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RE: STATE SIGNIFICANT DEVELOPMENT APPLICATION (SSD 9601) FOR PROPOSED PLANT 2 UPGRADE WORKS

PROPERTY AT: 780 WALLGROVE ROAD, HORSLEY PARK (LOT 7 DP 1059698)

Dear Shaun,

Reference is made in relation to the subject State Significant Development (SSD) Application – **SSD 9601** – that was exhibited by the NSW Department of Planning, Industry & Environment (DPIE) on 9 October 2019 to 5 November 2019 for the proposed Plant 2 Upgrade Works at the identified Subject Site – 780 Wallgrove Road, Horsley Park (Lot 7 DP 1059698).

Following a review of the NSW DPIE’s request for the Response to Submissions (RTS), dated 9 March 2020, the matters raised have been taken into consideration and are accurately addressed in the response matrix that is attached to this letter. It is considered, that this information now provides the NSW DPIE with all the necessary facts and relevant particulars related to the Proposed Development subject to this SSD Application; thereby, enabling the assessment to be finalised and the Proposal determined.

We look forward to the NSW DPIE’s feedback on the information provided and look forward to progressing with the assessment of this SSD Application.

Should you wish to discuss further, please contact the undersigned.

Yours Faithfully,

Andrew Cowan
Director
Willowtree Planning Pty Ltd
ACN 146 035 707

State Significant Development Application – SSD 9601

Proposed Plant 2 Upgrade Works – 780 Wallgrove Road, Horsley Park (Lot 7 DP 1059698)

Enclosed:

- **Appendix 1 – Civil Engineering Response to Fairfield City Council**
- **Appendix 2 – Civil Engineering Response to WaterNSW**
- **Appendix 3 – Revised Civil Engineering Report**
- **Appendix 4 – Civil Engineering Drawings**
- **Appendix 5 – MUSIC Model**
- **Appendix 6 – Plume Rise Assessment Report**

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Table 1: Response Matrix	
Relevant Entities Response to Submissions	Formalised Response
NSW Department of Planning, Industry and Environment (Chris Ritchie – Director – Industry Assessments)	
<i>You are requested to submit additional information that effectively addresses the issues raised by agencies on the RTS.</i>	Noted and agreed. No additional comments have been raised by the NSW DPIE.

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Table 2: Response Matrix

Relevant Entities Response to Submissions	Formalised Response
Fairfield City Council (Andrew Mooney – Executive Strategic Planner)	
<p>A. Obstacle Limitation Surfaces</p> <p><i>The chimney stack is proposed to be 35 metres in height and the controlled activity may be within the Western Sydney Airport protected airspace Obstacle Limitation Surfaces (OLS). The applicant has responded that the chimney stack is not within the OLS however, plumes from the chimney stack may be considered a 'controlled activity'. Advice should be sought from the Western Sydney Airport determining authority regarding the level of emissions from the chimney stack to determine if approval is required under the Airports Act 1996.</i></p>	<p>Western Sydney Airport provided commentary on the matter on 20 March 2020, for which Table 8 outlined below considers and satisfactorily addresses the Submission raised.</p>
<p>B. Archaeological Due Diligence</p> <p><i>Council previous comments requested that a Heritage Impact Assessment Report be provided to consider the impact to surrounding local and state heritage items. The applicant responded that works are conducted wholly within the subject site therefore a Heritage Impact Assessment Report is not warranted.</i></p> <p><i>The NSW Office of Environment and Heritage (OEH) did not raise any concerns regarding the impact adjacent to State Heritage Item no. 01370 (Prospect Reservoir and surrounding area). The NSW OEH however requested the applicant prepare an Aboriginal Cultural Heritage Assessment Report.</i></p> <p><i>The Aboriginal Due Diligence Assessment Report prepared by Biosis dated 22 January 2020 reveals that a site investigation was conducted with consultation with the Deerubbin Aboriginal Land Council is significantly low. Council raises no objection, subject to a condition being imposed as follow:</i></p> <p><i>Should any potential objects, relics or items be found during construction works and carrying out of the activity, the operation of the development</i></p>	<p>Noted and agreed.</p>

