTLG and the Smart Motorways Group and subsequent application for road occupancy. Where possible work will be managed to avoid the need for lane closures on Kent Road and minimise the need for OOH work. A detailed Traffic Management Plan/Traffic Guidance Scheme will be prepared for the work and consultation with affected residents will be undertaken prior to works commencing.</p>
<p>Will the works result in visual impacts to sensitive receivers</p>	<p>Yes</p>	<p>Temporary visual impacts are expected for those nearest residential receivers in the vicinity of the works as infrastructure will be visible at the work locations for approximately 16 weeks.</p> <p>On completion of the work all permanent works will be underground. Maintenance hole lids will be visible at grade generally within the existing roadway. No permanent visual impact is expected.</p>
<p>Will the works involve significant earthworks</p>	<p>No</p>	<p>The works would involve open trenches. Open trenching would occur progressively so the area of impact would be limited at any one time.</p>

4. Recommendation

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

✓	The proposed design/construction change is consistent with the Approved Project SM-WSA 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 design/construction change is likely to be consistent with the Approved Project Approved Project SM-WSA 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 design/ construction change is not 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):



Date: 21/03/24

Name: 

Position: Parklife Metro D&C Environment Manager

6. Endorsement

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

✓	The proposed design/construction change is consistent with the Approved Project SM-WSA 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 Approved Project SM-WSA 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.

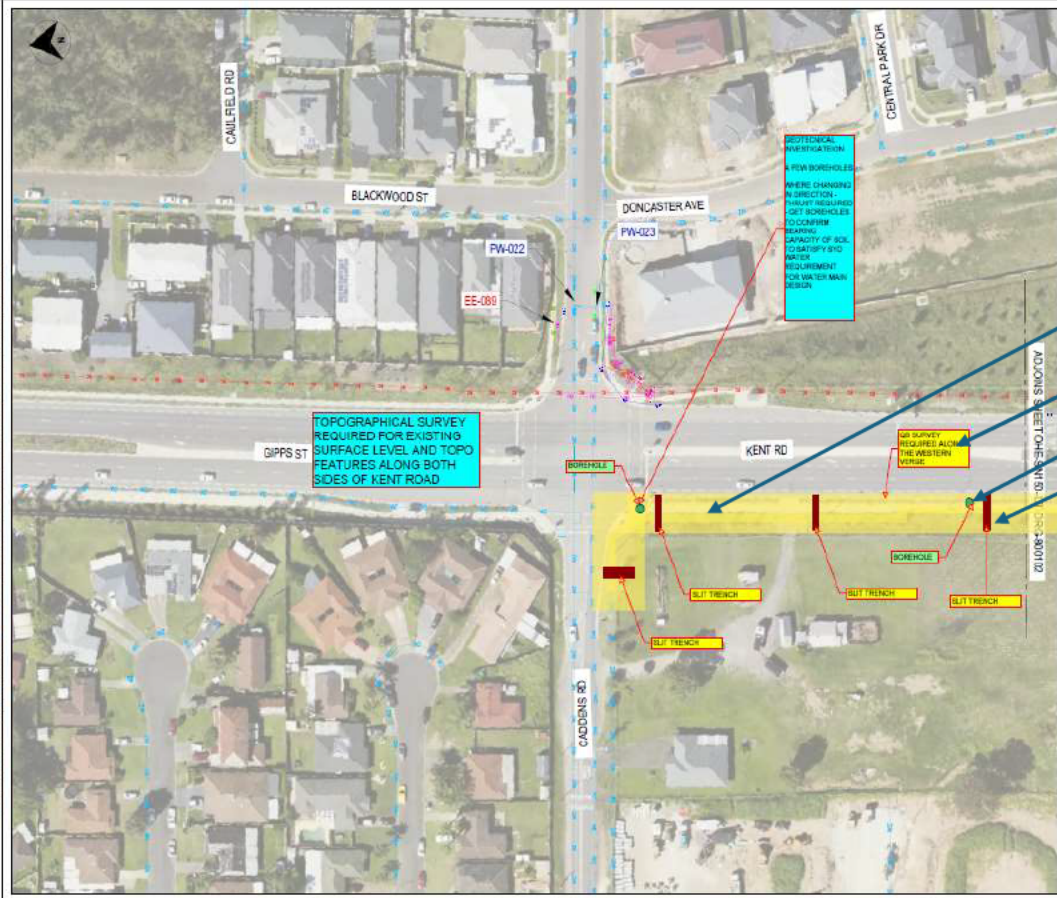
This endorsement is conditional on the following:

1. All works will be carried out in accordance with the Approved Project SM-WSA 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. Sydney Metro and PLM will advise Sydney Roads of works within the bounds of the existing Aboriginal Heritage Impact Permit (AHIP) prior to the works occurring. works will be undertaken in accordance with the existing AHIP and any unexpected finds in this area must also be notified to Sydney Roads.

