

15 June 2022

Sally Munk
Principal Planner - Industry Assessments
Department of Planning and Environment
4 Parramatta Square, 12 Darcy Street
Parramatta 2150

Ground floor, 20 Chandos Street
St Leonards NSW 2065
PO Box 21
St Leonards NSW 1590

T 02 9493 9500
E info@emmconsulting.com.au
www.emmconsulting.com.au

Re: Luddenham Advanced Resource Recovery Centre -- Revised Response to Request for Additional Information (RFI – 38033000)

Dear Sally,

This letter provides a revised response to the Department of Planning and Environment (DPE)'s request for additional information (RFI) in relation to the Luddenham Advanced Resource Recovery Centre (ARRC) (dated 3 March 2022) (DPE ref RFI 38033000).

In the RFI, DPE requested the applicants submit additional information that addressed the matters identified in Liverpool City Council (Council)'s submission on the Responses to Request to Information Report (EMM December 2022) in relation to traffic impacts and onsite sewerage management systems. EMM Consulting Pty Limited (EMM), on behalf of the applicants, submitted a response to the RFI on 8 March 2022. DPE subsequently requested the applicants amend their RFI response to provide additional detail and clarification and respond to additional traffic matters.

Accordingly, this letter provides a revised response to the RFI including a response to DPE's additional requests for information.

1 Consultation

Following DPE's request to the applicants to amend their RFI response, the applicants have consulted further with Council and Transport for NSW (TfNSW) to resolve the residual traffic matters as efficiently as possible. A summary of this consultation is provided in Table 1.1.

Table 1.1 Summary of TfNSW and Council consultation

Agency	Consultation method	Purpose	Key outcomes
TfNSW	Email and phone correspondence between EMM Associated Traffic Engineer (Abdullah Uddin) and TfNSW Land Use Planner (Felix Lui)	EMM requested clarification regarding proposed layout of final upgrade to the Elizabeth Drive/Adams Road intersection and whether the light and heavy vehicle left-hand turn from Elizabeth Drive into Adams Road would be maintained following the upgrade.	TfNSW confirmed that the final upgrade to the Elizabeth Drive/Adams Road intersection would accommodate heavy vehicles (B doubles) turning left into Adams Road from Elizabeth Drive. TfNSW noted, that while the final upgrade would accommodate a B double turning left into Adams Road, it is ultimately Council's decision whether they permit heavy vehicles to use Adams Road.

Table 1.1 Summary of TfNSW and Council consultation

Agency	Consultation method	Purpose	Key outcomes
Council	Email correspondence	Provision of EMM’s draft RFI response.	The draft response was discussed in detail with Council during subsequent meetings (refer Table 2.1 below).
Council	Teleconference 6 April 2022. Attendees: <ul style="list-style-type: none"> • Mr Patrick Bastawrous, Team Leader -Transport Management Liverpool City Council • Abdullah Uddin, EMM Traffic Engineer; and • Janet Krick EMM Associate Environmental Planner 	Discussion of each of the matters raised in Council’s submission and EMM’s response to these matters including additional clarification as required.	Council provided preliminary feedback on the applicants’ responses to matters raised in Council’s submission however requested a follow up meeting with EMM so that the Council Transport Planner (unavailable at the time of the 6 April meeting), who authored the transport components of the Council submission, could provide further comment.
Council	Teams meeting 12 April 2022 Attendees: <ul style="list-style-type: none"> • Mr Patrick Bastawrous, Team Leader -Transport Management Liverpool City Council • Ms Stella Qu, Traffic Planner, Liverpool City Council • Abdullah Uddin, EMM Traffic Engineer; • Janet Krick EMM Associate Environmental Planner; and • Mr John Scarlis, KLF Recycling. 	Resolution of final Council traffic matters.	<p>Council provided feedback on the applicants’ responses to traffic matters raised in Council’s submission with general agreement reached on all matters.</p> <p>Council shared draft conditions for the ARRC and these were discussed with EMM and the applicants.</p> <p>The meeting closed with the understanding that Council would finalise these draft conditions and provide to EMM and EMM would append this documentation to the revised RFI response to DPE.</p>

2 Responses to matters raised in Council’s submission

The applicants’ revised responses to each of the matters raised in Council’s submission are provided in Table 2.1. This table has also been revised to document the outcomes of the discussions with Council as relevant.