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<p><i>must stop and notify the Office of Environment and Heritage (OEH) unless authorised in writing by the NSW OEH.</i></p>	
<p>C. Staff and Visitor Parking</p> <p><i>Council requested further information regarding sufficient parking for staff and visitors. The applicant provided a Traffic Letter prepared by Ason Group dated 18 December 2019 that the northern section of Plant 2 from Ferrers Road is currently unmarked however able to accommodate 63 car spaces in compliance with the minimum requirements of AS28890.1. Council raises no objections subject to the condition that the northern portion of the site to accommodate car spaces shall be formalised in accordance with AS/NZ 2890.1:2004. The car spaces must be line marked to maximise car spaces, improve safety for users, and reduce dust and proper discharge of stormwater.</i></p>	<p>Noted and agreed.</p>
<p>D. On-site Detention Design</p> <p><i>Council requires the on-site detention system to be designed in accordance with clause 4.5.1.2 of Council's Stormwater Management Policy (Sept 2017). Detailed cross section of the OSD basin shall be included in the final design. Council's Development Engineers have reviewed the applicant's response and require detailed calculations of OSD design to include stormwater plans to demonstrate the storage volume and site discharge in accordance with the Stormwater Management Policy. Plans must also provide a long section through the OSD basin and headwall at discharge point.</i></p>	<p>In accordance with the Letter of Support provided by AT&L (refer to Appendix 1), they note that reference should be made to the detailed sections of the basin located on Drawings DAC021 and DAC022 (refer to Appendix 4), which includes a section through the outlet location to Eastern Creek.</p> <p>Additionally, reference should be made to the revised <i>Soil & Water Management Plan and Civil Engineering Design Report (REP001-03-18-577)</i>, which includes a detailed description and calculations relating to stormwater quantity and quality treatment features.</p>
<p>E. Biodiversity Assessment</p> <p><i>Council's Natural Resources Team have reviewed the provided Landscape Plan prepared by Geoscape Landscape Architects, job No 191126 dated 28/12/2019 and the Biodiversity Development Assessment Report prepared by Cumberland Ecology dated 06/02/2019 and provide the following comments:</i></p> <p>i. Landscape Plan</p> <p><i>The landscape plan indicates additional planting to the site. The landscape plan needs to be reflected in the BDAR and development footprint. It is noted that the landscape area is amongst previously recorded Cumberland Plain Land Snail sightings.</i></p>	<p>Following an email from the NSW DPIE, dated 12 March 2020, it was noted, that EES Group confirmed there were no further actions required to be undertaken with respect to the Biodiversity Development Assessment Report (BDAR) prepared by Cumberland Ecology. The Proponent is in agreement with EES Group's commentary, for which further commentary with respect to Council's submission is not considered to be warranted.</p>

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ii. Biodiversity Development Assessment Report

The consultant has suggested the following credit requirements for the clearing of:

- 1. PCT 849 - Grey Box - Forest Red Gum grassy woodland on flats of the Cumberland Plain, Sydney Basin Bioregion (0.11 ha - 2 credits required).*
- 2. PCT 1232-Swamp Oak floodplain swamp forest, Sydney Basin Bioregion and South East Corner Bioregion (0.03 ha – 1 credit required).*

Ecosystem Credit Species

The consultant has provided a list of the predicted ecosystem credit species for the vegetation zones within the Development Site, and whether they have been retained within the assessment following consideration of habitat constraints, geographic limitations, vagrancy and quality of microhabitats. Ten species have been removed from the assessment, based on the absence of habitat constraints. The consultant needs to clarify why they are not addressing the 26 species to be retained for assessment that are identified in table 9 of the Report.

Species Credit Species

A total of 17 flora species credit species and 23 fauna species credit species have been predicted for the Development Site.

