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STATE SIGNIFICANT DEVELOPMENT APPLICATION (SSD 9741) FOR PROPOSED DATA CENTRE

PROPERTY AT: 1 SIRIUS ROAD, LANE COVE WEST (LOT 1 DP 1151370)

Dear Patrick,

Reference is made to the subject State Significant Development Application (SSDA) – SSD 9741 – that was publicly exhibited by the NSW Department of Planning, Industry & Environment (DPIE) on 11 April 2019 to 13 May 2019 for a proposed Data Centre at the identified Subject Site – 1 Sirius Road, Lane Cove West (Lot 1 DP 1151370). Additionally, pursuant to discussions with the NSW DPIE, the SSD Application was resubmitted in accordance with Clause 55 of the *Environmental Planning and Assessment Regulation 2000* on 10 September 2019.

Following a review of the NSW DPIE's letter, dated 16 September 2019; the submissions received from the respective Government Agencies, issued on 30 September 2019 and 3 & 9 October 2019; and the email dated from the NSW DPIE on 11 October 2019, 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

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Enclosed:

- **Appendix 1 – LV Switchroom Locations**
- **Appendix 2 – Indicative Fuel Locations**
- **Appendix 3 – SEPP 33 Report**
- **Appendix 4 – Dangerous Goods Review Report**
- **Appendix 5 – Travers Bushfire & Ecology – Vegetation Letter of Support**
- **Appendix 6 – Travers Bushfire & Ecology – Bushfire Letter of Support**
- **Appendix 7 – GRC Hydro Flood Assessment Letter of Support**
- **Appendix 8 – AW Edwards Letter of Support**

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Table 1: Response Matrix

Relevant Agencies Response to Submissions	Formalised Response
Lane Cove Council	
<i>Overall, Council supports the amendments to the original design. Impacts on the adjoining Ecologically Endangered Communities (EEC) have been minimised. The reduced building footprint occupies a smaller portion of the site area and provides a significantly larger setback from the environmentally sensitive areas to the south-west.</i> <i>Although the overall height of the development would increase as a consequence of the greater setbacks, it is considered to be a better planning outcome and provides greater environmental impact considerations. The revised envelope has been consolidated and would be constructed with high-quality well-integrated finishes and materials.</i> <i>The proposed built form of the development would not be consistent with the LEP height control. However the additional height is supported given the more considered design and amelioration of environmental concerns.</i> <i>Council acknowledges that the addition of a proposed Data Centre would be beneficial to the economy of the state and the local area. The proposed high-tech industry would also provide increased employment opportunities to the Lane Cove West Business Park.</i>	It should be noted, that in the letter issued by Council, dated 27 September 2019, item 6 – carparking, states, that “the site is proposed to be serviced by a private minibus to pick up / drop off staff at the front of the site.” Accordingly, the reference in the traffic report prepared by ARUP (2019) notes, that there is a mini-bus parking bay, and not a service that will be provided. It is requested, that this be reworded to suit the notation from the traffic report. Table 2 outlined below has been prepared pursuant to reviewing the draft Conditions of Consent, issued by Lane Cove Council, dated 27 September 2019. Conditions outlined in Table 2 are requested to be reviewed and addressed where deemed appropriate.
NSW Department of Primary Industries	
<i>I refer to your email of 13 September 2019 to the Department of Primary Industries regarding the above matter.</i> <i>DPI has reviewed the project and has no comment.</i>	Noted and agreed.
Fire and Rescue NSW	
1. <i>It is understood that there has been a significant increase in the total volume of diesel proposed to be stored on site from 510,000 L to 3,336,000 L. Additionally, a number of inconsistencies were noted throughout the Report and associated appendices as to the total volume</i>	In the SLR Consulting SEPP 33 Report issued to the Department on 21/12, an estimate of approximately 510,000 L was assumed to be the quantity of diesel fuel storage proposed across the Site. However, pursuant to the design changes and revised scheme, the Dangerous Goods Review Report prepared by Lote Consulting

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<i>of diesel proposed to be stored on site. It is recommended that clarification be provided as to the total volume of diesel proposed to be stored on site.</i>	(26/08/2019) confirms, that approximately 3,336,000 L of diesel fuel storage would be required across the Site for the Proposed Development. This was discussed with FRNSW (27.09.19). Consensus was that this a product of the detailed development of requirements between the original EIS submission and the current position. No objections were raised on this point. It should be noted, that FRNSW were not concerned with the quantity; more so the strategy in which the proposed quantity would be appropriately managed and mitigated in the instance a hazard was to occur on-site.
<i>2. It is understood that there has been modifications to the proposed arrangement of diesel storage and generator sets as a result of changes to the development height and footprint such that they are now located on tiered platforms external to the building.</i>	This point was expanded and covered in more detail with FRNSW (27.09.19). Noted.
<i>3. It is noted in the RtS that the recommendation given by FRNSW requiring "Further information be provided in regard to the storage of the diesel on site, including consideration and provisions made for special problems of fighting fire in accordance with E1.10 of the National Construction Code (NCC)" has been discounted given that the State Environmental Planning Policy No 33 – Hazardous and Offensive Development (SEPP 33) screening did not deem the proposed development to be either hazardous or offensive. FRNSW do not accept that this response is adequate or correct given that SEPP 33 is an assessment tool used as part of a planning instrument for development control and is not related to the design and construction of buildings including associated fire and life safety systems in accordance with the NCC. FRNSW deem the storage of 3,336,000 L of diesel to present a significant hazard and associated fire risk that would pose 'special problems of fighting fire'.</i>	FRNSW's position was noted and discussed in more detail (27.09.19). Whilst SEPP 33 is the relevant legislative policy covering the proposed storage of hazards, the issues associated with firefighting and life safety were deemed to warrant further investigation. It was agreed that Lote Consulting and Scientific Fire would review the associated risks highlighted and further address the comments made. These would be presented in the finalised FER for approval by FRNSW. Accordingly, it was agreed that the review by FRNSW would be done post SSD approval with the caveat that FRNSW may require further measures to be adopted within the development at the detailed design phase, prior to the issue of the relevant Construction Certificate.
<i>4. It is noted that Appendix 32 Fire Engineering Report is limited to a general review of the proposed design to determine if compliance with the performance requirements of the NCC can be achieved. No identification of hazards or an assessment of associated risks including worst credible fire scenarios (WCFS) has been undertaken.</i>	The Fire Engineering Report in Appendix 32 constitutes a DA Fire Engineering Statement. It is very typical for details of the fire engineering strategies to be kept at a high level for the purposes of a DA submission (in this instance SSD Application submission). The subsequent Fire Engineering Brief Questionnaire (FEBQ) submission has documented the potential fire hazards / risk associated with the proposed fire engineering performance solutions. It is also noted that the detailing of Dangerous Goods treatment and management is not the scope of a Fire Safety Engineer, rather a Dangerous Goods Consultant.