Table 2.1 Responses to matters raised in Council’s submission

Matter	Council’s submission	Applicants’ response
Traffic demand forecast	<p>The forecast traffic flows along Elizabeth Drive appear to be underestimated according to the forecast car trips in Western Sydney Aerotropolis Transport Planning and Modelling Stage 2 report. It does not reflect the forecast 46,280 vehicular trips generated from the Western Sydney Airport (WSA) and the aerotropolis precincts. Confirmation is required with regard to the assumptions used in the adopted STFM outputs.</p>	<p>The applicants consulted closely with TfNSW during the EIS and Response to Submission phases of the project. The Addendum Traffic Impact Assessment (Addendum TIA) used updated forecast traffic volumes – Strategic Travel Forecasting Model (STFM) – at TfNSW’s request.</p> <p>TfNSW provided updated STFM outputs for traffic volumes on Elizabeth Drive, Luddenham Road and Adams Road north of the site access in February 2021 and STFM outputs for traffic volumes on The Northern Road and Adams Road south of the site access in March 2021. TfNSW has raised no issues in relation to the background existing or forecast traffic volumes used to inform the Addendum TIA. The latest submission received from TfNSW dated 17 January 2022 raises no further comments relating to the project.</p> <p>Sydney Traffic Forecasting Model (STFM) is a strategic model owned and maintained by TfNSW. This model considers all future residential and employment growth for vehicles in various parts of Sydney and its associated traffic generation. This STFM model is an essential tool for the transport modellers to estimate traffic in future years. TfNSW has exclusive right to update the base model, when needed.</p> <p>The Western Sydney Aerotropolis Transport Planning and Modelling Stage 2 Report (AECOM 2020) was prepared to support the development and implementation of transport policies and strategies to foster a mode shift to sustainable transport for the Aerotropolis as well as transport infrastructure and services to facilitate the planning and definition of a multi-modal network for the Aerotropolis. As such the Transport Planning and Modelling Stage 2 Report is a strategic document for the long-term development of the Aerotropolis enabled by the Future Transport Strategy 2056. The 46,280 vehicle trip figure referenced in Council submissions is assumed to have been taken from Table 8.2 of AECOM (2020) (this assumption is due to Table 8.1 being the only reference to this figure in the report). This table refers to the total vehicle trips predicted by the mechanised passenger mode share from the Public Transport Patronage Model for the morning peak across all of the five initial Aerotropolis precincts (which include WSA) in 2056. This is not only 25 years beyond the scenarios modelled in the Addendum TIA but considered the morning peak hour movements across the entire initial five precincts of the Aerotropolis, not just the peak hour movements on key roads such as Elizabeth Drive and The Northern Road relevant to the ARRC application.</p> <p>Therefore, the use of the STFM model as requested by TfNSW is the appropriate traffic forecast data to inform the TIA and Addendum TIA for the project.</p>

Table 2.1 Responses to matters raised in Council’s submission

Matter	Council’s submission	Applicants’ response
	<p>It is noted that the 100% Elizabeth Drive West upgrade design shows that the intersection Elizabeth Drive/Adams Road will be restricted to left in only for light vehicles. The addendum TIA report only includes two scenarios: all traffic access from Elizabeth Drive and evenly traffic distributions between Elizabeth Drive and The Northern Road. The TIA has not assessed a scenario that all heavy vehicles generated from the subject site will be via The Northern Road only. Hence, additional traffic scenario is to be included in the report which assumes that the most traffic to/from the subject site will be via The Northern Road when the left in only restriction is in place at the intersection of Elizabeth Drive/Adams Road.</p>	<p>Consultation with TfNSW (refer Table 1.1) has clarified that the final upgrade to the Elizabeth Drive/Adams Road intersection will accommodate a B-double left turn into Adams Road from Elizabeth Drive. This has subsequently been discussed with Council. From these discussions, the applicants understand that Council are supportive of permitting heavy vehicles to access Adams Road via this left turn in movement from Elizabeth Drive and therefore no longer require assessment of this additional traffic scenario.</p> <p>At TfNSW’s request, the applicants carried out sensitivity SIDRA analyses considering TfNSW’s preliminary concept design of Elizabeth Drive/Adams Road upgrade which directed all background and project development traffic to The Northern Road/Adams Road intersection with the exception of background and project development traffic turning left into Adams Road from Elizabeth Drive. Through consultation with TfNSW, the applicants are of the understanding that in the final upgrade solution to Elizabeth Road/Adams Road intersection, the heavy vehicle left turn movement would be retained into Adams Road (as facilitated by the interim upgrade including 120 m deceleration lane proposed by the applicants).</p> <p>The sensitivity SIDRA analysis carried out for this scenario (refer to EMM’s 16 July 2021 response) showed there would be significant strain on the at the Northern Road/Adams Road intersection due to the redirected traffic. A LOS F is predicted for this intersection as a result in the change in baseline traffic flow, regardless of whether the project proceeds. This indicates that, regardless of the ARRC, further consideration should be given to the proposed long term Elizabeth Drive/Adams Road intersection or that further road network upgrades would be required (such as construction of the proposed subarterial road connecting Elizabeth Drive to the Anton Road/Adams Road intersection depicted in the draft precinct plan) prior to restricting additional turn movements at the Elizabeth/Adams Road intersection.</p> <p>While the Addendum TIA has not assessed a scenario wherein all ARRC heavy vehicles access the site via The Northern Road/Adams Road intersection, based on the sensitivity analysis conducted, it is logically assumed that regardless of the ARRC, the Northern Road/Adams Road intersection would be under significant strain due to redirected baseline traffic with a LOS F reasonably assumed. As noted above, further road network upgrades would be required to accommodate predicted baseline traffic flows prior to restricting turn movements at the Elizabeth/Adams Road intersection.</p>