The following species have been retained for further assessment and have been targeted during surveys:

- Flora Species: Cynanchum elegans; Marsdenia viridiflora subsp. viridiflora*
- Fauna Species: Cumberland Plain Land Snail*

The consultant needs to provide reasons for the following assumptions regarding no surveys for the following Threatened Species within the 10 km radius given that the area was in a drought at the time of assessment:

As above.

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- *Pimelea spicata*
- *Green and Golden Bell Frog*

The Cumberland Plain land Snail has been retained in the assessment however, there is no species credits listed in the credit report. Council officers have previously visited the site and noted that the Cumberland Plain Land Snail was present and subsequently recorded on Atlas in 2015 (Shown on Seed website). There is inconsistency between Seed website records and BDAR site records for Cumberland Plain Land Snail.

The consultant needs to clarify why the removal of vegetation (food source) for all Macro and Micro bat species has not been accounted for.

F. Hydrogen Fluoride Scrubber

Councils Environmental Management Section have reviewed the submitted documentation for the proposed upgrade to plant 2 and the response from the NSW EPA.

The main issue for the community would be air pollution in particular total suspended particles (TSP) and odour. The proposed upgrade to plant 2 will provided an improvement to air pollution. However, the NSW EPA has an issue with the efficiency rate of the proposed hydrogen fluoride (HF) scrubber.

Council concurs with NSW EPA that proposed hydrogen fluoride (HF) scrubber needs to be of a design to meet international best practice (90-99 %). However, the impact of any upgrade (including the proposed upgrade) would be of benefit to the community.

A change in the HF Scrubber would need to be addressed in an updated operational waste management plan for the waste generated from the different scrubber.

Noted and agreed. This can be ameliorated during the detailed design of the proposed development, for which would address the relevant requirement.

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Table 3: Response Matrix

Relevant Entities Response to Submissions	Formalised Response
NSW Department of Planning, Industry and Environment – Environment, Energy and Science Group (EES) (Susan Harrison – Senior Team Leader Planning)	
<p>Aboriginal Cultural Heritage</p> <p><i>It is noted that within the RtS table prepared by Willow Tree Planning dated 6 February 2020, the proponent states "In an email dated 6 December 2019, the NSW DPIE confirmed that an Aboriginal Due Diligence Assessment would suffice with respect to addressing Aboriginal Cultural Heritage impacts anticipated for the proposed development."</i></p> <p><i>The due diligence process outlined in the Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales (DECCW, 2010) is not a substitute for undertaking an Aboriginal cultural heritage assessment. Due diligence is a legal defence against harm under section 87 of the National Parks and Wildlife Act 1979 (NPW Act) and is not designed for the assessment of major projects. Under the NPW Act, regardless of the existence of due diligence, if an object is found and is going to be harmed, even in a disturbed context, work must stop, and an Aboriginal Heritage Impact Permit applied for. As the NPW Act does not apply to major projects, the use of the due diligence process for these projects is not appropriate.</i></p>	<p>Following an email from the NSW DPIE, dated 12 March 2020, it was noted, that there were no further actions required to be undertaken with respect to Aboriginal Cultural Heritage, for which "the assessment will be moving forward with the Aboriginal Due Diligence Assessment provided in accompaniment to the RTS." Accordingly, further consideration is not considered to be warranted in this respect.</p>
<p>Biodiversity</p> <p><i>The Biodiversity Development Assessment Report prepared by Cumberland Ecology dated 6 December 2019, has been reviewed and is adequate. There is no further comment in relation to Biodiversity.</i></p>	<p>Noted and agreed.</p>
<p>Flooding</p> <p><i>There are no further comments in relation to flooding.</i></p>	<p>Noted and agreed.</p>
<p>Sustainability</p> <p><i>The proponent has noted and agreed within RtS table prepared by Willow</i></p>	<p>Noted and agreed.</p>

