Our reference: ECM: 8712576
Contact: Sandra Fagan
Telephone: (02) 4732 7992

27 June 2019

Department of Planning & Environment
Attn: Daniel Gorgioski
Senior Planner
Ports and Water Assessments
GPO BOX 39
SYDNEY NSW 2001

Email: daniel.gorgioski@planning.nsw.gov.au

Dear Mr Gorgioski

Notice of Exhibition – St Marys Intermodal (SSD 7308) at Forrester Road, St Marys

I refer to your email dated 29 May 2019 regarding the above proposal for the development of the St Marys Intermodal which involves the construction of an intermodal terminal and container park.

Council Staff have reviewed the proposal and provide the following comments for your consideration:

Planning:

The positive economic benefits of the proposal and potential employment generation are recognised. To this extent the site location and use of heavy rail infrastructure for freight transport is supported. While most of the issues below primarily relate to technical matters (traffic, stormwater management, noise) these issues raise the question as to whether the existing local and regional road infrastructure is adequate for this site to be suitable without significant upgrades to avoid adverse unreasonable impact to the local community.

Traffic Matters:

Access Arrangement

The Traffic and Transport Assessment (TTA) prepared by Bitzios, dated 18 April 2019 indicates that all vehicular access including B-double tucks will be via Lee Holm Drive and Forrester Road, via Glossop Street and Mamre Road to the M4 Motorway. With the exception of Mamre Road, the proposed access route relies solely on local roads, predominantly residential streets. This is totally unacceptable from a road safety and amenity perspective and is raised as a significant concern.

The proposed access via Lee Holm Drive is not acceptable because Lee Holm Road has a narrow roadway with multiple fronting driveways and land use activities. In addition, the B-double turn paths shown in Figure 7.4 of the TTA at the Lee Holm Drive access driveway use the full road width and full driveway

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width which is also not acceptable. Two-way truck use and car use at the Lee Holm Drive driveway is not acceptable. There was no assessment of SIDRA/swept path for the Lee Holm Drive/Christie Street which the applicant intends to use for both heavy vehicles including 26m B-double truck access and likely car access.

The B-double turn paths shown in Figure 7.3 of the TTA at the Forrester Road access driveway use the full road width and full driveway width which is also not acceptable. Two-way truck use and car use at the Forrester Road driveway is not acceptable. This is compounded by the existing traffic movements at the southern end of Forrester Road, accessing the commuter car parks, 'Kiss and Ride' area and commuter pick up and drop off area from the Bus Stop.

In considering the above, Council considers that heavy vehicle traffic generated by this development should be directly connected to the arterial road network and that the arterial road network should be upgraded to accommodate the increased heavy vehicle traffic. Any connections to Christie Street should include upgrading of Christie Street and connections to Dunheved Road, future Werrington Arterial Stage 2 (to be reconstructed by RMS), Forrester Road with additional connections to the proposed Outer Sydney Orbital. Access via local residential streets is completely unacceptable and the application should be refused on these grounds.

Truck Distribution Assumptions

The TTA Figure 3.6 illustrates expected truck distribution assumption. The TTA Section 1.3 indicates that the trip generation and distribution assumptions were submitted to Roads and Maritime Services and Transport for NSW and discussed at a meeting on 11 January 2019. However, for Council, the proposed truck distribution assumption is not acceptable because Figure 3.6 demonstrates that 97% of the truck distribution is via Glossop Street and 84% is via Mamre Road. Glossop Street and Mamre Road are located within built-up residential areas. These areas are not suitable to carry the volume and types of long articulated heavy vehicle traffic generated by this development. The development's truck distribution should be directly connected to the arterial road network, not in built-up urban areas.

Traffic Generation

The TTA Section 3.1 states that the container terminal has a maximum operating capacity of 301,000TEU (20 foot containers) per annum. The TTA Section 3.4 indicates that the proposal would be around 436 trucks (218 in and 218 out) in total daily trips.
The previous Environmental Impact Statement (EIS) for the Moorebank Intermodal Terminal (IMT) Project, has a capacity for 500,000 Twenty-foot Equivalent Units (TEU) per year. Please note that a TEU equates to a standard shipping container size. The Moorebank Intermodal Terminal is serviced by heavy vehicles as well as 12 interstate trains per week which load and unload at the facility. The Environmental Impact Assessment (EIS) for the Moorebank Intermodal Terminal Project has predicted that this will generate 2,174 heavy vehicle trips per day, with a trip being a journey either to or from the facility (as set out in chapter 11 on page 23 of the EIS).
The SMI has 60.2% of the maximum operating capacity that IMT proposes. Based upon IMT EIS's Chapter 11, principles, the predicated trips for SMI would be around 1309 total daily trips (based on the ratio of maximum operating capacity between IMT and SMI), which is higher than TTA.