Table 2.1 Responses to matters raised in Council’s submission

Matter	Council’s submission	Applicants’ response
Intersection analysis	<p>Elizabeth Drive is a classified road. TfNSW approval is required for the following proposed interim treatments at the intersection of Elizabeth Drive/Adams Road prior to the determination:</p> <ul style="list-style-type: none"> a) Provision of a 90 m deceleration left-hand turn lane into Adams Road; b) Provision of a short left-hand turn land on Adams Road into Elizabeth Drive; and c) Removal of the right-hand turn from Elizabeth Drive west into Adams Road. <p>As the intersection of Elizabeth Drive/Adams Road will be restricted to left in only for light vehicle, Council recommends that this intersection be restricted to left in/left out only for the operation of ARCC.</p>	<p>Elizabeth Drive is a classified road and as such, TfNSW is the relevant road authority for proposed Elizabeth Drive/Adams Road intersection upgrades required for the ARRC.</p> <p>TfNSW has endorsed the concept design for the interim upgrade to the Elizabeth Drive/Adams Road intersection noting that the final design and upgrade of this intersection should be consistent with this design.</p> <p>This concept design permits all turn movements from the ARRC and background traffic with the exception of the right turn into Adams Road from Elizabeth Drive.</p> <p>This matter has been discussed with Council with the applicants clarifying that further consultation with TfNSW has confirmed the final Elizabeth Drive/Adams Road intersection upgrade will accommodate a B double left hand turn into Adams Road from Elizabeth Drive.</p> <p>Following this discussion, the applicants understand that Council are satisfied with the TfNSW endorsed the concept design for the interim upgrade to the Elizabeth Drive/Adams Road intersection.</p>
	<p>Traffic survey data at the intersection of The Northern Road/Adams Road was collected during the construction of The Northern Road upgrade in 2019. It appears that the survey data was collected at the Old Northern Road/Adams Road intersection instead of the upgraded The Northern Road intersection as the survey data indicates that the intersection is a T-intersection instead of a four-way intersection. Clarification is required with regard to the survey data.</p>	<p>Clarification on this matter was provided to Council during recent meetings. Council did not seek for additional information or make further comment on this matter.</p> <p>Consultation with TfNSW advised that the Traffic Impact Assessment (TIA) for the project was to be carried out with consideration of the existing road network (refer to Table 2.20 of the Response to Request for Information Report EMM 2021 for consultation records with TfNSW). Accordingly, the traffic count survey carried out to inform the existing traffic volumes was carried out at old The Northern Road/Adams Road intersection which was the intersection operational at the time of the survey.</p>