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	During the meeting, it was agreed by FRNSW that the finalised FER and the current DG Review Report, can both be updated to address the comments raised. Following this, and in line with FRNSW's recommendation, the Fire Engineering Report will reference the updated Dangerous Good report in order to allow FRNSW to be able to review and approve the proposed strategies in both succinct documents.
5. <i>It is noted that Appendix 39 Dangerous Good Report identifies the total quantities of lithium-ion batteries and diesel to be stored on site but does not undertake an assessment of fire and life safety system requirements beyond that specified with relevant Australian Standards. FRNSW do not deem that provision of a hydrant system capable of providing 20 L/s flow and powder type extinguishers to be commensurate with the fire risks posed by the storage of these goods or adequate in mitigating a WCFS.</i>	The purpose of the DG report is to assess the compliance of the facility against the applicable standards to inform the design of the facility. The DG report does not assess fire and life safety and only provides guidance on what is required to comply with the standard. In terms of the fire risk, a fire can only occur if the diesel is released from the fuel tanks. As the tanks are banded, being structurally integral (i.e. inner tank and outer tank), two tank failures would be required to occur to allow for an external release. Following release, the combustible liquid would then need to be ignited. As combustible liquids don't emit flammable vapours, the ignition source must have a high energy or be in continuous contact with the diesel to ignite it. Therefore, the potential for an external release and ignition to occur is incredibly low. The diesel tanks are single units and are not connected, so while the total volume of combustible liquid at the site is large, the potential for escalation is minimised by the presence of individual units (noting that the potential for release and ignition is incredibly low). The standard takes this into account when identifying the fire protection required, (i.e. 20 L/s of hydrant flow) as the protection required is for individual tanks rather than the conglomerated volume of the individual tanks. Nonetheless, FRNSW's concern regarding potential for impact of a tank on adjacent tanks, or for a bushfire to impact the tanks may require the tanks to be cooled.
6. <i>It is noted that representatives for the Applicant have engaged with FRNSW in the Fire Engineering Brief Questionnaire (FEBQ) process. A number of inadequacies have been identified within this following a review of the updated submission including:</i> <i>a. Only generic information was provided within the FEBQ submission and a number of hazards proposed to be on site were not identified including the diesel storage and lithium-ion battery system. No assessment of the risk or WCFS were undertaken in relation to these.</i> <i>b. No assessment or demonstration of compliance with Clauses E1.10 or E2.3 of the NCC was provided.</i>	a. As discussed, and clarified in the meeting held with FRNSW, the FEBQ submission has made reference to the Dangerous Goods Report for information associated with the handling and treatment of Dangerous Goods. Outcomes and recommendations from the updated Dangerous Good Report will be included in the upcoming Fire Engineering Report as requested by FRNSW. b. Clause E1.10 of the NCC relates to the treatment of special hazards (i.e. Dangerous Goods in this instance). Clause E1.10 only mentions, that suitable additional provision must be provided; however, has not detailed how this is achieved.

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c. <i>All assessments were undertaken against the original layouts and do not give consideration to the proposed modifications.</i> d. <i>It was identified that the proposed largest fire compartment would exceed the maximum size as prescribed in Table C2.2 of the NCC such that the building would be deemed a 'Large Isolated Building', however no assessment was made against associated performance requirements.</i>	Whilst this is the case, the design team has discussed with FRNSW their potential concerns associated with the Dangerous Goods identified on-site. FRNSW's concerns will be addressed in the updated Dangerous Goods Report and referenced in the Fire Engineering Report documentation. With respect to Clause E2.3 (smoke hazard management system), this will be complied with to the extent as required by the BCA DtS provision for a development with an effective height of less than 25 m. c. The Fire Engineering Report documentation shall include the revised layout and will include recommendations from the updated Dangerous Goods Report. d. It has been clarified in the meeting that the Subject Site will not be intended to be designed as a Large Isolated Building. Fire compartmentation within the subject building will be in accordance with Type A Construction requirements, with fire compartments not more than 5,000 m² area and 30,000 m³. The Fire Engineering Report will also include fire compartment drawings to assist FRNSW in its review.
7. <i>It is recommended that the Applicant undertake consultation with FRNSW in regard to the fire and life safety system requirements for the development. Whilst there is currently no requirement for a Fire Safety Study to be undertaken, FRNSW may request one should it be deemed that the development poses unique challenges to the response to and management of an incident.</i>	Consultation with FRNSW (Nathan Everett) was undertaken on 27.09.19. The session was informative and productive. An agreed pathway moving forward was reached with a view that further information would be provided addressing the comments raised in more detail. On receipt of the finalised FER, FRNSW will review and advise if any further measures are to be implemented. Notwithstanding, the abovementioned items are considered to be appropriately addressed.
Sydney Water	
<i>Thank you for referring the development application referral listed above to Sydney Water.</i> <i>We have reviewed the amended development application and have no further comments to make to our previous correspondence in the attachment.</i>	Noted and agreed.
Transport for NSW	
<i>Thank you for your correspondence dated 13 September 2019, requesting Transport for NSW (TfNSW) to review and comment on the amended application and response to submissions for the subject development.</i> <i>The amended application and response to submissions has been reviewed, and no further comments are provided.</i>	Noted and agreed.

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Ausgrid	
<i>Ausgrid has no further submission and will continue to work with the proponent regarding our requirements for safe and unrestricted access to our assets on and adjacent to the development site.</i>	Noted and agreed.
<i>Ausgrid's John Duck (Customer Manager) will work directly with the proponent to resolve these issues.</i>	
NSW Department of Planning, Industry & Environment – Hazards Team	
<i>1. Provide justification on large backup power capacity is required for the SSD. Reduction on the size of PTU and diesel storage quantity should be considered given the location of the SSD is in close proximity to an Ausgrid 132 kV electricity supply.</i>	The determination of the quantity of generators, fuel supply and PTUs is a product of delivering sufficient power in the event of a major power supply disruption. The worst-case generator fuel consumption at 100% load is 875 L/hour. To provide 48 hours of operation, each tank will require 42,000 L of fuel. There is no individual tank on-site with storage capacity of greater than 42,000 L, they are a dedicated supply to a single Generator. Given the capacity of the proposed Data Centre, the quantities provided are minimum requirements which cannot be reduced without reducing the overall capacity. Should the back up power capacity not be able to be provided, this could ultimately compromise the operational efficiencies of the proposed Data Centre.
<i>2. Confirm the location of the PTU. Although noted from EIS Appendix 39, Figure 3-2 that the PTU will be installed inside the data centre building, we understand from our meeting with the Applicant that the PTU will be in the basement of the building. However, EIS Appendix 5 indicates that the basement will primarily be occupied with electrical switch rooms with no clear indication on how the PTU (or sub-systems) will be located.</i>	The PTUs will be located in each LV Switchroom, refer to the attached plans (Switchrooms A-F in Appendix 1). PTUs comprise UPS units, transformers, control gear and battery racks. Each LV Switchroom is 2 hr fire rated within building envelope, which is rated to 4 hrs.
<i>3. Provide description of the PTU technology to be installed (specifications, battery chemistry, specific hazards, etc.).</i>	The PTU's comprise a series of battery racks as noted in Item 4. The general arrangement will be as shown in the extract diagram below.