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In considering the above, Council considers the current assumptions grossly underestimate what could actually occur and recommends that traffic generation needs to be reassessed based upon the existing MTI and Chullora.

Intersection Assessment

The TTA report contains extensive SIDRA output runs (173 pages) generated from the SIDRA program. However, these must be tabled in summary form and clearly articulated for Council to review. Table 4.3 to Table 4.7 need to be expanded to provide more detail in identifying the worse approach, LOS, and the approaching queue length. This needs to be done to identify mitigation measures.

There was no assessment of SIDRA for the Lee Holm Drive/Christie Street, Christie Street/Forrester Road, Forrester Road/Glossop Street and / Dunheved Road / Christie Street intersections. These intersections require assessment travelling paths for intended use by both heavy vehicles including 26m B-double truck access and likely car access.

Other Design Requirements

- Sealed pedestrian and cyclist access is to be provided from the southern end of Forrester Road (near St Marys Station) to the site;
- The car park entry / exit should be separate from the heavy vehicle entry / exit driveways;
- Separate accessible pedestrian access is to be provided from the footway and the car park to the building entrance in accordance with AS 2890 car park access and AS 1428 Mobility accessible paths of travel;
- The access driveway widths must accommodate swept movements of the largest vehicle servicing the site and be designed to conform with AS 2890.2;
- Sight distance requirements and driveway widths are to be met in accordance with AS/NZS 2890.1: 2004 and Council requirements. This is to include the requirements set out in AS 2890.1 Figure 3.2 Sight Distance Requirements at Driveways and Figure 3.3 Minimum Sight Lines for Pedestrian Safety. Also, AS 2890.2 Figure 3.3 Sight Distance Requirements at Access Driveway Exits and Figure 3.4 Minimum Dimensions for Access Driveway Sight Splays for Pedestrians;
- The required sight lines around the driveway entrance and exit are not to be compromised by street trees, landscaping, fencing or signposting;
- All car parking and manoeuvring must be in accordance with AS 2890.1, AS 2890.2, AS 2890.3, AS 2890.5, AS 2890.6 and Council requirements; and
- All car spaces are to be sealed/line marked and dedicated for the parking of vehicles only and not be used for storage of materials/products/waste materials etc.

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Traffic Conclusion

It summary, it is considered that:

- The assessment heavily underestimates the truck movements;
- The assessment places undue pressure and an unacceptable burden onto the local road network within built-up residential areas and is completely unacceptable and should be refused;
- All heavy truck movements should be directly connected to the arterial road network and the arterial road network should be upgraded to accommodate the increased heavy vehicle traffic; and
- Any connections to Christie Street should include upgrading of Christie Street and connections to Dunheved Road, the future Werrington Arterial Stage 2 (to be reconstructed by RMS), Forrester Road with additional connections to the proposed Outer Sydney Orbital.

Engineering Matters:

Flooding:

- The development site is affected by the Little Creek (a tributary of South Creek) flooding as well as by the South Creek flooding. Up to the 1 in 500 year (0.2%AEP) the Little Creek flooding is the dominant flood however for the PMF event the South Creek flooding is the dominant flood;
- Little Creek runs through the site at the northern side where access to Lee Holm Road is proposed. The proposed culvert to cross the Little Creek is not modelled so the flood impacts by the changes are not known. The Flood Impact Assessment indicates that the culvert will be sized to ensure no adverse to upstream flood levels. Flood modelling is required to ensure no adverse flood impacts upstream or downstream for all flood events;
- It is proposed to change the entire development site to hard surface, so there will be considerable increase of the site run-off. An OSD will be required to control the run-off leaving the site. Also, stormwater quality control device(s) will be required to manage the quality of stormwater leaving the development site;
- More than a half of the development site will be inundated by the South Creek PMF flooding and by the little Creek flooding. Therefore, there should be some barriers installed to prevent any floating containers leaving the site during floods. This is to prevent any blockages of culverts or bridges located downstream by the floating containers;
- It is also proposed to have “shelter-in-place” to manage flood evacuation. This is not supported. In any case a flood evacuation management plan will be required to address the flood evacuation;
- The proposed development is simply meeting the 100mm adverse flood impacts as stated in our DCP. This is not acceptable. There shouldn’t be any increase in flood levels upstream or downstream; and
- The development must demonstrate that the proposal is compatible with the State Government Floodplain Development Manual and Council’s Local Environmental Plan and Development Control Plan for Flood Liable Lands