Signed:	[Redacted Signature]
Endorsed by:	[Redacted Name] A/ Senior Manager Planning Approvals
Date:	27.03.24

Appendix A – Figures

Kent & Caddens Road



LEGEND

- 1:5000 - CHAINLOSS
- DESIGN CONTROL SETTING LABEL
- PROJECT BOUNDARY
- CADASTRAL BOUNDARY
- PROPOSED TREE
- EXISTING DRAINAGE
- PROPOSED DRAINAGE

EXISTING UTILITIES

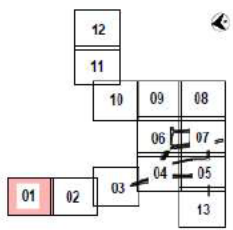
- EXISTING TELECOMMUNICATION
- EXISTING TELECOMMUNICATION (DVT)
- EXISTING ELECTRICAL (DVT)
- EXISTING ELECTRICAL (DVT)
- EXISTING ELECTRICAL TRANSMISSION LINE
- EXISTING ELECTRICAL OVERHEAD
- EXISTING GAS (HIGH PRESSURE)
- EXISTING GAS (LOW PRESSURE)
- EXISTING GAS (DVT)
- EXISTING SEWER
- EXISTING SEWER (DVT)
- EXISTING WATER (DVT)
- EXISTING WATER (DVT)

UTILITIES TAGGING

- COLOR OF TAG CORRESPONDS TO UTILITY TYPE AS SHOWN IN LEGEND ABOVE
- UNIQUE ASSET ID (BY TYPE OF ASSET)

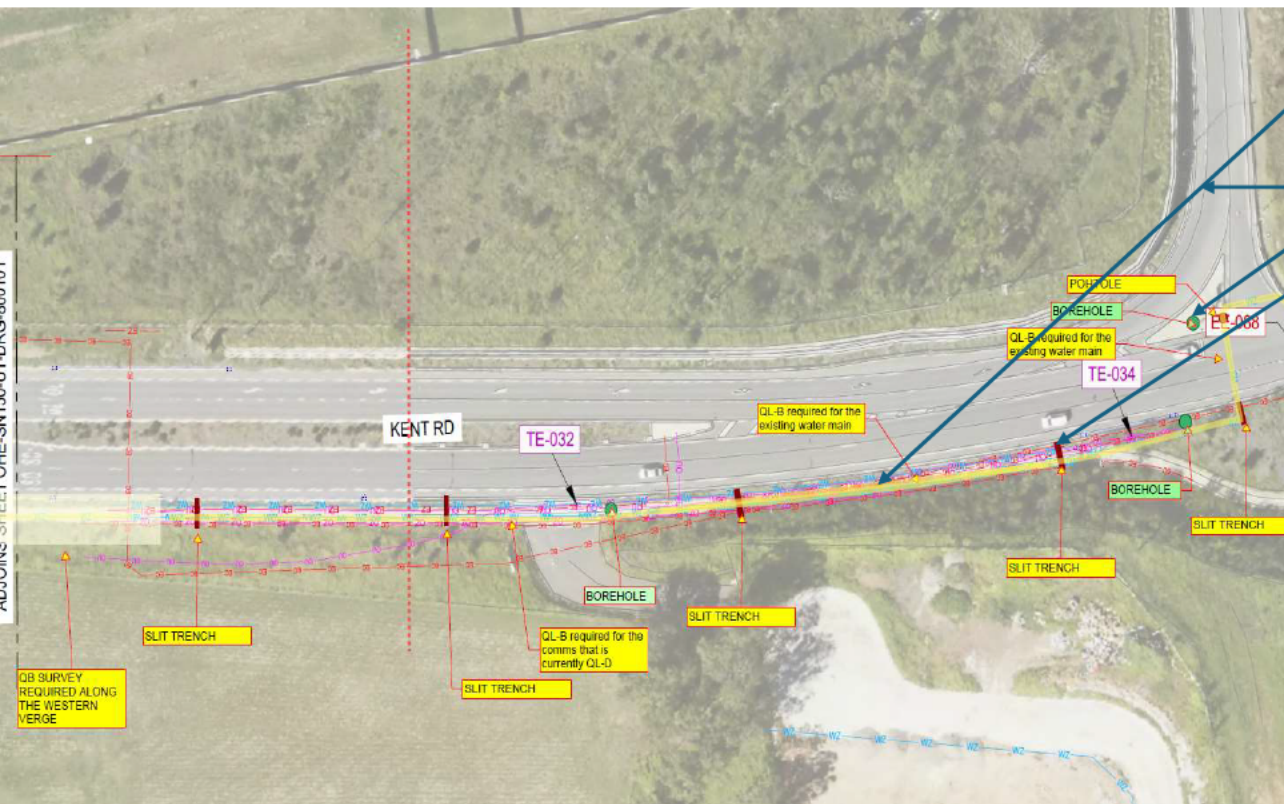
Scope

- 1) Scanning/locating and Survey Pick up.
- 2) Topographical Survey
- 3) 2 x geotechnical bore holes.
- 4) 4 x Slit Trenches (3 x .6 x 1.5)