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	<table><tr><th colspan="2">Specification</th><th>Unit</th><th>Value</th></tr><tr><td rowspan="11"></td><td>Configuration</td><td></td><td>136S1P</td></tr><tr><td>Dimension (W*H*D)</td><td>mm</td><td>650.0 x 2055.0 x 600.0</td></tr><tr><td>Weight</td><td>kg</td><td>~ 550(TBD)</td></tr><tr><td>Nominal Capacity</td><td>Ah</td><td>67</td></tr><tr><td>Nominal Energy</td><td>KWh</td><td>34.625</td></tr><tr><td rowspan="2">Voltage</td><td>Nominal</td><td>Vdc</td><td>516.8</td></tr><tr><td>Operating</td><td>Vdc</td><td>408V ~ 571.2V</td></tr><tr><td>Rack color</td><td></td><td>KCC - EX8816(S) N9.5</td></tr><tr><td>Recommended Operation Temperature</td><td>°C</td><td>23±3</td></tr><tr><td>Storage Temperature</td><td>°C</td><td>0 ~ 40°</td></tr><tr><td>Storage Humidity</td><td>%</td><td>Less than 60 % Rh under no condensing</td></tr></table>	Specification		Unit	Value		Configuration		136S1P	Dimension (W*H*D)	mm	650.0 x 2055.0 x 600.0	Weight	kg	~ 550(TBD)	Nominal Capacity	Ah	67	Nominal Energy	KWh	34.625	Voltage	Nominal	Vdc	516.8	Operating	Vdc	408V ~ 571.2V	Rack color		KCC - EX8816(S) N9.5	Recommended Operation Temperature	°C	23±3	Storage Temperature	°C	0 ~ 40°	Storage Humidity	%	Less than 60 % Rh under no condensing
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4. Describe the fire safety systems associated with the PTU. Are these systems a component of the PTU or would be as part of building fire safety design? If the PTU is located in the basement, how is spatial confinement addressed (i.e. basement ventilation, gas suppression systems, etc.)?	It is noted each individual LV Switchroom contains a series of battery racks, 40 racks per switchroom containing 17 batteries each. Each LV Switchroom is 2 hr fire rated and isolated from other rooms. The LV Switchrooms are in turn contained within the building envelope which will be Type A construction ie 4 hr rated. In addition, the following protection measures will be incorporated: ▪ Fire Detection and Alarm System in accordance with NCC 2019 Clause E2.2a and AS1670.1-2018. ▪ Owing to the air exchange rate within the spaces, MASD(VESDA) has been selected for below ceiling and within ceiling spaces/subfloor spaces. ▪ Fire Sprinklers in accordance with NCC 2019 E1.5 have been provided for Asset Protection. The system have been provided to these rooms in accordance with AS2118.1-2017 – Ordinary Hazard III. ▪ Double interlocked pre-action fire sprinkler systems in accordance with this standard has also been nominated. ▪ Fire Extinguishers will be provided as per NCC 2019 E1.6 and selected, located and distributed in accordance with AS2444-2001 and the Draft Fire Safety Engineering Report (Design Issue 10 – Fire Hose Reels). ▪ Fire Hydrant Coverage to NCC2019 E1.3 and AS2419.1-2005. ▪ Fire Hose Reels have been omitted – as per Draft FSER (Design Issue 10 – Fire Hose Reels).																																							

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5. <i>Demonstrate the total quantity of diesel have been minimised when considering the above hazards.</i>	Total fuel supply capacity has been calculated to provide 48 hours emergency supply. Each generator requires 42,000 L of diesel fuel for that nominated period. Refer to Item 1 above.
6. <i>Provide description on how the diesel tanks be filled and its filling location, considering tanks are stack 3-height and it will be difficult to access the tanks located in the inner centre. It is also noted in the DG Report (Appendix 39 of EIS, page 15) that the tanks are vehicle filled. Please provide information the parking location of the diesel tanker and demonstrate adequate clearance is available.</i>	The proposed fuel filling points will be distributed around the building, two (2) fuel filling points per generator platform. The fill points shall be a Stainless Steel cabinet with spill containment and physical protection. From these points a fuel distribution system will circulate fuel into the individual tanks. Refer to the attached preliminary plan indicating current proposal (refer to Appendix 2).
7. <i>Verify that the location of the 132 kV high-voltage substation in close proximity to the gensets (and vice-versa) complies with all relevant Australian Standards and codes, including and not limited to those related to electrical safety, fire safety and combustible liquids.</i>	The applicable Standard for the storage and handling of combustible liquids is AS 1940. This Standard does not explicitly state separation distances to substations. However, it does state, that ignition sources shall not be within the hazardous zone associated with liquids. Combustible liquids do not emit flammable vapours. Hence, there is no hazardous area. Subsequently, the substation would not be within the hazardous zone and thus the separation distance would be compliant. Input from the substation designer would be required to demonstrate separation distances are compliant from the electrical safety perspective.
8. <i>Verify that any clearances as part of bush fire control takes into account the specific hazards from significant diesel storage and the 132 kW high-voltage substation.</i>	AS 1940 states that combustible material shall not be located within 3 m of a DG storage. The scrub/bush is located >3 m and thus complies with the standard.
9. <i>Ensure that recommendations raised in all technical and safety studies associated with the SSD are consistent and they will compromise on fire and environmental safety.</i>	Noted. All recommendations as presented in each of the technical reports will be implemented in the development of the final detailed design for the Proposed Development.
10. <i>Demonstrate that an integrated engineering approach has been taken when considering the above hazards, proposed safeguards and operations practicality.</i>	While diesel is combustible, it is not a high-risk product as it does not readily ignite. Furthermore, the diesel is contained within individual self-bunded tanks which minimise the potential for release and associated escalation.
11. <i>Demonstrate that the SSD can comply with HIPAP 4 qualitative risk criteria, including and not limited to HIPAP 4, Section 2.4.4 Environmental Risk (regarding the location adjacent to Lane Cove River), and especially the principle "all 'avoidable' risks should be avoided".</i>	The recommendations outlined in the Hazardous Industry Planning Advisory Paper No.4 may be able to be addressed. In doing so the proposed approach currently incorporates measures which reduces the risk of environmental damage if an accidental release occurs. In particular, the proposed diesel fuel tanks are twin walled construction, with the outer skin containing any potential fuel leaks. These and other measures can be reviewed in the detailed design for the Proposed Development.
12. <i>Confirmation that the current design of the SSD can be altered in a safe and appropriate manner to comply with fire safety requirements arising from a FSS prepared in consultation with FRNSW, taking into account the</i>	Given the consultation meeting with FRNSW on 27.9.19, FRNSW appear to be comfortable with the proposed approach undertaken with the project. There remain some areas that require further development and consultation with FRNSW, which