Table 2.1 Responses to matters raised in Council’s submission

Matter	Council’s submission	Applicants’ response
	<p>In addition, SIDRA model analysis indicates that only 1 through vehicle on either approach of Adams Road at its intersection of The Northern Road is assumed in the model. An updated survey data and the forecast demand as part of the Northern Road upgrade EIS are to be used to recalibrate traffic demands at the newly upgraded intersection of The Northern Road/Adams Road. The forecast traffic volume at this intersection is to include the forecast freight movements to access the fuel farm in the WSIA.</p>	<p>Clarification on this matter was provided to Council during recent meetings. Council did not seek for additional information or make further comment on this matter.</p> <p>The Northern Road is a classified road and as such, TfNSW is the relevant road authority for The Northern Road/Adams Road intersection. TfNSW has raised no issues in relation to the background existing or forecast traffic volumes used to inform the Addendum TIA or the SIDRA modelling carried out to inform the assessment.</p> <p>At the request of TfNSW, the Addendum TIA uses the latest TfNSW Strategic Travel Forecasting Model (STFM) outputs for the AM and PM peak periods. TfNSW provided updated STFM outputs for forecast traffic volumes on Elizabeth Drive, Luddenham Road and Adams Road north of the site entry in February 2021 and STFM outputs for traffic volumes on The Northern Road and Adams Road south of the site entry in March 2021.</p>
	<p>As requested previously, intersection treatment at Adams Road/the site access is to be modelled and confirmed with Council.</p>	<p>EMM clarified with Council that the ARRC internal access road will be maintained as a private access by the applicants and will not be transferred to Council ownership. Following clarifying with Council that the site access is a site entry, rather than an “intersection” Council were satisfied that intersection modelling was not required. Council was also supportive of deferring further civil design work until post approval although noted that Council will expect to see signage and pavement marking included in the site entry design documentation that would accompany the application for an approval under Section 138 of the <i>Roads Act 1993</i> that clearly delineated the divide between the Council road network (ie Adams Road) and the private site access of the ARRC.</p> <p>Should the project be approved, the applicants will progress the design for the site entry from Adams Road in consultation with Council. Certified civil design plans for the upgrade to the site entry to Council as part of the Section 138 application. The applicants agree to upgrade the site entry on Adams Road in accordance with Council’s specifications.</p> <p>It is noted the Revised Biodiversity Development Assessment Report (BDAR) (contained in Appendix G of the Submissions Report) accounted for the clearance of vegetation associated with the widening of Adams Road at the site entry to accommodate a B-double turn path.</p>

Table 2.1 Responses to matters raised in Council’s submission

Matter	Council’s submission	Applicants’ response
Anton Road upgrade	<p>Due to the planned Elizabeth Drive/Adams Road intersection upgrade design, all heavy vehicles to/from the subject site will be via Adams Road, south of the subject site. Hence, the section of Adams Road between the site access and Anton Road is to be upgraded to cater for the heavy vehicle movements. It is noted that most heavy vehicles will be 30t load PBS vehicles. Pavement design for the upgraded Adams Road south section must be catered for the forecast freight vehicle movements. The design layout of Adams Road upgrade between the site access and Anton Road is to be submitted to Council for review.</p>	<p>As noted above, the applicants have clarified with TfNSW and subsequently Council that the long-term upgrade to the Elizabeth Drive/Adams Road intersection would restrict all turn movements at this intersection except left turns into Adams Road for light and heavy vehicles. Therefore, assuming this intersection upgrade proceeds in its current form, ARRC traffic would be able to access the site via Elizabeth Drive east and The Northern Road/Adams Road intersection. All traffic leaving the ARRC would travel south along Adams Road (refer response above).</p> <p>As outlined in Section 3.1.1(ii) of the Submissions Report, pavement upgrades on Adams Road between the site entry and Anton Road will be required to accommodate ARRC development traffic. Should the project be approved, pavement design will be submitted to Council for review and endorsement as part of the Section 138 application. A similar process has recently been progressed between the applicants and Council to upgrade Adams Road north of the site entry to facilitate heavy vehicle access for the approved quarry development on the site.</p>
	<p>Street lighting shall be provided along Adams Road between The Northern Road and the site access road.</p>	<p>The applicants will provide street lighting along the private internal site access road and at the site entry from Adams Road.</p> <p>Should the project be approved, the potential requirement for further lighting along Adams Road would be discussed with Council as part of the Section 138 application with consideration of the ARRC’s approved operating hours.</p>
	<p>There is an existing 3 tonnes load limit along Adams Road, south to the subject site. The proposed removal of the 3 tonnes load limit must be submitted to Council’s Pedestrian, Active Transport and Traffic Committee for endorsement.</p>	<p>The applicants acknowledge this requirement, having undertaken the same process to lift the load limit between the site entry and Elizabeth Drive to allow for the recommencement of quarry operations at Luddenham Quarry.</p>
	<p>An approval for the proposed PBS route along Adams Road, south to the subject site is required from NHVR.</p>	<p>The applicants acknowledge this requirement. An approval for the proposed PBS route on Adams Road between Elizabeth Drive and Anton Road will be sought from NHVR following approval of the project.</p>