FOR REVIEW AND COMMENTS

M4/Kent Road - Section



Scope

- 1) Scanning/locating and Survey Pick up.
- 2) Topographical Survey
- 3) 3 x geotechnical bore holes.
- 4) 5 x Slit Trenches.
- 5) 1 x Pothole

Proposed Dates/Time

16/02/24 & 17/02/24

10pm – 5am

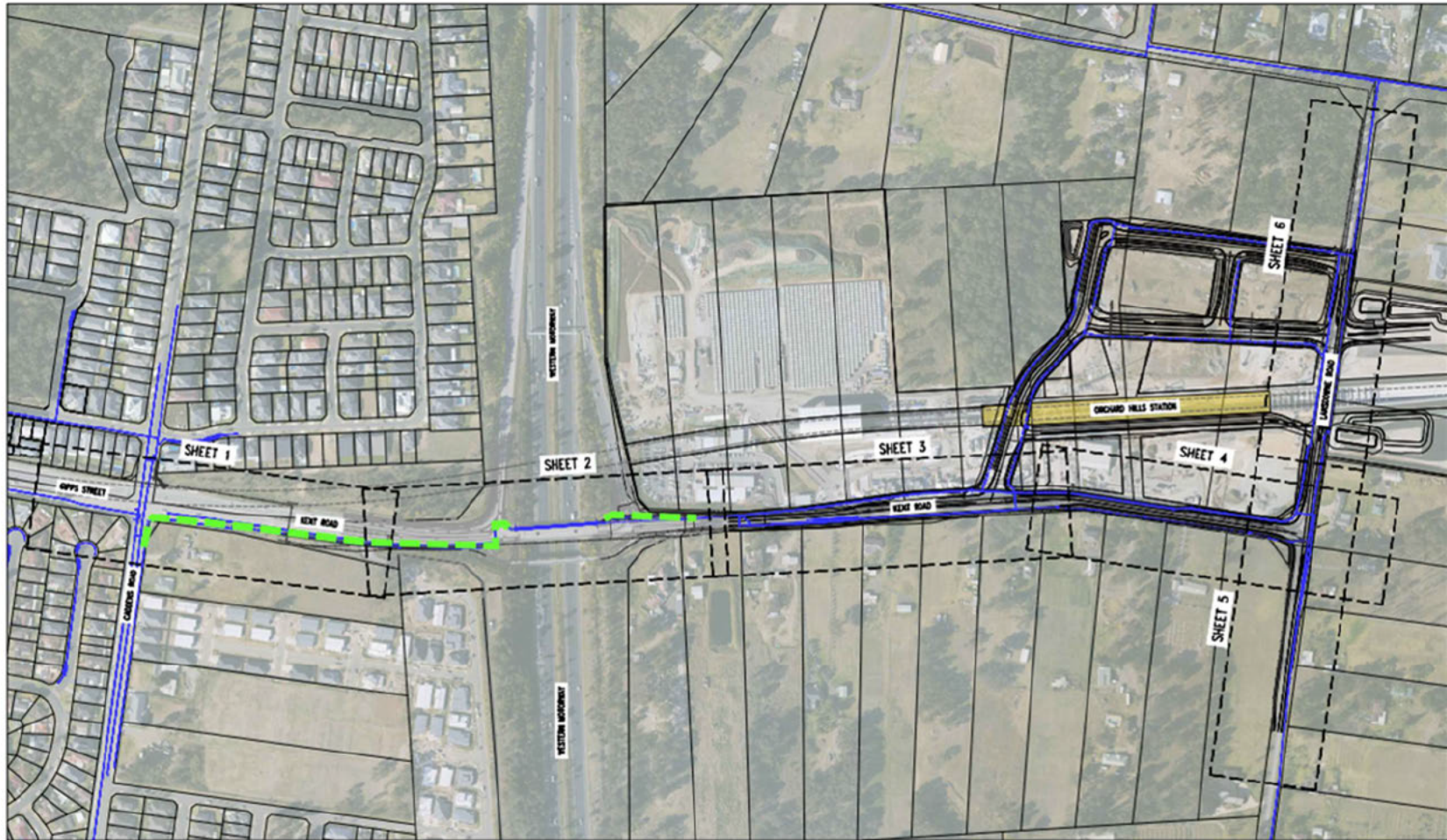

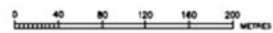


Figure A3

LEGEND

 Watermain construction scope

LOCALITY PLAN
(1:2000)