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Stormwater Drainage:

- Stormwater drainage for the site is to be undertaken in accordance with the Penrith DCP 2014 Part C3 Water Management;
- All stormwater drainage is to be designed and constructed in accordance with the following Council adopted policies and standards:
  - Stormwater Drainage Specification for Building Developments;
  - Design Guidelines for Engineering Works for Subdivisions and Developments; and
  - Engineering Construction Specification for Civil Works.
- The development shall not have any adverse impact upon adjoining properties by the damming, concentration or diversion of existing stormwater flows; and
- As the development is predominately hard stand, post developed stormwater discharge flows are to match pre-developed flows.

Biodiversity Matters:

BDAR

The BDAR identifies biodiversity values on the subject site. Three Plant Community Types (PCTs) occurring in various conditions are present in the development site. The PCTs have been mapped as; PCT 835 – Forest Red Gum - Rough-barked Apple grassy woodland on alluvial flats of the Cumberland Plain, Sydney Basin Bioregion; PCT 1800 – Swamp Oak open forest on riverflats of the Cumberland Plain and Hunter Valley; and PCT 1071 – Phragmites australis and Typha orientalis coastal freshwater wetlands of the Sydney Basin Bioregion. PCT 835 and 1800 conform to the endangered ecological community (EEC) 'River-flat eucalypt forest on coastal floodplains of the NSW North Coast, Sydney Basin and South East Corner bioregions' listed under the BC Act. One threatened flora species, Grevillea juniperina subsp. juniperina (Juniper-leaved Grevillea), was recorded within the development site. Three threatened microchiropteran bats (microbats) were recorded during the Anabat survey within the development site including Myotis macropus (Southern Myotis), Falsistrellus tasmaniensis (Eastern False Pipistrelle) and Mormopterus norfolkensis (Eastern Freetail-bat). Possible calls of the threatened microbat Miniopterus schreibersii oceanensis (Eastern Bentwing-bat) were also recorded, however, the calls cannot be confidently attributed to this species due to overlapping calls with other species.

Impacts on Grevillea juniperina subsp. juniperina and Southern Myotis habitat require species credit offsets. Impacts to Eastern False Pipistrelle, Eastern Freetail-bat and Eastern Bentwing-bat will be offset as ecosystem credits. The BDAR describes avoiding and minimising the impacts through the positioning of most of the development in the areas of the subject site degraded and with no biodiversity values. I agree with this finding. Where impacts on Biodiversity values has been unavoidable the works have been restricted to the most degraded vegetation and the connectivity between ecosystems is still maintained.

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Ecosystem credits required

Plant Community Type	ID Number	Credits
Forest Red Gum - Roughbarked Apple grassy woodland on alluvial flats of the Cumberland	835	13
Swamp Oak open forest on riverflats of the Cumberland Plain and Hunter valley	1800	1
Phragmites australis and Typha orientalis coastal freshwater wetlands of the Sydney Basin Bioregion	1071	2

Species Credits Required

Species	Common Name	Credits
Grevillea juniperina subsp. juniperina	juniperina Juniper-leaved Grevillea	11
Myotis macropus	Southern Myotis	**7**

Summary - Biodiversity

In summary I am satisfied with the BDAR and the required credits to offset the impact. Prior to the issue of any Construction Certificate, the consent authority should be satisfied that the ecosystem and species credits have been retired.

Environmental Matters:

Recommended conditions are not provided as the level of detail in the EIS, including technical documents, is not considered satisfactory and significant issues have been identified that require further consideration and assessment.

Land Contamination

A small area (a former stockpile footprint in the northern portion of the site) has been identified to be impacted by surficial asbestos. The Contamination Assessment undertaken concludes that '*the site can be made suitable for the proposed development subject to the successful remediation and validation of asbestos impacted soil*'. A remediation action plan has been prepared for the site and is included in the EIS.