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<i>staged/phased approach described in EIS Appendix 5 (last page), while ensuring compliance with all conditions of consent.</i>	will be undertaken in the continued development of the Proposed Development. This includes finalisation, review and assessment of the indicative FER and FEBQ, which will be provided to FRNSW prior to the issue of a Construction Certificate. Ongoing development of the project will be undertaken in compliance with the conditions of approval.
NSW Environment Protection Authority	
<i>The Environment Protection Authority (EPA) has advised that the capacity of the on-site diesel storage as currently proposed (3,300,000 litres) would trigger the requirement for an Environment Protection Licence (EPL) under Schedule 1, clause 9 of the Protection of the Environment Operations Act 1997 (the POEO Act). The relevant trigger for the storage of petroleum products under the POEO Act is 2,000 tonnes, and I understand that the current diesel storage capacity as proposed would equate to approximately 2,920 tonnes.</i> <i>In addition, the EPA has advised that there is insufficient detail in the updated Environmental Impact Statement (EIS) to allow it to determine whether an EPL can be issued for the proposed development. Accordingly, the Department notes that there are two options available to you regarding this outstanding issue:</i> <i>1. Liaise directly with the EPA regarding the information they require to determine whether an EPL can be issued for the proposed development.</i> <i>2. Reduce the capacity of on-site diesel storage to below the relevant trigger (2,000 tonnes).</i>	As documented in Section 4.2.4 of the Environmental Impact Statement, the Proposed Development as submitted to the NSW DPIE does not trigger any thresholds in respect of this legislation, for which an Environmental Protection Licence (EPL) would be required. Accordingly, the Proposed Development has taken complete cognisance of the potential thresholds that may trigger an EPL. Diesel fuel proposed on the Subject Site will be stored in 80 x 28,240 L sub-tanks as part of a diesel genset combination, which are separated into three (3) individual banks around the Site, with a total combined storage of approximately 2,259,200 L. Therefore, the total fuel storage converted to volumetric tonnes, would not trigger the requirements under Schedule 1 of the POEO Act for an EPL. It is acknowledged and formally noted, that any contravention to the fuel storage proposed, would be subject to separate approval. For consistency and completeness, the SEPP 33 and Dangerous Goods Review Reports have been updated respectively (refer to Appendix 3 & 4).
<i>Should you decide to reduce the capacity of the on-site diesel storage, the Department would require additional information around the use of the diesel tanks to ensure the outstanding concerns raised by the EPA are appropriately addressed. This includes:</i> <i>whether there would be any noise or air quality (including vapourisation) impacts associated with the filling of the diesel tanks.</i>	The planned filling procedure is, that tankers will park adjacent to the designated filling points and will connected by hoses. Hoses connect onto manifolds which are sealed, thereby ensuring fuel vapor is completely contained. Minor fuel drips may occur when hoses are disconnected; however, these would be contained within a localised bunded area for appropriate cleaning to be undertaken.
<i>clarifying whether the diesel storage tanks will be located above or below ground.</i>	Individual fuel tanks are located aboveground under each generator. These are double walled tanks ensuring leaks are contained within the outer layer. Detection is provided to the interstitial space to automatically create an alert if leaking occurs.
<i>the measures that would be implemented to prevent and/or mitigate surface</i>	Refer to the abovementioned items should be made, which satisfactorily addresses

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<i>and groundwater impacts associated with the use of the diesel tanks.</i>	the measures to be implemented to mitigate any impacts occurring as a result of the proposed fuel storage. This will include localised bunding, double walled tanks and automatic leak detection.
<i>whether the diesel tanks were considered as part of the contamination studies and the associated Remedial Action Plan (should they be located underground).</i>	Tanks are not located underground and therefore do not relate to the RAP. The RAP has been prepared to address works or activities that may occur within the EPA capped area only.
NSW Department of Planning Industry & Environment – Environment, Energy and Science Group (EES)	
Biodiversity: <u><i>Avoid / Minimise the Clearing of Native Vegetation:</i></u> <i>The previous BDAR proposed to clear approximately 0.79 hectares (ha) of native vegetation (comprising 0.37 ha of complete clearing and 0.42 ha partial impact for the APZ) (see BDAR page 24) which amounted to 87% of the existing native vegetation on the site being impacted. OEH recommended in its submission that the development footprint be modified to avoid / minimise the clearing of native vegetation to be consistent with the Biodiversity Conservation Act 2016 (BC Act) and the NSW Government Biodiversity Assessment Method 2017.</i> <i>The amended BDAR now proposed to clear approximately 0.66 ha of native vegetation (comprising 0.38 ha of complete clearing and 0.28 ha will be managed within the APZ) (section 3.3, page 22; table 3.3, page 24; section 5.1.2, page 39). The EIS indicates these avoidance measures have resulted in the retention of approximately 27.47% of the native vegetation on the site and the retention of 25.77% of Smooth-barked Apple-Red Bloodwood open forest in an intact condition (page 227). While the amended EIS has reduced the area of vegetation to be removed it still proposed to impact:</i> ▪ <i>72.5% of the native vegetation area on the site, and</i> ▪ <i>74.23% of Smooth-barked Apple-Red Bloodwood open forest in an intact condition.</i> <i>EES considers the development footprint needs to be further modified to avoid / minimise the clearing of native vegetation.</i>	As previously highlighted on 4 July 2019, it is important to note, that all schemes investigated for the Site would require vegetation clearing across the Site, to enable a suitable and appropriate development footprint. This would be evident and the same unavoidable case for any such future development on the Site, which would aim to utilise and maximise the Site, to its best and highest use possible, to maximise the land value, for which acquisition was sought, further contributing to the orderly (sequential) and economic use and development of the Site in accordance with the Objects of the EP&A Act. The format of Data Centres typically require the development footprints similar from what is proposed under this SSD Application. Reductions in the building footprint would result in an ultimately inefficient operation. It is imperative, that the data halls proposed within the building are connected, which coincides with servicing requirements for the proposed operations. Therefore, reductions in the building footprint could jeopardise the intended operational outcomes of the Proposed Development. Notwithstanding the above, and pursuant to further consultation with both the NSW DPIE and Lane Cove Council, the overall development footprint has been significantly reduced, by virtue of accommodating a higher maximum building height (which has been satisfactorily justified via means of a Clause 4.6 Variation Request). Accordingly, by reducing the development footprint, the Subject Site (as a result of the Proposed Development) will afford attributing site benefits, including: ▪ Further retention of native vegetation across the Site, previously identified and proposed to be removed. ▪ Revegetation of the Subject Site to a satisfactory standard, for which would be consistent with both the Landscape Plans and Vegetation Management Plan, previously provided. ▪ Restoration of redundant, underperforming vegetated areas, to reinvigorate

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the Site's vegetative characteristics to be consistent with the proposed landscaping treatment offered across the Site.

- Implementation of mitigation and management measures to cater for the ongoing management and maintenance of existing and proposed vegetated areas.

In accordance with the above, the development footprint proposed is considered to be highly appropriate for the Subject Site, which is currently an underperforming, underdeveloped, redundant IN2 Light Industrial zoned land portion. The Proposed Development has satisfactorily addressed the local character of the Lane Cove West Business Park; the tumultuous environmental parameters requiring strategic and scientific consideration, including existing native vegetation on the Subject Site. Therefore, the development footprint is considered highly appropriate for the Subject Site, for which further consideration is not considered to be required in this respect.

Tree Removal:

The previous TAR proposed removing 125 trees – 82 of these trees were to be removed regardless of their SULE rating as they were located within the impact area and a further 43 trees were recommended for removal due to poor condition (see page of TAR). The RTS notes the revised scheme has reduced the extent of tree removal (page 125) but EES does not consider it to be a significant reduction in the number of trees to be removed.

The revised reports contain inconsistent advice in relation to the number of trees that are proposed to be removed, for example:

- *The EIS states the proposed development would account for the removal of 84 trees on the subject site (regardless of their SULE rating) (page 228).*
- *The RTS states the proposed development will account for the removal of 84 trees within the impact area regardless of their SULE rating but it also indicates the number of trees to be removed for poor SULE rating is 39 which amounts to a total of 123 trees being removed (page 119).*
- *The revised TAR indicates 83 trees are proposed for removal regardless of the SULE rating and in total 122 trees are proposed to be removed (see section 4.3, page 9 and section 6.1, page 18).*

Travers Bushfire & Ecology suggest, that there has been limited changes in the number of trees being retained since the first submission of the Tree Assessment Report (TAR).