01			
02			
03			
04			
05			
06	REV. ISSUE	BY	DATE
07	REVISION DESCRIPTION	BY	DATE



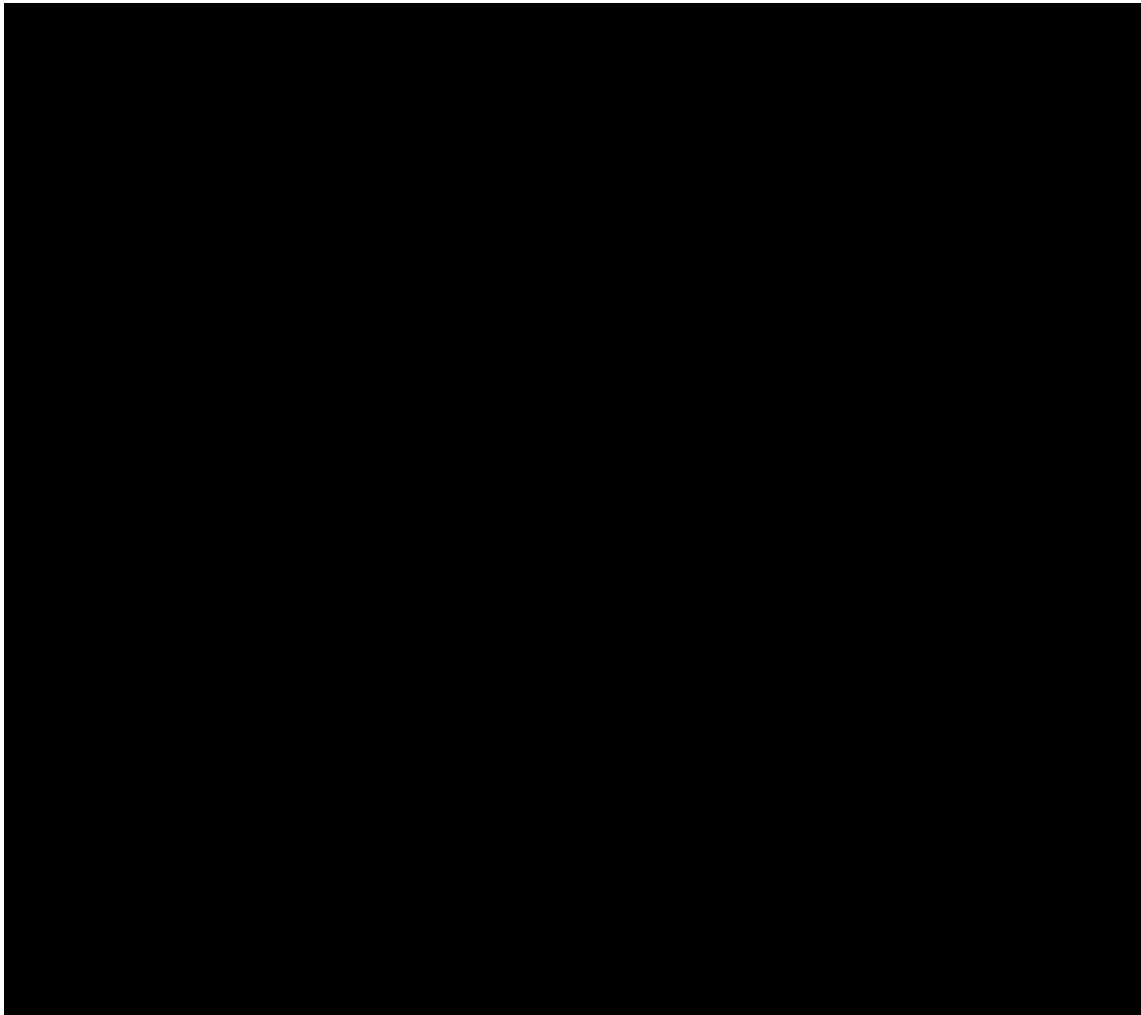
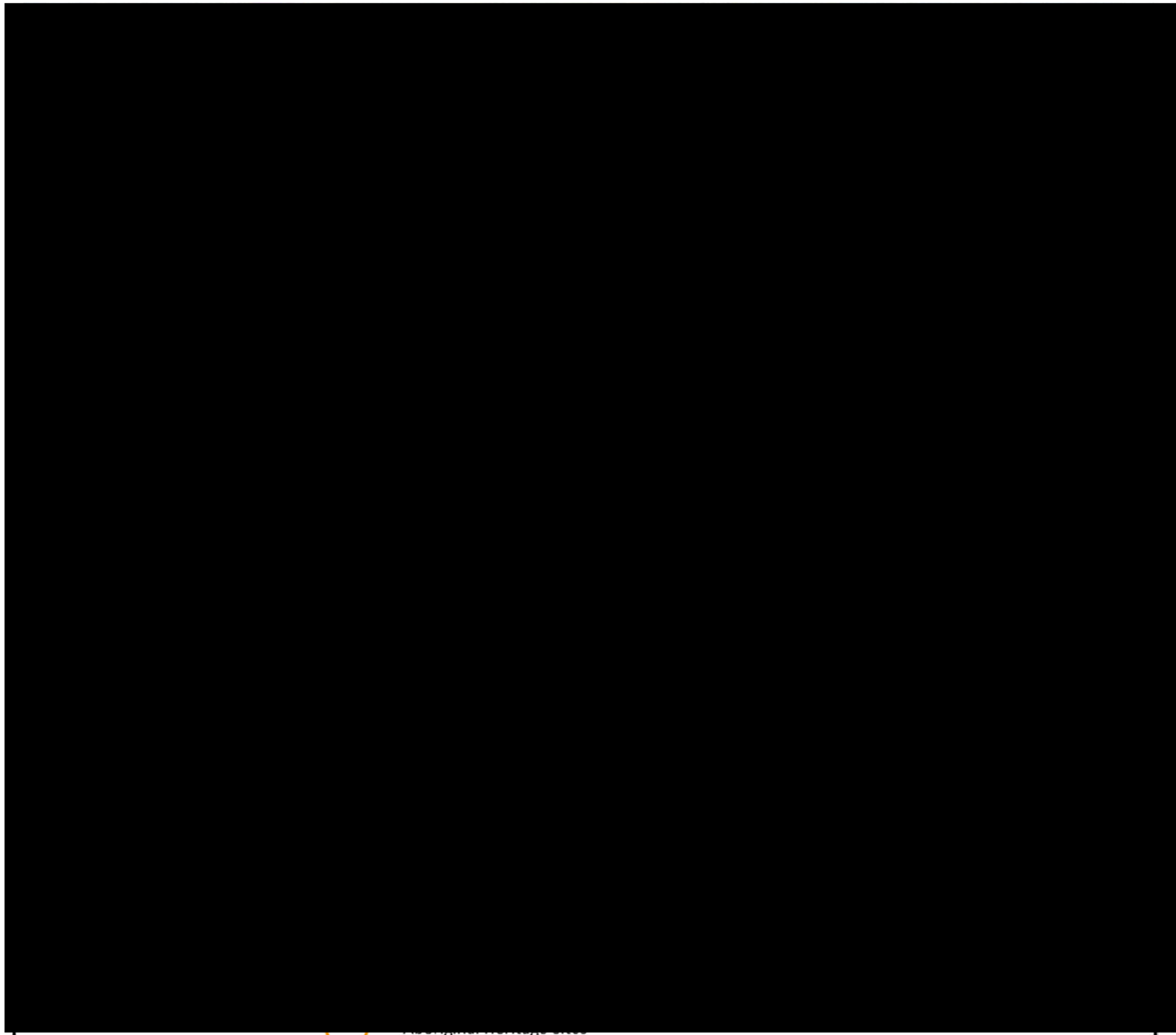