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<p><i>Tree Planning dated 6 February 2020, that EES recommendations for sustainability measures in conjunction with water management will be implemented where deemed practical and applicable across the subject site. On this basis there are no further comments in relation to sustainability.</i></p>	
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Table 4: Response Matrix

Relevant Entities Response to Submissions	Formalised Response																																																
<p>WaterNSW (Clay Preshaw – Manager Catchment Protection)</p>																																																	
<p>Pre and Post-Development Flows</p> <p><i>Our requirement that the post-development stormwater discharge flows must be equal to or lesser than current conditions stands. AT&L notes within table 8 of the response document that 'the quantity of flows into Eastern Creek are limited to equal or less than pre-development levels by the proposed OSD basin'; however no supporting evidence with results is provided to support this claim. Pre-development flows must be identified against post-development flows discharging offsite. Showing that the peak discharge flows meet the allowable permissible site discharge (PSD) requirements set by the local council is insufficient. As noted by AT&L, revised flood modelling would be the ideal process and is requested by WaterNSW.</i></p>	<p>Reference should be made to Table 3.4 (refer to extract below) of the revised <i>Soil & Water Management Plan and Civil Engineering Report (REP001-03-18-577)</i> prepared by AT&L (2020), which compares the pre-development flows with the post-development peak flows for all storm events between the 1% AEP and 63% AEP. This analysis has been undertaken with the DRAINS model (refer to Appendix 3). Accordingly, the post-development results are provided for the mitigated scenario involving installation of the proposed detention basin.</p> <p>Table 3.4 - Pre-Development vs Post-Development Peak Flow Comparison</p> <table border="1" data-bbox="1122 735 2078 1118"> <thead> <tr> <th>Storm Event (AEP)</th> <th>Storm Event (ARI)</th> <th>Pre-Development Flow (m³/s) (L/s)</th> <th>Post-Development Flow with Basin* (L/s)</th> <th>Difference (L/s)</th> <th>Peak Flow Reduction?</th> </tr> </thead> <tbody> <tr> <td>63%</td> <td>1</td> <td>1,553</td> <td>927</td> <td>-626</td> <td>Yes</td> </tr> <tr> <td>39%</td> <td>2</td> <td>2,088</td> <td>1,166</td> <td>-922</td> <td>Yes</td> </tr> <tr> <td>18%</td> <td>5</td> <td>2,760</td> <td>1,459</td> <td>-1,301</td> <td>Yes</td> </tr> <tr> <td>10%</td> <td>10</td> <td>3,150</td> <td>1,633</td> <td>-1,517</td> <td>Yes</td> </tr> <tr> <td>5%</td> <td>20</td> <td>3,680</td> <td>1,850</td> <td>-1,830</td> <td>Yes</td> </tr> <tr> <td>2%</td> <td>50</td> <td>4,100</td> <td>2,057</td> <td>-2,043</td> <td>Yes</td> </tr> <tr> <td>1%</td> <td>100</td> <td>4,750</td> <td>2,260</td> <td>-2,490</td> <td>Yes</td> </tr> </tbody> </table> <p>AT&L note, that BMT have also undertaken a flood modelling investigation for the proposed development, which focuses on flows through Eastern Creek. This is the watercourse into which stormwater from the development discharges; and whereby it continues north, under the bulk water supply pipelines.</p> <p>The results of the TUFLOW flood modelling undertaken by BMT (2020) demonstrate that the points of the Site (immediately upstream and downstream of the bulk water supply pipelines), including the afflux in the 5% AEP, 1% AEP and</p>	Storm Event (AEP)	Storm Event (ARI)	Pre-Development Flow (m ³ /s) (L/s)	Post-Development Flow with Basin* (L/s)	Difference (L/s)	Peak Flow Reduction?	63%	1	1,553	927	-626	Yes	39%	2	2,088	1,166	-922	Yes	18%	5	2,760	1,459	-1,301	Yes	10%	10	3,150	1,633	-1,517	Yes	5%	20	3,680	1,850	-1,830	Yes	2%	50	4,100	2,057	-2,043	Yes	1%	100	4,750	2,260	-2,490	Yes