With regard to the retention of invasive species, the TAR is to be updated to show any Camphor Laurel, Privet or Black Locust Trees that were to be retained, in fact be removed. Whilst investigating the TAR, dated 6 September 2019, it is noted, that six (6) Camphor Laurel, two (2) Large-leaved Privet and one (1) Black Locust are retained. This is contradictory to that noted on LDA-05 in the landscape documentation which proposed retention of eleven (11) trees. In changing these invasive species to be removed and rather be consistent with the Vegetation Management Plan (VMP), this will require Table 4.1 of the TAR to be updated to the following:

Table 4.1 – Trees to be removed or retained

Trees removed within the development impact area regardless of SULE rating	80	46.78%
Trees removed for very poor condition SULE 3b, 3c or 4a-f	34	19.88%
Invasive tree species to be removed	9	5.26%
Trees retained	48	28.07%
Total	171	100.00%

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▪ <i>The Summary of Changes indicates 114 trees are proposed to be removed.</i> <i>The proponent needs to clarify the number of trees that are now proposed to be removed. It appears the total number of trees proposed to be removed is either 114 or 122-123 trees compared to 125 trees previously.</i>	Travers note, that if they are to update the TAR based upon the current proposal, an additional nine (9) trees would be removed as they considered invasive and inconsistent with the VMP; therefore, a total of 123 trees would be removed and 48 would be retained. Accordingly, to compensate for the removal of the suggested nine (9) additional trees identified as invasive species, it is recommended, that these trees be replanted as native trees as a replacement. This would also be consistent with the above request to retain native vegetation across the Site. Given, that the overall reduction of two (2) trees from the original TAR; and that the NSW DPIE (EES Group) do not believe the Proposed Development adequately avoids / minimises the clearing of vegetation in the context of the BDAR, it is likely, that the Site layout will need further refinement, by virtue of the removal, replanting and revegetation of the Subject Site. In that instance the TAR will need to be updated, for which recounts of the tree retention and removal would be refined and emulated throughout the Landscape Plans; VMP; EIS; and other documentation utilising the information from this count. It is requested, that this can be accounted for in the formal Conditions of Consent, by which would state for the nine (9) invasive tree species to be removed not recorded within the TAR, these are to be replaced within native vegetation. By replacing invasive species for native vegetation, this would significantly the vulnerability, competitiveness of the local environment, and overall improve the performance of the existing and proposed native vegetation in the immediate locality.
<u><i>Retention of Trees:</i></u> <i>EES notes Drawing No. LDA-05 in the landscape documentation proposed to retain a number of invasive exotic trees at the site including:</i> ▪ <i>6 x Camphor Laurel (Cinnamomum camphora);</i> ▪ <i>3 x Large-leaved Privet (Ligustrum lucidum);</i> ▪ <i>1 x Small-leaved Privet (Ligustrum sinense); and</i> ▪ <i>1 x Black Locust (Gleditsea tricanthos).</i> <i>It is unclear why Drawing No. LDA-05 proposes to retain these invasive trees. EES notes that none of these exotic species are hollow-bearing trees</i>	As above. The adjoining comments have satisfactorily been addressed within the abovementioned passage.

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compromise so it appears they are not being retained to provide native fauna tree hollow habitat (see page 24-25 of VMP). The proposed retention of these invasive trees is not consistent with the VMP which notes invasive species such as Camphor Laurel, Large-leaved Privet and Small-leaved Privet require intensive weed control and ongoing eradication (see section 3.2, page 13 of VMP) and it lists these species as target weed species with very high priority (see Appendix 2).

Prior to approving the landscape documentation, it is suggested the Department considers information relating to these exotic trees available for example on the NSW Department of Primary Industries website (DPI NSW Weedwise) which indicates:

- *Camphor Laurel is a highly invasive exotic species. It has prolific seed production, birds and other fauna readily eat the fruit and disperse the seeds and it has a tendency to form single species communities and exclude most other tree species, including native vegetation – see DPI Weedwise link: <https://weeds.dpi.nsw.gov.au/Weeds/CamphorLaurel>*
- *Privets (*Ligustrum lucidum* and *Ligustrum sinense*) are considered to be a serious environmental weed throughout Australia. Infestations threaten biodiversity, including endangered plant and animal species and ecological communities. Dense stands of privet prevent other vegetation surviving or establishing – see DPI Weedwise links: <https://weeds.dpi.nsw.gov.au/Weeds/PrivetBroadleaf> <https://weeds.dpi.nsw.gov.au/Weeds/PrivetNarrowleaf>*
- *Gleditsia triacanthos spreads rapidly from seed; it is capable of out-competing and replacing native vegetation; it can form dense thickets particularly along waterways as it spreads by the seed being washed downstream and the sharp thorns can also injure wildlife – see DPI Weedwise link: <https://weeds.dpi.nsw.gov.au/Weeds/HoneyLocust>*

*The Greater Sydney Regional Strategic Weed Management Plan 2017-2022 published by Greater Sydney Local Land Services and developed in partnership with the Greater Sydney Regional Weed Committee lists Camphor Laurel, *Ligustrum lucidum*, *Ligustrum sinense* and *Gleditsia triacanthos* under Appendix 2 (other weeds of regional concern) and it notes*

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<i>that for all of these tree species one of the assets / values at risk is the environment.</i> <i>The spread of seed from these invasive trees from the site is a concern as the Lane Cove National Park is located to the west of the site.</i> <i>The removal of these additional 11 trees from the site will add to the total number of trees being removed and EES recommends:</i> ▪ <i>The Department clarifies with the proponent if the proposed retention of these invasive exotic trees in Drawing No. LDA-05 is a typing error.</i> ▪ <i>The landscape documentation is amended to remove (and not retain) these invasive tree species from the site.</i> ▪ <i>The invasive exotic trees are replaced with local native provenance tree species.</i>	
<u><i>Hollow Bearing Trees:</i></u> <i>The previous TAR indicated 10 hollow-bearing trees were required to be removed (section 4.3, Page 9). The revised TAR notes "the proposed will require the removal of eight hollow-bearing trees which collectively have 23 hollows of varying sizes (section 3.4, page 6). OEH previously recommended the tree hollows are replaced at a ratio greater than 1:1. The TAR confirms 24 compensatory nest boxes are to be installed (page 6).</i>	Travers Bushfire & Ecology note, that the proposed nest box installation (or re-use of hollows) is at a 1:1 ratio only because there is not suitable room on site to cater for more as it would be overcrowding and not expected have any further benefit for the local fauna species that utilise hollow-bearing resources. More nest boxes may be added if the amount of native bushland being retained is increased, or conversely it may retain additional hollow-bearing trees and the replacement ratio would increase to more than 1:1. If additional nest boxes are required, these could be erected into trees on the adjoining Council reserve, such that the benefit of nesting resources is improved. Council approval would need to be sought to undertake the installation.
<u><i>Mitigation Measures:</i></u> <i>EES notes the revised EIS has not amended mitigation measure (18) to include the text in italicised bold as previously recommended by OEH:</i> <i>(18) Greenbox would mark on site with temporary fencing, the clearance boundaries prior to commencement of any construction to ensure that there is no unnecessary removal of vegetation. The fencing must be regularly checked and maintained throughout construction.</i> <i>OEH previously recommended the Mitigation Measures are amended to include the following:</i>	In respect to the adjoining mitigation measures, these are generally assessed within the VMP to be implemented and endorsed for the Proposed Development. Notwithstanding, the following responses have been formulated for the purpose of this Submission: 1. Agreed. The VMP provides a methodology for the contaminated lands remediation area, refer to section 3.1.5 for an overview. Section 3.3.1 provides an overview of the restoration and revegetation strategies to be implemented across the site including bushland areas, APZ areas, screening planting and contaminated lands. 2. Agreed. Section 3.3.1 of the VMP states the following: Revegetation and direct