Table 2.1 Responses to matters raised in Council’s submission

Matter	Council’s submission	Applicants’ response
Access road	Design of the proposed access road and its intersection with Adams Road are to be submitted to Council for review. Consideration is to be given to provide truck parking area along this road to cater for future warehousing developments.	<p>Should the project be approved, the applicants will submit certified civil design plans for the site entry on Adams Road to Council for approval as part of the Section 138 application. The applicants agree to upgrade the site entry on Adams Road in accordance with Council’s specifications. The applicants discussed this approach with Council during recent meetings. Based on these discussions the applicants understand that Council is supportive of this approach.</p> <p>A preliminary design of the private site access road is contained in Appendix B of the EIS. Appendix B of the EIS contained design plans for the proposed ARRC internal access road. Page 15 of this Appendix shows the extent of the ARRC site roadworks, while Page 16 shows a bulk earthworks plan outlining the required cut and fill to establish the ARRC site internal access road (and overall ARRC site). Page 20 and 21 of Appendix B of the EIS show a longitudinal section of the internal access road and cross-sections respectively.</p> <p>The design of the private internal access road will consider (where property constraints allow) the provision of heavy vehicle and light vehicle parking noting the future development applications for warehouse developments will incorporate parking to meet Aerotropolis Development Control Plan provisions.</p>
Summary of Council’s requests	<p>As a result of the above, a revised TIA report is to be submitted to Council for review, which includes (but not being limited):</p> <p>a) Additional modelling scenario that all heavy vehicles generated from the subject site will be via The Northern Road and Adams Road, south to the subject site;</p> <p>b) Clarification on the forecast demands and modelling assumptions along Elizabeth Drive, The Northern Road and Adams Road;</p> <p>c) Revised SIDRA analysis based on the updated traffic distribution assumptions;</p>	<p>Based on the above and below responses a revised TIA is not considered to be required.</p> <p>Following discussions with Council, the applicants understand that Council are supportive of permitting heavy vehicles to access Adams Road via this left turn in movement from Elizabeth Drive and therefore no longer require assessment of this additional traffic scenario.</p> <p>As above, the applicants consulted closely with TfNSW during the EIS and Response to Submission phases of the project. The Addendum Traffic Impact Assessment (Addendum TIA) used updated forecast traffic volumes – Strategic Travel Forecasting Model (STFM) – at TfNSW’s request.</p> <p>TfNSW provided updated STFM outputs for traffic volumes on Elizabeth Drive, Luddenham Road and Adams Road north of the site entry in February 2021 and STFM outputs for traffic volumes on The Northern Road and Adams Road south of the site entry in March 2021.</p> <p>Following discussions with Council, the applicants understand that Council are supportive of the proposed transport strategy and therefore no longer require assessment of additional traffic scenarios.</p>

Table 2.1 Responses to matters raised in Council’s submission

Matter	Council’s submission	Applicants’ response
	d) Intersection analysis of Adams Road/the site access road to confirm the required intersection treatments;	<p>EMM clarified with Council that the ARRC internal access road will be maintained as a private access by the applicants and will not be transferred to Council ownership.</p> <p>As above, should the project be approved, the applicants will progress the design for the site entry on Adams Road in consultation with Council.</p> <p>It is noted the Revised Biodiversity Development Assessment Report (BDAR) contained in Appendix G of the Submissions Report accounted for the clearance of vegetation associated with the widening of Adams Road at the site entry to accommodate a B-double turn path.</p> <p>Certified civil design plans for the upgrade to the site entry from Adams Road to Council for approval as part of the Section 138 application.</p>
	e) TfNSW in principle approval to the proposed interim intersection upgrade at the Elizabeth Drive/Adams Road intersection;	<p>As noted above TfNSW has endorsed the concept design for the interim upgrade to the Elizabeth Drive/Adams Road intersection noting that the final design and upgrade of this intersection should be consistent with this design (refer TfNSW letter dated 17 January 2022).</p>
	f) Design of the site access road and its intersection with Adams Road; and	<p>As above, should the project be approved, the applicants will submit certified civil design plans for the upgrade to the site entry on Adams Road to Council for approval as part of the Section 138 application.</p> <p>A preliminary design of the site access road is contained in Appendix B of the EIS. Appendix B of the EIS contained design plans for the proposed ARRC internal access road. Page 15 of this Appendix shows the extent of the ARRC site roadworks, while Page 16 shows a bulk earthworks plan outlining the required cut and fill to establish the ARRC site internal access road (and overall ARRC site). Page 20 and 21 of Appendix B of the EIS show a longitudinal section of the internal access road and cross-sections respectively.</p>
	g) Design of Adams Road upgrade between the site access road and Anton Road.	<p>As above, the applicant has agreed to upgrade between Adams Road and Anton Road to allow the load limit to be lifted. The design of the upgrade would be agreed with Council following approval of the ARRC.</p>
Flood Mitigation, and Treatment of Stormwater	All stormwater generated within the site to be treated prior to discharging to the receiving water body (Oak Creek).	<p>Stormwater from hardstand areas external to the ARRC warehouse will be treated in an onsite detention basin before being discharged to Oak Creek.</p>