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	<p>PMF storm events is negative, indicating that a reduction in flood levels at these locations in the post-development scenario. Accordingly, the proposed development area is not directly affected by flood from Eastern Creek as shown in Figure 11 with the revised <i>Soil & Water Management Plan and Civil Engineering Report (REP001-03-18-577)</i> prepared by AT&L (2020).</p> <p>Furthermore, AT&L note, that no adverse flooding impacts are anticipated as a result of the proposed development for the following reasons:</p> <ol style="list-style-type: none">1. No works are proposed within the designated 1% AEP flood plain adjacent to Eastern Creek. There will not be any loss of flood storage or alterations to the flow paths of Eastern Creek.2. There will be no increase (actually a reduction) in localised peak stormwater flows coming from the development due to the provision of an on-site detention basin (refer to the extract above).3. All local stormwater runoff from roofs and hardstands will be captured and conveyed to discharge points by an underground piped network.
<p>On-site Detention (OSD) Basin Maintenance</p> <p><i>The maintenance of the onsite detention basins is crucial to ensure it functions as designed. It is still unclear what provisions are in place to ensure it receives ongoing maintenance to prevent failure. As per Fairfield Council's Stormwater Management Policy, WaterNSW request an onsite detention basin maintenance plan and schedule be prepared to ensure effective operation and maintenance of the basin.</i></p>	<p>As required by Fairfield City Council's <i>Stormwater Management Policy</i> (Sept, 2017), a maintenance manual and schedule would usually be provided to the PCA following the completion of the basin and prior to the issue of an Occupation Certificate, with a copy also provided to Council (and WaterNSW if required). It is requested, that this be considered as part of the formal Conditions of Consent.</p> <p>Notwithstanding, Section 3.6 of the revised <i>Soil & Water Management Plan and Civil Engineering Report (REP001-03-18-577)</i> prepared by AT&L (2020) includes a concise summary of the anticipated basin maintenance regime as a result of the proposed development (refer to Appendix 3).</p>
<p>Neutral or Beneficial Impact on Water Quality</p> <p><i>WaterNSW requested that the development demonstrate it will have a neutral or beneficial impact on water quality based on Clause 13 (Bulk Water Supply Infrastructure not to be impacted) of State Environmental Planning Policy (Western Sydney Parklands) 2009. The site lies within the Western Sydney Parklands and is therefore subject to the provisions of the SEPP.</i></p> <p><i>Bulk Water Infrastructure means any bulk water supply infrastructure and ancillary infrastructure (such as access roads and stormwater control measures) within the SEPP's Bulk Water Supply Infrastructure Map required</i></p>	<p>Due to the Site's location within the Western Sydney Parklands and adjacent to the Warragamba Prospect Bulk Water Supply Pipelines, it is acknowledged that WaterNSW's NorBe requirements need to be achieved. A water quality model has been prepared for the development in MUSIC software in order to confirm the proposed treatment train is sufficient. A gross pollutant trap device has been added to the stormwater network as a primary treatment device immediately upstream of the proposed sediment basin.</p> <p>Furthermore, reference to Section 3.5.4 and Table 3.9 of the revised <i>Soil & Water Management Plan and Civil Engineering Report (REP001-03-18-577)</i> prepared by AT&L (2020) should be made with respect to the results of the MUSIC modelling</p>