Figure A4 Extent of AHIP C0000637

Appendix B – Environmental Control Plan



WSA SSTOM
ENVIRONMENTAL CONTROL MAP
ORCHARD HILLS

ECM No.	SMWSASSM-PLD-OHE-SN150-EV-ECM-000001
Revision	Rev 00
Date Issued	05/02/2024
Endorsed	[Redacted]
[Redacted]	[Redacted]

Contact Information		
Position	Name	Contact Number

Scope of Works
<ul style="list-style-type: none"> Set-up traffic controls and work site as per ROL Mobilise plant and equipment to work areas as required Undertake investigation works (borehole, pothole, slit trench or non-intrusive investigations as required) Backfill and restore and/or secure work area Remove traffic controls as per ROL

Air Quality Measures	
Mitigation Measure	Responsibility
Plant, vehicles, and equipment will be serviced and maintained in good working order to reduce unnecessary emissions from exhaust fumes.	Site Supervisor / Plant Operator
Minimise the use of diesel- or petrol-powered generators and instead utilise mains electricity or battery powered equipment, where practicable.	Site Supervisor / Environmental Advisor
Use water-assisted dust sweeper(s) on access and local roads, as necessary, to remove any material tracked out of the site.	Site Supervisor / Project Engineer
All vehicles will be switched off when not in operation.	All workers
Where practicable, vehicles will be fitted with pollution reduction devices i.e. Catalytic converters and particulate filters.	Project Engineer