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1. *The revegetation areas of contaminated land including the riparian corridor of Stringybark Creek; the fire trail and the vegetated areas of the APZ are to be planted with a diversity of appropriate local native plant species from the native vegetation community (or communities) that occur, or once occurred, on the site.*
2. *The revegetation areas and landscaped areas must a diversity of local provenance species (trees, shrubs and groundcovers) from the native vegetation community (or communities) that occurs, or once occurred, on the site.*
3. *Any native trees that are required to be cleared from the site shall be salvaged (for example tree hollows and tree trunks which are greater than approximately 25-30 cm in diameter and 3 m in length) and placed in the revegetation and regeneration areas to enhance habitat.*
4. *Remnant native vegetation that is required be removed from the site, especially juvenile plants shall be translocated to the revegetation and regeneration and landscape areas.*
5. *The topsoil from areas of native vegetation that are to be cleared for the development shall be collected and used in the revegetation and regeneration areas on the site.*
6. *Seed from any native plants to be removed shall be collected and used in the revegetation and regeneration areas landscape areas.*
7. *Any trees that are to be planted at the site shall use advanced and established local native species from the relevant vegetation communities which occur on the site, preferably with a minimum tree height of 2-2.5 metres and / or plant container pot size of 50-75 litres to mitigate the removal of trees and the habitat they provide.*
8. *Any trees that are to be removed from the site are replaced at a ratio greater than 1:1.*
9. *Any tree hollows to be removed are to be replaced at a ratio greater than 1:1.*

The revised EIS and BDAR refers to the mitigation measures recommended by OEH and indicate that mitigation measures 2, 3, 4, 5, 6 and 9 as listed above should be implemented as part of the proposal (see section 6.11, page 227 of EIS and section 6.3, page 45 of BDAR). While the EIS and BDAR note these additional measures should be implemented, it is unclear why Part G of the EIS (Draft Management and Mitigation Measures) has not been

seeding will utilise local provenance collected seed, including species found within Smooth-barked Apple - Red Bloodwood open forest. A minimum of twenty five (25) species is to be used in each community. The final plant installation list is to be approved by the project ecologist. A further five (5) species minimum are to be planted in the outlet protection areas.

Native species from Appendix 1 – Table A1 are to be used for revegetation purposes. Alternatives to this list may be used as approved by the project ecologist. The location of the planted species will be determined by the revegetation contractors under the direction of the project ecologist considering existing vegetation communities, any native regeneration present and suitable topographical and bed conditions.

3. Agreed in principle. Section 3.5 of the VMP describes the guidelines for ameliorating the loss of nesting hollows, in particular noting that hollow bearing limbs are to be dismantled by an arborist prior to felling the entire tree, with a fauna ecologist present to supervise in the event that fauna can be relocated if the hollow is being utilised. Hollows may be reused and attached to a suitable tree, replaced by a nest box, or the hollow may be placed on the ground in a restoration area for use by ground dwelling species. The VMP does not specifically stipulate the dimensions of point 3. As there is limited restoration areas, only a proportional number of logs of the recommended size would be used.
4. **Disagree.** The transplanting of juvenile material may not necessarily be feasible for a number of reasons, but particularly as it is not a cost effective approach, and not all species will have a good success rate of translocation. A lot of the bushland has a moderate-high degree of weeds, and transferring of weed propagules should be avoided. The use of tube stock for most of the revegetation works will be more cost effective, and will ensure a rich mix of species diversity. With translocation, only certain species will survive and it would likely need supplementing.
5. **Disagree.** This item was not considered in the VMP as a lot of the area of existing bushland is on moderate steep slope with rocky outcrops, and the edges have a moderate-high level of weeds. Utilising machinery in these areas may not be appropriate because of the topography and outcrops, and spreading of weed propagules is not appropriate. Some small areas may be suitable for topsoil

amended to include these measures (see pages 250-255 of EIS).

The RTS does not agree with mitigation (7) to use advanced and established local native trees (minimum tree height of 2-2.5 metres and / or plant container pot size of 50-75 litres) to assist mitigate the removal of existing trees (page 127). It indicates sourcing this type of advanced stock in a timely manner is impractical but does not include details on the minimum size of the trees that are proposed to be planted (page 127 of EIS). The RTS also notes the use of advanced trees would place a substantial limitation on the revegetation of the site. If this is so, it is recommended the proponent commences sourcing local native provenance trees and / or growing local provenance trees as soon as possible, so the trees to be planted are more established in size to assist mitigate the loss of existing trees and improve the urban tree canopy at the site.

The RTS also disagrees with the OEH mitigation measure (8) to replace any trees removed from the site at a ratio greater than 1:1. The RTS states "it would not be possible to replace all trees proposed for removal at a ratio equal or greater than 1:1" (page 127). The Summary of Changes, however notes it is proposed to plant 120 trees for the 114 trees to be removed (page 5). As noted above the proponent needs to clarify the number of trees that are now proposed to be removed as the Summary of Changes notes the revegetation works is replacing the trees lost. If 122-123 trees are proposed to be removed and 120 trees are to be planted, it is unclear why it is not possible to replace the removed trees at a ratio greater than 1:1.

If consent is great to this SSD, EES recommends conditions of consent are included which require the implementation of the above mitigation measures 1, 2, 3, 4, 5, 6, 8 and 9. In relation to mitigation measure (7) it is recommended the Department clarifies with the proponent what size local native provenance trees can be provided for plant at the site.

collection and reuse, but overall, the viability of this exercise is considered to be quite limited. Utilisation of clean topsoil may be more cost and time effective, however a combination of both on-site and off-site top soil may be considered as appropriate.

6. Agreed. In Table 3 of the VMP and section 4.5 item 7, it states that the as part of the pre-construction works, seed collection shall be undertaken from local provenance stock. It does not stipulate that seed shall be collected from site, but it is agreed, that subject to the seasonality of commencement of works, seed can be collected from site where possible, and supplemented with other tube stock sourced locally. This feature may be added into the VMP.
7. **Disagree.** Advanced trees of 50-75L that are locally native, may be very difficult to source, in particular with regard to quantities and species mix or richness. Utilisation of trees of this size may not be economically feasible as the costing for semi-advanced trees could easily be spread across the sourcing of many of the required shrubs and groundcovers. The VMP does not specify the size of stock for revegetation works, however tube stock is usually more accessible when trying to source endemic plants.