Table 2.1 Responses to matters raised in Council’s submission

Matter	Council’s submission	Applicants’ response
	<p>Processing of waste materials including recycled product to be carried out within an enclosed warehouse. All dirty water generated from the processing will be captured within a leachate tank, treated in a treatment plant within the site and reuse for site activities. No untreated dirty water or treated dirty water to be discharged to the receiving water bodies.</p>	<p>These matters are all addressed in detail in the EIS.</p> <p>All acceptance, processing, storage and dispatch of waste and recycled product will be carried out inside the enclosed ARRC warehouse.</p> <p>Water will be used within the ARRC warehouse for dust suppression and washdown of operational areas.</p> <p>Water will drain via drains in the floor of the ARRC warehouse to a leachate tank within the water treatment plant located in the water management infrastructure area to the south of the ARRC warehouse. Leachate will be treated in the water treatment plant and stored for reuse within the ARRC warehouse. Treated water will not be discharged to Oaky Creek.</p>
<p>On-site Sewerage Management System (OSMS)</p>	<p>The Submission Report prepared by EMM Consulting dated 27 May 2021 did not specifically address requirements for the on-site sewage management system. Despite the limited information available, Clause 4.1.6 of the document explains that the wastewater system would require pumping out on a monthly basis.</p>	<p>It is noted the EIS for Sydney Water’s proposed Upper South Creek Advanced Water Recycling Centre (AWRC) was exhibited in late 2021. The AWRC would provide wastewater services across Western Sydney including the ARRC site and is scheduled to commence operation in 2025. A sewage treatment plant will not be required for the ARRC operations if it can access the mains sewer prior to the start of operations (ie if operations start after around 2025).</p> <p>Notwithstanding, if the Sydney Water wastewater infrastructure is not operational by the time the ARRC commences operations, a temporary (ie until the site can be connected to the main sewer) onsite sewerage management system will be required. The applicants acknowledge that approval for this system will be required under section 68 of the <i>Local Government Act 1993</i>.</p> <p>The Servicing Strategy Report (Appendix S of the EIS) proposed a sewerage treatment plan (STP) located in the water management infrastructure area to the south of the ARRC warehouse. Indicatively, this would consist of a fully enclosed eloywater oxyfix treatment system which would treat wastewater for either removal offsite or for use onsite (eg flushing toilets). As a fully enclosed system, the sewerage treatment plant would avoid any potential attraction of wildlife.</p> <p>Water would only be used for irrigation of landscaped areas if treated to Australian standards for recycled water (ie would meet the same recycled water quality standards as the Sydney Water AWRC).</p> <p>The final design and specification of the STP would be identified in the wastewater report prepared a part of the Section 68 application to Council. This design and specification would require approval from Council.</p>

3 DPE additional RFI

Additional information requested by DPE subsequent to the initial response to RFI is summarised in Table 3.1 alongside the applicants' responses.

Table 3.1 Responses to additional matters raised by DPE

Matter	Response
<p>The Department notes the Response to Council comments require further details before it can be accepted for further consideration. Overall, the RFI response has referred to TfNSW submission to address issues raised by Council. As TfNSW is the relevant road authority for Elizabeth Drive only, any assessment of impacts to Council owned roads need to be carried out to the satisfaction of Council, not TfNSW.</p>	<p>The applicants have discussed with Council in detail the matters raised in Council's submission (refer Table 1.1 and Table 2.1). Council provided feedback on the applicants' response to matters raised in Council's submission with general agreement reached on all matters.</p>
<p>Discrepancy between traffic forecasts in the Western Sydney Aerotropolis Transport Planning and Modelling Stage 2 Report and the STFM are not explained. It is possible STFM underestimates traffic forecasts as STFM may have only considered WSA traffic, but not Aerotropolis traffic, so assumptions may be different. Applicant to confirm assumptions, as per Council's request.</p>	<p>Refer response to Traffic demand forecast in Table 2.1. Clarification has been provided to Council. The use of the STFM model as requested by TfNSW is the appropriate traffic forecast data to inform the TIA and Addendum TIA for the project.</p>
<p>TIA must address Elizabeth Drive 100% concept design which does not permit any heavy vehicles turning left off Elizabeth Drive. This analysis has not been done to Council's satisfaction. The ultimate traffic scenario to be considered should be confirmed in consultation with Council.</p>	<p>Consultation with TfNSW (refer Table 1.1) has clarified that the final upgrade to the Elizabeth Drive/Adams Road intersection will accommodate a B-double left turn into Adams Road from Elizabeth Drive. This has subsequently been discussed with Council.</p> <p>From these discussions, the applicants understand that Council are supportive of permitting heavy vehicles to access Adams Road via this left turn in movement from Elizabeth Drive and therefore no longer require assessment of this additional traffic scenario.</p>
<p>Intersection analysis at the junction of Anton Road / Adams Road should be provided (intersection configuration to be assessed should be identified in consultation with Council)</p>	<p>Council has not requested this analysis be carried out.</p> <p>Cognisant of the developing Aerotropolis and uncertainties surrounding the future road network, the applicants consulted closely with Council and TfNSW on the approach to the traffic impact assessment (TIA) prior to commencing the traffic assessment for the project in 2020. TfNSW directed the applicants to carry out the traffic assessment on the existing road network using future traffic volume data provided by TfNSW. This approach was supported by Council.</p> <p>The applicants have subsequently gone above and beyond the traffic and transport related SEARs, with reiterations of the proposed transport strategy in response to feedback from TfNSW and Council and updated analysis at the request of TfNSW to account for an update to TfNSW's traffic forecast model (STFM).</p> <p>The Addendum TIA determined that peak ARRC development traffic could be accommodated within the existing road network with ARRC development traffic representing up to 4.77% of the local daily traffic on Adams Road (south) and up to 1.6% and 0.8% of the daily traffic on Elizabeth Drive and The Northern Road respectively.</p> <p>TfNSW has confirmed in writing, that TfNSW is satisfied with the information provided. Council and the applicants have also reached general agreement on all matters raised by Council.</p> <p>Accordingly, it is not considered reasonable for DPE to continue to seek additional assessments as development of the future Aerotropolis road network progresses due to the marginal impact the ARRC will have on the</p>