Chemical & Fuel Storage Measures	
Mitigation Measure	Responsibility
Spill kits will be kept with work vehicles and any spills on site will be managed in accordance with the Emergency Spill Response Procedure	Site Supervisor / Project Engineer
Refuelling of vehicles and plant will be away from any drains or waterways	Site Supervisor

Contamination Measures	
Mitigation Measure	Responsibility
If contaminated materials are discovered or suspected, works will cease, and the Site Supervisor and Environmental Manager notified immediately, and the Contamination and Asbestos Unexpected Finds Procedure will be implemented.	All workers
Any material requiring off-site disposal will be classified in accordance with the Waste Classification Guidelines and recorded in the waste tracking register	Environmental Advisor
No concrete washout on site. If washout is required plant and equipment will use the facilities at OHE.	Site Supervisor / Project Engineer

Flora & Fauna Measures	
Mitigation Measure	Responsibility
If a threat to an animal is evident onsite you must contact your supervisor and/or Environmental Advisor immediately. Works may need to cease if the animal is in danger or harmed, until it has been relocated. Any fauna encountered on the site would be managed in accordance with the Fauna Handling Procedure	All workers
No clearing is allowed for these works. No-go zones are established around protected native vegetation as shown on the ECM map.	All workers

Heritage Measures	
Mitigation Measure	Responsibility
Works are within an existing AHIP boundary. Any unexpected find will be notified to Sydney Roads in addition to the procedure below	Environment Advisor
In the event of an unexpected heritage find all works in the vicinity of the find will be stopped and the Environment Manager will be informed. Any potential unexpected heritage finds will be managed in accordance with the Sydney Metro Unexpected Heritage Finds Procedure. Appropriate advice would be sought from the Project Heritage Specialist. Activities in the vicinity of the find would not re-start until clearance has been received from the Archaeologist	All workers
A known Aboriginal heritage site is located on the east side of Kent Road. This area is a No go zone.	All workers

Traffic & Access	
Mitigation Measure	Responsibility
All worker parking will be within publicly available areas or as approved by the site traffic guidance scheme.	Supervisor / Project Engineer
Site traffic control measures will be implemented in accordance with the approved ROL	Supervisor / Project Engineer

Noise and Vibration	
Mitigation Measure	Responsibility
Standard hours: <ul style="list-style-type: none"> Monday to Friday 7am to 6pm Saturday 8am to 1pm No work on Sundays or public holidays 	All workers
No works to occur outside standard hours unless approved by the EPL and accompanied by an approved PLM Out-of-Hours Permit	All workers
All construction plant and equipment used on the site will be: <ul style="list-style-type: none"> Fitted with properly maintained noise suppression devices. Operated in a proper and efficient manner. Serviced and maintained in accordance with manufacturers specifications. If a piece of plant or equipment is found to exceed the noise levels included in modelling, the following will occur: <ul style="list-style-type: none"> At-source control or a quieter or less vibration emitting piece of plant or equipment will be utilised (If available and appropriate). On-site mitigation (e.g. noise blankets) will be reviewed; The noise assessment (where required) will be repeated with the accurate noise level of the plant / equipment. 	Site Supervisor / Project Engineer
Non-tonal movement alarms will be used in place of tonal reversing alarms for all plant and machinery	Site Supervisor / Project Engineer
Implement mitigation measures as required by the DNVIS	Site Supervisor / Project Engineer
Noise and Vibration Monitoring	
If required by the DNVIS, noise monitoring will be undertaken by according to relevant standards and guidelines.	Environment Advisor

Waste Measures	
Mitigation Measure	Responsibility
No waste to be left or stored on site	All workers

Visual Amenity and Light Pollution Measures	
Mitigation Measure	Responsibility
Light spill will be positioned to minimise impacts to sensitive receivers, including habitat areas.	Supervisor / Project Engineer

Water & Soil Management Measures	
Mitigation Measure	Responsibility
Erosion and sediment controls implemented as per standard Blue Book controls.	Supervisor / Project Engineer
Backfilling to occur on completion of investigation to minimise exposed open trench	Supervisor / Project Engineer



Procedures	Requirement
Emergency Spill Response Procedure	If a spill occurs personnel in the vicinity must stop works and implement Emergency Spill Response Procedure. Notify Site Supervisor and Environmental Team immediately. Consider any safety hazards created by the incident and if safe to do so, apply immediate controls to attempt to minimize further harm to the environment. This could include use of spill kit material depending on the severity of the incident. If spill causes or threatens material harm initiate Incident Response Plan.
Sydney Metro Unexpected Heritage Finds Procedure	If an unexpected heritage item is discovered stop work , protect the item and notify Environment Advisor. The Environment Team initiate the Unexpected Heritage Finds Procedures and coordinate with the Project Heritage Specialist. Works are not to recommence until written clearance is received.
Contamination and Asbestos Unexpected Finds Procedure	If observations indicate presence of potential contamination, then stop all works in the immediate area, notify the Site Supervisor and Environment Coordinator and cordon off area. Inform the Environmental Manager and Project Manager and implement procedure