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<p><i>for water supply purposes. The Warragamba Pipelines adjacent to the development site are designated as bulk water supply infrastructure.</i></p> <p><i>As such, WaterNSW insists that any development within the Western Sydney Parklands that will have impacts on the bulk water supply infrastructure must address the the impact on associated infrastructure.</i></p>	<p>exercise and confirmation NorBe requirements are achieved (refer to Appendix 3).</p>
<p>Impacts on Bulk Water Supply Infrastructure</p> <p><i>As identified above, there is potential for the development to have impacts on the bulk water supply infrastructure of the Warragamba Pipelines. The applicant determined that no further consideration of clause 13 was required due to the works being wholly within the development site and that onsite detention will treat any water prior to discharge. The applicant has not demonstrated in its response how the development meets the entire Clause 13 of State Environmental Planning Policy (Western Sydney Parklands) 2009.</i></p> <p><i>All other requested conditions within our initial response remain current and should be incorporated into any consent issued.</i></p> <p><i>WaterNSW requests the Department continues to consult with us regarding proposals on land adjacent to and impacting on WaterNSW infrastructure, land or assets due to the potential for impact on water quality and water supply.</i></p>	<p>Clause 13 of <i>State Environmental Planning Policy (Western Sydney Parklands) 2009</i> (WSP SEPP), contains the following subclauses that are in relation to impacts on the bulk water supply infrastructure:</p> <p style="padding-left: 40px;"><i>(a) The development will have a neutral beneficial impact on the quality of the water in the bulk water supply infrastructure shown on the Bulk Water Supply Infrastructure Map;</i></p> <p>Refer to the abovementioned item.</p> <p style="padding-left: 40px;"><i>(b) The development will not impact on the integrity or security of the bulk water supply infrastructure;</i></p> <p>The proposed development is located over 100 m away from the bulk water supply pipelines and is contained within a secure industrial parent site. Given that the proposed development includes provisions for an upgrade to an existing industrial manufacturing facility, there will be no impact to the security of the pipelines. Section 3.8 of the revised <i>Soil & Water Management Plan and Civil Engineering Report (REP001-03-18-577)</i> prepared by AT&L (2020) includes confirmation, that there will be no adverse flooding impacts as a result of the proposed development, which would affect the integrity of the downstream bulk water supply infrastructure.</p> <p style="padding-left: 40px;"><i>(c) The development will not increase the risk of illegal access to the bulk water supply or security of the bulk water supply infrastructure;</i></p> <p>The proposed development is located over 100 m away from the bulk water supply pipelines and is contained within a secure industrial parent site. Additionally, there is also existing exclusion fencing at the boundary of the two (2) sites, preventing unauthorised access.</p> <p style="padding-left: 40px;"><i>(d) Access to bulk water supply infrastructure for maintenance and operation</i></p>