Table 3.1 Responses to additional matters raised by DPE

Matter	Response
Council has previously asked for SIDRA analysis and preliminary design drawings for the site access intersection with Adams Road, this is the expected minimum information for any DA.	<p>existing road network and the reasonable assumption that future upgrades to the Aerotropolis Road network will increase the capacity of the network.</p> <p>As outlined in Table 2.1, following clarifying with Council that the site access is a private site entry, rather than an “intersection” Council were satisfied that intersection modelling was not required. Council was also supportive of deferring further civil design work until post approval although noted that Council will expect to see signage and pavement marking included in the site entry design documentation that would accompany a Section 138 approval that clearly delineated the divide between the Council road network (ie Adams Road) and the private site access of the ARRC.</p> <p>Should the project be approved, the applicants will progress the design for the site entry from Adams Road in consultation with Council. Certified civil design plans for the upgrade to the site entry to Council for approval as part of the Section 138 approval. The applicants agree to upgrade the site entry on Adams Road in accordance with Council’s specifications.</p>
Anton Road Upgrade – preliminary design drawings for the upgraded road design (between the site access and Anton Road) should be submitted for Council’s review.	Refer response in Table 2.1. Should the project be approved, the applicants will submit certified civil design plans for the upgrade to the site entry on Adams Road to Council for approval as part of the Section 138 application. Council is supportive of this approach.
The traffic response (RFI – 03032022) referenced the SIDRA sensitivity analysis undertaken at the TNR/Adams Road intersection for the redirected traffic flow scenario and a LOS F was predicted as a result in the change in baseline traffic flow, regardless of whether the project proceeds. Could you please clarify how the baseline STFM outputs were modified to obtain the redirected baseline scenario.	<p>The baseline traffic scenario assumed the following:</p> <ul style="list-style-type: none"> • 55% of peak period traffic was assumed to be peak hourly traffic; • the STFM model outputs were interpolated to obtain traffic at the analysed year; and • in lieu of any data, traffic distribution splits were assumed to be as per existing. <p>The raw SIDRA files for the baseline and redirected baseline scenarios have been provided to DPE for review.</p>
Note that the predicted LoS F for the redirected baseline scenario appears to be primarily attributed to the additional vehicles assumed in the R3 turn from North-east of Adams Road (65 in the baseline compared to 496 in the redirected case – see attached image). It is understood by the Department that Adams Road currently services a varied origin and destination of motorists and its function is ‘collector’ or a cut-through rat run in the surrounding road network. As such, closing off the intersection of Elizabeth Drive/Adams Road should reduce traffic along Adams Road. However, this does not appear to be the case in the SIDRA sensitivity analysis.	<p>Traffic volumes on Adams Road will be higher in the future due to traffic accessing the Western Sydney Airport via the Anton Road/Adams Road intersection. Restricting all turn movements at the Elizabeth Drive/Adams Road intersection, with the exception of the left turn into Adams Road from Elizabeth Drive will redirect all of this traffic to The Northern Road/Adams Road intersection.</p> <p>The raw SIDRA files for the baseline and redirected baseline scenarios have been provided to DPE for review.</p>
Please clarify the SIDRA modelling parameters adopted for the existing and with development scenarios, including vehicle length, passenger car equivalent (PCE) or passenger car unit (PCU) factors, turning vehicle factor and any other parameters relevant to heavy vehicles.	These parameters have not been altered in the model. As noted above, the raw SIDRA files for the baseline and redirected baseline scenarios have been provided to DPE for review.