Permits	Approvals
Environmental Work Method Statement (EWMS)	Sydney Metro Western Sydney Airport Conditions of Approval - SSI 10051
Out Of Hours Works Permit	Environment Protection Licence No. 21807
Aboriginal Heritage Impact Permit (AHIP) #C0000636 – issued to Roads and Maritime Services	ER002 Kent Road Watermain - Environmental Review

Training Topic	Senior Managers	Superintendents	Engineers	Environmental team	Supervisors	Leading hands	Labourers	Subcontractors
Project / Site induction	X	X	X	X	X	X	X	X
Incident response	X	X	X	X	X	X	X	X
Waste management, minimisation and recycling	X	X	X	X	X	X		
Environmental control maps and sensitive areas	X	X	X	X	X	X	X	X
Erosion and sediment controls		X	X	X	X	X	X	X
Out of hours works procedures	X	X	X	X	X	X	X	X
Dust management		X	X	X	X	X	X	X
EWMS targeted training	X	X	X	X	X	X	X	X
Environmental monitoring				X				

Author:	██████████	Superintendent responsible for area:	██████████
Endorsed by:	Environment Manager		
Signature	██████████	(signature)	(date)



Appendix C – Preliminary Noise Assessment

Noise Assessment

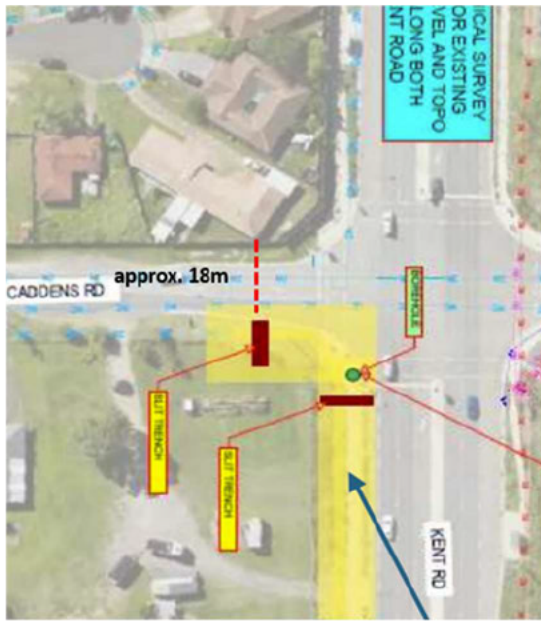
Part A – Information of Works

Location Description:	Kent Road at corner of Cadden Road, Claremont Meadows
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1. Description of Proposed OOH Works and location map:

OOH are considered likely due to anticipated ROL conditions. Works will include concrete saw cutting to open paved road service for utility investigations.

The property at [REDACTED] was identified as the nearest residential receiver to potential concrete saw cutting works as shown in the Figure below. (note: a noise wall extend around the northwest corner of Caddens and Kent Roads)



Kent Road is located in Noise Catchment Area (NCA) 06. NCA 06 is described predominantly medium density residential dwellings to the east of Gipps Street and south of Caddens Road. Ambient noise conditions are dominated by traffic along M4 Western Motorway and Gipps Street.

Noise management levels (NML) and sleep disturbance criteria for NCA 06 are identified in the table below. Highly Noise Affected (HNA) residential receivers are those where exceedances above 75dBA are predicted.

NOISE MANAGEMENT LEVEL (NML) DB(A)

NCA	Standard Hours	OOH-Day ²	OOH – Evening ²	OOH – Night ²	Sleep Disturbance ³
06	47	42	37	37 ^{4,5}	52 ⁴

Standard construction hours are 7am to 6pm (Mon to Fri) and 8am to 1pm (Sat)

² Out-of-hours (OOH): OOH Day from 1pm to 6pm Saturday; 8 am to 6 pm Sunday and Public holidays; OOH Evening from 6 pm to 10 pm Monday to Saturday and 6pm to 10pm Sunday; OOH Night from 10pm to 7am Monday to Friday, and from 10pm to 8am Saturday, Sunday and Public holidays

³ Sleep disturbance criteria applicable to OOH Night period

⁴ Sleep disturbance criteria of LAF_{max} 52 dB(A) has been adopted as the sleep disturbance criteria