The use of screening plants in the APZ and replacement of invasive tree species within the existing bushland remnants should try to source larger trees as specified in point 7.
8. Agreed. Currently, the ratio is approximately 1:1 for replacement of trees. The application of additional trees within landscaping beds is dependent upon the landscaping plans, and their compliance with APZ standards. The VMP may consider some additional plantings within remnant bushland areas, such as replacement of the existing invasive trees at a 2:1 ratio in the same approximate location, therefore adding an extra nine (9) trees overall. The density of canopy trees has been specified as 1 per 50m², with sub-canopy trees as 1 per 30m². Increasing the sub-canopy density to 1 per 10-15m² would ensure an effective replacement of trees closer to a 2:1 ratio.
9. Agreed. The Item 2 Response (refer to **Appendix 5**) is directed at hollow-bearing tree replacement. Based on the current plan, it will remove twenty-three (23) hollows, and proposed to reinstall twenty four (24). An improved ratio can be achieved through installation on the adjoining Council reserve subject to their

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	approval. The mitigation measures are considered to be justified and satisfactorily addressed, for which the mitigation measures agreed have been transferred into the formal Mitigation and Management Measures for the Proposed Development.
Flood: <i>The former OEH previous comments, dated 3 June 2019, advised the consultant to address post development scenario to determine the effect of the development on flooding behaviour and on adjacent, upstream and downstream properties. The amended EIS has not addressed this requirement, rather, it states in page 102 'As the lowest proposed building level is 11 m AHD, it is reasonable to suggest that the Proposed Development is unaffected by flooding'. This statement is not accurate, as setting up floor levels above the probable maximum flood will merely eliminate above floor flooding within the building, however, it won't eliminate ground inundation at the vicinity of the site, neither it suggest that the proposed development has no impacts on flood behaviour.</i> <i>From a flood risk management perspective, the Flood Impact Assessment should not only be limited to identify flood planning level, but to address the impact of the development on flood behaviour and on adjacent existing properties as well as address the emergency management aspects of the site. Accordingly, EES considers that, the flood assessment did not satisfy the requirement of the SEARs. Therefore, the previous OEH comments are still relevant.</i>	In a letter, dated 16 October 2019, GRC Hydro (refer to Appendix 7) suggest, that in periods of high rainfall, there are two (2) mechanisms by which the development site may be impacted. These include: 1. <i>Mainstream flood affectation – Stringybark Creek lies adjacent to the site and to the west (but not on the proposed development site). The work GRC Hydro have done assesses the design flood behaviour of Stringybark Creek. This work identified that the 1% AEP flood level in Stringybark Creek is 2.11 m AHD and hence the subject site is not impacted by mainstream flooding in the 1% AEP event (as shown in the attached Figure 1); and</i> 2. <i>Local stormwater – The overall development site occupies space at the top of the headland. As such no exterior catchments flow into the proposed development site. It does of course generate its own runoff but as per Page 23 of the NSW Floodplain Development Manual (NSW, 2005) such flow is not designated as flooding but rather is stormwater. This runoff is dealt with elsewhere and is not considered further in this document which pertains specifically to Stringybark Creek mainstream flooding.</i> Notwithstanding, since the Subject Site is not impacted by mainstream flooding (refer to Figure 1 of Appendix 7), the post-development scenario was not addressed within the Flood Assessment undertaken. Accordingly, the logic and justification for this, is that if the Proposed Development works occur on higher ground than the calculated design flood levels estimated (1% AEP level adjacent to the Site is 2.11 m AHD), then clearing no impacts in relation to post-development flooding would result on the Site. Despite the abovementioned justification, GRC Hydro have since undertaken further investigations, including: 1. <i>Impact Assessment – the results from the 1% AEP event are compared (existing versus proposed) in order to assess what impact the works have on design flood behaviour. As expected, no impact is observed on Stringybark Creek flood levels. Levels for both pre and post development were</i>

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	<i>calculated to be 2.11 mAHD.</i> 2. <i>Climate Change – As per feedback we have assessed a 2050 condition via the 0.5% AEP event combined with a tailwater level equal to the 20Y ARI Sydney Harbour level plus 0.51 m as well as a 0.2% AEP event with a Sydney Harbour equal to 20Y ARI plus 0.9 m. Results indicate that at the site flood levels are dominated by receiving water levels. Resultant flood levels are 2.26 mAHD for 2050 climate change run (0.5% AEP event with tailwater level of 1.89 mAHD and 3.18 mAHD for 2100 climate change run (0.2% AEP event with tailwater of 2.28 mAHD).</i> Accordingly, whilst the Proposed Development lies adjacent to Stringybark Creek, the proposed works do not occur at the levels at which flood waters exist. As such, there is no impact associated with the works on flood behaviour for any upstream, downstream or adjacent property. With regard to climate change impacts on the Subject Site, the results suggest, that the answer is not at all owing to the face, that the Proposed Development occurs at levels well in excess of flood levels in Stringybark Creek. GRC Hydro conclude, by stating the following: ▪ Flood water from Stringybark Creek do not impact the ability of people to exit the Subject Site; and ▪ Once people have exited the Site, there are multiple routes to exit the overall area and none of these are impacted by flooding associated with Stringybark Creek.
<i>Sustainable Building:</i> <i>EES notes its recommendation for green roofs and cool roofs to be integrated into the proposed design is considered to be impractical and unfeasible, due to the requirement for mechanical plant to be located on the roof area of the proposed Data Centre (see page 128 of RTS).</i>	Noted and agreed.
NSW Rural Fire Service (RFS)	
<i>The proposed fuel storage tanks in their current locations are considered to have the potential to generate or accelerate bush fire risk to adjacent buildings on and off site and to emergency personnel when defending the property during bush fire events. Additional bush fire protection measures (either with PBP, Australian Standard 3959-2009 Construction of buildings in</i>	It is noted, that Travers Bushfire & Ecology have undertaken a further detailed assessment of the bushfire risk posed to the diesel fuel storage tanks to ascertain the level of radiant heat impact and flame temperature exposure on the diesel fuel tanks.

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bushfire prone areas or Building Code of Australia), such as constructional standards and design provisions, to support the location and suitability of the proposed diesel fuel tanks need to be provided given these are possible ignition points and fuel sources.

Accordingly, this information has been calculated using either Method 2 (AS3959) or the short fire run methodology as detailed in Schedule 1, which is attached in Table 1, located within **Appendix 6** of the Submission. The data recorded has since been provided to 'Parratech' to inform them on developing an engineered solution, which addresses the potential bushfire risk in support of the location of the proposed fuel tanks.

Based on Table 1 within **Appendix 6**, Generator Platform 3 will be exposed to the greatest radiant heat impact – 49.44 kW/m². The resonance period of bushfire attack that Generator Platform 3 will be exposed to is based on 3:10 (min;sec) being the 'time duration' the tanks would be subject to the longest period of flame temperature affectation being 1090 degrees Kelvin.

The *Generator Insulated Base Fuel Tank Thermal Study* prepared by Parratech is appended within **Appendix 6**, for which their design has been based on the worst case scenario – 49.44 kW/m² of radiant heat flux for a period of up to 3.10 minutes.

The Parratech Report concludes, that the insulated diesel tanks experience very little influence from the fire event that runs for a period of 3.10 minutes. The temperature of the diesel mass is nowhere near the auto-ignition temperature of 215 degrees Celsius, or the flag point of 55-90 degrees Celsius for diesel.

The risk posed is further mitigated by the provision of multiple tanks with each tank having smaller storage capability as opposed to one large tank with a significant fuel storage capability. These factors coupled with the construction materials of the data centre being BAL Flame zone on the exposed sides offers a total protection solution.

Additional information to address safe access to the proposed buildings, with regard to the location of part of the proposed vehicular access on the south western elevations of the Data Centres in the form of an elevated driveway, needs to be provided. This driveway is partially located above Generator Platform No. 1 (diesel fuel tanks located below) which in the course of a bush fire event might impact adversely on the safety of fire fighters either fighting the fire or accessing or egressing the site.

Travers Bushfire & Ecology suggest, that the overhead vehicle ramp is provided with a vertical separation of approximately 6 m from the exhaust and over 10 m from the diesel tanks (refer to Figure 1 of **Appendix 6**). Furthermore, the vehicle ramp will be a concrete road with concrete supporting footings and is therefore a stable engineered roadway suitable for purpose.