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	<p><i>activities by WaterNSW and Sydney Water Corporation will not be impeded by the development.</i></p>
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Existing access for WaterNSW and their contractors to the adjoining section of bulk water supply pipelines is from Ferrers Road and Wallgrove Road to the east and west respectively, not from the Austral site.

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Table 5: Response Matrix	
Relevant Entities Response to Submissions	Formalised Response
NSW Environment Protection Authority (Jacqueline Ingham – Unit Head Sydney Industry)	
<p><i>The NSW Environment Protection Authority ("EPA") is writing to you following receipt of the Response to Submissions ("RtS") dated 6 February 2020. The RtS responds to the EPA's submission to the publicly exhibited state significant development application (SSD 9601) dated 4 November 2019.</i></p> <p><i>The Austral Brick Co Pty Ltd ("Austral") holds environment protection licence no. 546 ("the licence") located at 780 Wallgrove Road, Horsley Park ("the premises"). The licence permits mining for minerals, crushing, grinding or separating, extractive activities and ceramic works.</i></p> <p><i>The EPA is now satisfied with the level of environmental assessment however, a variation to the environment protection licence will be required if SSD 9601 is approved.</i></p>	<p>Noted and agreed.</p>

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Table 6: Response Matrix

Relevant Entities Response to Submissions	Formalised Response
Crown Lands	
<p><i>The Horsley Park Brickworks site is within Lot 7 DP 1059698, nominally at 780 Wallgrove Rd, Horsley Park).</i></p> <p><i>Eastern Creek, a Crown Waterway divides this property from the South to the North and appears to have a riparian corridor on either side, within Lot 7 DP 1059698.</i></p> <p><i>While the proposed development is documented to be on the eastern side of Eastern Creek, recent aerial photography shows access tracks crossing this Crown waterway within both the northern and southern boundaries of Lot 7 DP 1059698.</i></p> <p><i>Crown Lands anticipates that these access tracks will remain in use during and after the proposed development; hence expects that some formal agreement will be required for Horsley Park Brickworks to legally cross Eastern Creek, addressing the environmental constraints apparent with such crossings.</i></p>	<p>There is no intention under this Proposal to utilise the tracks alluded to by Crown Lands. Further consideration is not considered warranted with respect to the proposed development.</p>

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Table 7: Response Matrix

Relevant Entities Response to Submissions	Formalised Response
Parklands Development and Strategy Parramatta Park & Western Sydney	Parklands Trust (Joshua French – Director)
<i>It appears the applicant has addressed everything they can and their response is reasonable considering the site and the business that is operating.</i>	Noted and agreed.

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Table 8: Response Matrix

Relevant Entities Response to Submissions	Formalised Response
<p>Western Sydney Airport (Kirk Osborne – Lead Town Planner)</p>	
<p><i>I have reviewed the plans and the site is within the boundary of the Western Sydney Airport's protected airspace being the Obstacle Limitation Surface (OLS). The OLS at this location is RL 222.2 AHD. Based on the Civil and Architectural plans, the stack height proposed is RL95.15 and therefore the stack height will not impact on the OLS.</i></p> <p><i>Importantly however, the proposed development is located under the approach path surface. The Air Quality report states that the stack will have an exit velocity design speed of 15m/sec. It should also be noted that air turbulence caused by an emission from a stack or vent may be a 'controlled activity' under the Airports Act 1996, if the level of air turbulence caused by an emission from a stack or vent has an upward vertical velocity of 4.3 metres per second in prescribed airspace (i.e. at RL 222.2).</i></p> <p><i>If the upward vertical velocity exceeds this level then further assessment by WSA will be required and a controlled activity approval from the Commonwealth Dept of Infrastructure, Regional Development and Cities will be required. I have attached the relevant Guideline from the National Airports Safeguarding Framework.</i></p> <p><i>WSA requests the applicant provide further information on the velocity of stack emissions at the OLS prescribed airspace surface level to determine if a controlled activity approval is required.</i></p>	<p>In revised documentation provided by Airlabs (2020), they note that as the facility is in proximity to two (2) airports (Western Sydney Airport and Bankstown Airport), a plume rise assessment has been undertaken and prepared (refer to Appendix 6).</p> <p>The Critical Plume Height (CPH) is the height which the plume average vertical velocity exceeds the Critical Plume Velocity (CPV) of 4.3 m/sec. Gradual plume rise statistics obtained from TAPM modelling indicates that plume velocity drops below 4.3 m/sec within 20 seconds of release from a stack. The modelling prepared also indicates that the CPH at CPV of 4.3 m/sec is approximately 141 m Above Ground Level (AGL).</p> <p>Accordingly, ground elevation at the Subject Site is 64.6 m AHD. In terms of m AHD, CPH is $141 + 64.6 = 205.6$ m AHD.</p> <p>Notwithstanding, for the Western Sydney Airport, the OLS tool was utilised. It was determined that the OLS height relative to ground level at the proposed stack location is approximately 157.6 m. Therefore, the determined CPH of 141 m AGL from the proposed stack is below the threshold.</p> <p>With respect to Bankstown Airport, the OLS tool is not readily available; however, is based on the relative distance to the Subject Site. It can assumed that the OLS height relative to the ground level is also 157.6 m. Further consultation is considered to be required with Bankstown Airport on the matter to assess the plume rise from the proposed stack from the information provided.</p>

Appendix 1

Civil Engineering Response to Fairfield City Council

Appendix 2

Civil Engineering Response to WaterNSW

Appendix 3

Revised Civil Engineering Report

Appendix 4

Civil Engineering Drawings

Appendix 5 DRAINS Model

Appendix 6

Plume Rise Assessment Report