4 Response to matters raised in Council’s additional submission

Additional information requested by Council subsequent to the revised draft response to the RFI is summarised in Table 4.1 alongside the applicants’ responses.

Table 4.1 Responses to additional matters raised by Council

Matter	Response
<p><u>Ultimate intersection treatment</u></p> <p>The current TfNSW design for the Elizabeth Drive/Adams Road intersection will only permit left turn movements into Adams Road. However, a new four-way signalised intersection is proposed at the Elizabeth Drive/Luddenham Road intersection with a provision for a future sub-arterial road to connect to the precinct. This will provide an opportunity for traffic from Adams Road to be diverted to the new sub-arterial road.</p> <p>Should the proposed development be permitted in the medium-long term, additional traffic modelling scenario is to be carried out to demonstrate that traffic redistribution to the proposed new Elizabeth Drive/Luddenham Road/the proposed access road can be accommodated.</p> <p>As indicated in the applicant’s submission, the intersection of The Northern Road/Adams Road will be operating at LOS F in 2026. Limited traffic is to be via The Northern Road/Adams Road intersection due to intersection capacity constraints.</p>	<p>It is not considered reasonable for DPE to seek additional assessments as development of the future Aerotropolis road network progresses. This is due to the marginal impact the ARRC will have on the existing road network and the reasonable assumption that future upgrades to the Aerotropolis Road network will increase the capacity of the road network.</p>
<p>It is noted that the traffic count survey to inform the existing traffic volumes was carried out at previous The Northern Road/Adams Road intersection in 2019. The realigned The Northern Road/Adams Road intersection has been constructed at a different location with the different intersection configuration. Change to traffic condition at the new intersection is significant. Hence, it is recommended that additional traffic survey is to be carried out if the application is to be assessed further.</p>	<p>To clarify, while the traffic survey count was done at the former Northern Road/Adams Road intersection to inform existing traffic volumes, the actual SIDRA analysis was carried out on the new intersection. While the intersection configuration and location of the new intersection is different, it is reasonable to assume the traffic volumes moving through the intersection for the existing baseline scenario outlined in the original TIA were generally comparable between the old and new intersections.</p> <p>Notwithstanding the above, due to the rapidly changing traffic conditions in the Aerotropolis, more relevant to the operation of the ARRC, are the predicted future baseline volumes provided in TfNSW’s Strategic Travel Forecasting Model (STFM). It is noted, that the Addendum TIA is informed by STFM data rather than the data collected in the traffic survey.</p>
<p><u>A need for Adams Road pavement strengthening</u></p> <p>Due to the future restriction at the Elizabeth Drive/Adams Road intersection, heavy vehicle movements will leave the ARRC and travel south along Adams Road.</p> <p>This road section has an existing 3-tonne load limit and would need to be lifted to permit heavy vehicle movements. This requires pavement strengthening, road widening to provide a minimum of 1.0m road shoulders, Liverpool Local Traffic Committee support and Council’s approval.</p> <p>Hence, should the development be approved, the developer will be required to carry out the following works along Adams Road:</p> <ul style="list-style-type: none"> • Road widening to provide a minimum of 1.0m road shoulders and pavement strengthening to accommodate heavy vehicle movements between the site entry and Anton Road; and • Road widening along Adams Road at the site entry to permit the longest heavy vehicle to access the development site. 	<p>The requirement for Adams Road pavement upgrades is noted. Should the project be approved, the applicants will submit detailed designs to Council for approval prior to the road works being undertaken.</p>

Table 4.1 Responses to additional matters raised by Council

Matter	Response
It is noted the proponent has advised that the above works would be carried out. Concept/detailed designs to be submitted to Council for approval prior to the road works, and to be reconstructed in accordance Council's specifications. Should the application be approved, the consent conditions are to include the above works.	
<u>Street lighting</u> The above road works are to include street lighting in accordance with Council and Endeavor Energy requirements.	The requirement for street lighting is acknowledged.
<u>Haulage route</u> An approval for the proposed PBS route must be sought from NHVR to access the subject site. The design and construction of the proposed internal road layout must comply with Council's engineering specifications.	Should the project be approved, the applicants will seek approval from NHVR for Adams Road to be classified as a PBS route. As noted above, the internal access road is a private road and will not be transferred to Council ownership. Notwithstanding, the applicants will design and construct the internal road in accordance with Council's specifications for a private access road.

5 Closing

We trust that the revised responses contained in this letter meet DPE's information requirements.

Yours sincerely



Janet Krick

Associate Environmental Planner

jkrick@emmconsulting.com.au