⁵ Where evening or night NMLs exceed that of the previous period, they have been set at the NML of the previous period, in line with the NPfI, to reflect community's expectation for greater noise control during more sensitive periods

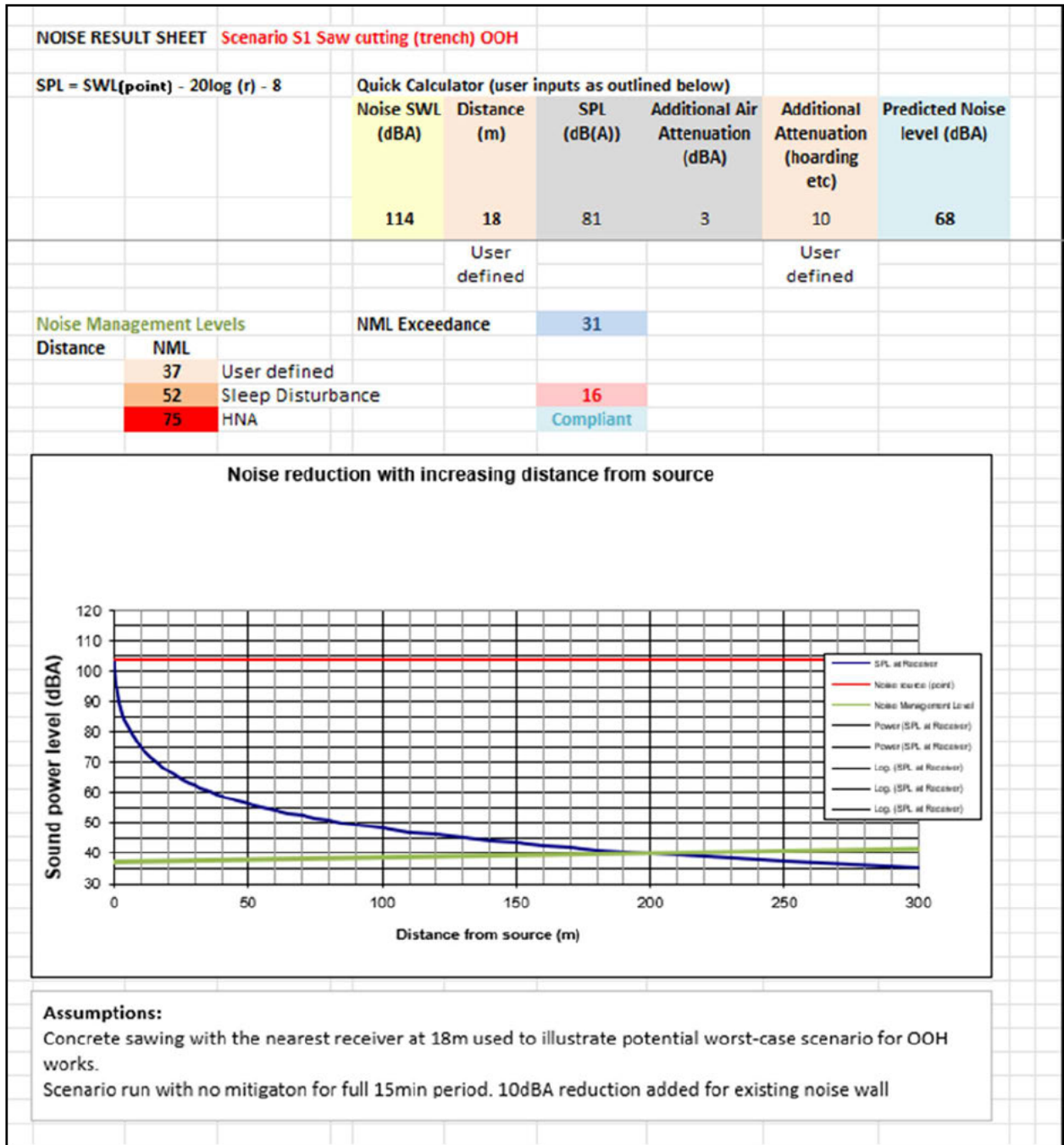
Part A – Information of Works**2. Plant and equipment:** *List type and size (break down plant into scenarios)*

No.:	Proposed plant and equipment:
Scenario 1 – OOH concrete sawing	
1	Concrete saw
2	Daymakers

Part B – Noise & Vibration Impact Assessment

3. Noise and Vibration Impact Assessment Outcomes

(modelling results to be attached)



Part C – Noise & Vibration Impact Assessment

Concrete saw cutting in the vicinity of residential receivers is predicated to generate noise levels which exceed both the evening and nighttime NMLs as well as sleep disturbance criteria. It is also noted that the NML for standard construction hours would also be exceeded by these works.

A DNVIS is required for these works.