As outlined in Table 1 of **Appendix 6**, Generator Platform 1 is exposed to a radiant heat flux of less than 23.72 kW/m². This should be considered in light of the proposed engineered design of the fuel tanks with two (2) stainless steel outer skins (6 mm), which will provide an engineered solution to guard against bushfire impact in order that the tanks do not rupture in order to create a possible ignition point or provide an available fuel source.

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	As a result, the diesel fuel tank design will not adversely impact on the safety of fire fighters accessing or egressing the Site. Additionally, firefighting access can also be gained onto the roof of the proposed Data Centre and via the pedestrian access stairs on each façade of the building.
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Table 2: Lane Cove Council – Draft Conditions of Consent

Condition	Preferred Action	Justification
Amended Condition 83: <i>To provide additional vegetative screening, the cleared area in the North East portion of the site would benefit from substantial re-vegetation with native trees. Council would welcome discussion with the owner undertaking to revegetate the area with endemic native trees.</i>	It is noted, that the cleared area on the north-eastern portion of the Subject Site is intended to be a buffer zone. The revegetation proposed is noted to be in accordance with the requirements stipulated by the NSW Rural Fire Service, which adheres to their access requirements as well as revegetation recommendations.	The proposed vegetation for this portion of the Subject Site is satisfactorily addressed within the proposed Landscape Plans for the Proposed Development prepared by Geoscapes (2019), which has considered all submissions received to date.
Amended Condition 83: <i>Trees that are removed as part of the DA process must be at a 1:1 ratio. Replacement trees must be able to reach the potential mature dimensions of the removed trees. The trees must be planted before issuance of the occupation certificate. All specimens must conform to Australian Standard 2303: Tree Stock for Landscape Use and be of an appropriate pot size for the intended location and use to ensure best chance of long-term health and vigour.</i>	Trees will be replanted at a 1:1 ratio where deemed practical.	Where trees cannot be replanted at a 1:1 ratio, the biodiversity credits identified for payment to the Biodiversity Conservation Trust will satisfactorily address all vegetation being removed in the first instance. Furthermore, the Landscape Plans and Vegetation Management Plan prepared are considered to satisfactorily address Council's requirements.
Building Conditions <i>4. No external cladding is permitted on the development.</i> Reason: Safety and amenity.	Clarification is sought as to reasoning of the stipulated condition.	Further clarification is required to be provided to the extent of the Condition.
Building Conditions <i>10. (35) All demolition, building construction work, including earthworks, deliveries of building materials to and from the site to be restricted to the following hours: -</i>	It is requested, that the construction hours for Monday – Friday be amended to suit the proposed construction activities being able to be undertaken from 7:00am to 7:00pm.	In a letter of support, dated 16 October 2019 (refer to Appendix 8), AW Edwards, note that given the size of the project and the requirement to construct the Proposed Development over a tight timeline, the additional hours are requested to facilitate completion works in particular.

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Table 2: Lane Cove Council – Draft Conditions of Consent

Condition	Preferred Action	Justification
<i>Monday to Friday (inclusive) 7:00am to 5:30pm</i> <i>Saturday 7:00am to 4:00pm</i> <i>A Notice/Sign showing permitted working hours and types of work permitted during those hours, including the applicant's phone number, project manager or site foreman, shall be displayed at the front of the site.</i> Reason: <i>To ensure reasonable amenity is maintained to the neighbouring properties.</i>		There is no intention to undertake any noisy works after 5:30pm, which would impact on the required acoustic noise levels at adjoining receivers. Deliveries will generally occur in the mornings, for which none are expected to occur after 5:30pm. Works that may occur between 5:30pm and 7:00pm weekdays will generally involve internal finishing works; wall framing; cable reticulation; sheeting; painting; cleaning; and / or similar activities. Accordingly, AW Edwards suggest, that these works will not adversely impact on adjoining neighbours as any noise that may be generated will generally be contained within the main building envelope. The design of the envelope facilitates this approach given its external concrete walls and minimal openings.
Building Conditions <i>25. (87) Pedestrians' portion of footpath to be kept clear and trafficable at all times.</i>	Clarification is sought to which footpath is being referred to.	There are no footpaths along the driveway area; therefore, Council's Condition 25. appears to be unwarranted and redundant.
Engineering Conditions <i>33. (A7) Pedestrian Access Maintained: Pedestrian access, including disabled and pram access, is to be maintained throughout the course of the construction as per AS-1742.3, 'Part 3 – Traffic control devices for works on roads'.</i> Reason: <i>To ensure pedestrian access is maintained.</i>	As above.	As above.
Engineering Conditions	Condition is requested to be removed.	The vehicular crossings along Sirius Road are

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Table 2: Lane Cove Council – Draft Conditions of Consent

Condition	Preferred Action	Justification
49. (V1) Proposed Vehicular Crossing: The proposed vehicular crossing shall be constructed to the specifications and levels issued by Council. A 'Construction of an Industrial Crossing' application shall be submitted to Council prior to the issue of the Construction Certificate. All works associated with the construction of the crossing shall be completed prior to the issue of the Occupation Certificate. Reason: To ensure compliance with Council's specifications.		existing.
Engineering Conditions 50. (A10) Boundary Levels: The levels of the street alignment shall be obtained from Council. These levels are to be incorporated into the design of the internal pavements, car parking, landscaping and stormwater drainage plans and shall be obtained prior to the issue of the Construction Certificate. Note: The finished floor level of the proposed basement shall be determined by Council if required. Reason: To ensure compliance with Council's specifications.	It is requested, that Condition 50 be removed.	The reasoning behind Condition 50 is not considered warranted. The design of the Proposed Development has considered Council's Engineering Guidelines ensuring compliance has been achieved throughout the process. Further investigation as to the floor level is not considered to be warranted, given the comprehensive drawings provided, via means of a Survey Plan, Architectural Plans and Civil Engineering Drawings, which are accurate and consistent with one another.
Landscape, Ecology and Bushland Conditions 68. Water sensitive urban design measures in the form of raingardens or other approved biofiltration	It is requested, that Condition 68 be removed.	The proposed Water Sensitive Urban Design (WSUD) Strategy has been considered and deemed satisfactory by Council (acknowledged in item 3 of Council's Submission). Additionally, Condition 69

State Significant Development Application – SSD 9741

Proposed Data Centre – 1 Sirius Road, Lane Cove West (Lot 1 DP 1151370)

Table 2: Lane Cove Council – Draft Conditions of Consent

Condition	Preferred Action	Justification
<i>measures shall be incorporated into the Hydraulic Engineering drawings to allow for enough volume of rainwater to continue to hydrate the Coastal Freshwater Swamp following best horticultural practices. The design is to be approved by a qualified Ecologist prior to issuing a construction certificate.</i> Reason: <i>Ensure protection of the environment.</i>		appears to be more relevant, which would negate the requirement of Condition 68.

Appendix 1
LV Switchroom Locations

Appendix 2

Indicative Fuel Locations

Appendix 3
SEPP 33 Report

Appendix 4

Dangerous Goods Review Report

Appendix 5

Travers Bushfire & Ecology – Vegetation Letter of Support

Appendix 6

Travers Bushfire & Ecology – Bushfire Letter of Support

Appendix 7 GRC Hydro Flood Assessment Letter of Support

Appendix 8
AW Edwards Letter of Support