It is understood that the SSD Application seeks to develop approximately 9.6 hectares of the overall 43 hectare site. Accordingly, the site investigations (Preliminary Site Investigation and Supplementary Contamination Assessment) and remediation action plan (RAP) all focus on this part of the site only. It is acknowledged that the overall site comprises several separate lots, some of which are entirely outside the proposed developable area. However, the application does not discuss site management in terms of ensuring that no site activities extend beyond the developed area.

The application refers to activities including long-term stockpile storage and the potential containment of contaminated material on site. However, the proposed location for these is not detailed. The application does not discuss how the site will be managed in the long-term to ensure that all activities are kept wholly within the developed area to prevent future encroachment into the adjoining area of land. It is considered appropriate that this aspect of long-term site

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management be addressed, with consideration given to determining whether the remainder of the site is also potentially impacted by surficial asbestos or other contamination, and whether physical demarcation of the developed area is required to prevent the future overflow of activities to the larger portion of the site. The provision of long-term site management controls to ensure that activities will not overflow to other areas of the overall site will have implications for other environmental aspects of the development as well as land contamination.

The application does not recognise that Council consent is required for the remediation of all land within the Penrith Local Government Area (LGA) with the RAP stating that remediation and validation works will be carried out and 'endorsed' by NSW Department of Planning. Page 17 of the RAP states that development works will only progress following written confirmation by the environmental consultant. The planning process that applies to the remediation of land within the Penrith LGA will need to be addressed.

The RAP discusses remediation by either off-site disposal or on-site burial of contaminated material. The RAP sates that '*the appropriate course of action and ongoing environmental management requirements for the contaminated excavated material will be determined by the Environmental Consultant with Pacific National at the time of remediation*'. The Development Application required to be submitted for remediation of the site will need to clearly detail the proposed method of remediation. Should on-site burial be proposed, the RAP will need to include details of the location, size and construction specifications for the containment, along with long term management plan details. The RAP raises the potential need to raise the level of the site in the event that onsite burial of material occurs. The impact of this will need to be considered in relation to overall site levelling works with the impact, if any, on fill importation requirements ascertained.

The EIS states that no material will be exported off site. Managing the movement of contaminated material on site ensuring separation of contaminated from uncontaminated material needs to be clearly detailed, including short term storage and long-term placement. It is noted that the Supplementary Contamination Assessment identified soil impacted by contaminants that are present at levels suitable for industrial/commercial land use, but which exceed ecological investigation levels (EILs). The application does not detail how material that is above EILs will be managed to ensure that it does not potentially impact ecologically sensitive areas of the site. Further consideration needs to be given to the onsite management of material that exceeds EIL's to ensure that if it is used on site it is utilised under hardstand areas and not stockpiled or placed elsewhere where it could impact vegetation and/or water quality.

The site has two existing sediment ponds, one of which is proposed to be dewatered then filled. The EIS does not include details of the proposed dewatering process and the land contamination investigations undertaken do not include an assessment of either of the sediment ponds. Therefore, the suitability of the land resulting from the sediment pond dewatering is unknown.

The PSI identified that further investigation of the railway corridor on site was required to determine whether surficial asbestos (asbestos brake pads) are present. The Supplementary Contamination Assessment included 3 sampling points within the rail corridor, however, the assessment does not state whether a thorough walkover investigation of the railway corridor was undertaken in addition to the sampling conducted.

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It is noted that remediation works are not included in the tabulated Construction Programme in Appendix 7.

Air Quality Impact Assessment (AQIA)

Air dispersion modelling has been used to assess the operational impact of the development and it is understood that NSW EPA will rigorously review the modelling to ensure that input data used, and subsequent assessment conclusions, are representative and appropriate. Consequently, it is anticipated that NSW EPA will identify any omissions and/or discrepancies in the assessment. However, the following comments in relation to some issues of concern are provided.

The operational modelling scenario was undertaken *'based on expected normal locomotive and truck movements during operation*'. It is considered appropriate that modelling be undertaken to assess the worst-case scenario.

The construction air quality assessment adopts the UK Institute of Air Quality Management (IAQM) level of 'low' for surrounding receivers during the construction stage. Part of the justification for this is based on no residential properties being within 20m of the site. Given that the site is surrounded by residential properties; and is close to St Marys High School and adjoining industrial/commercial work places, concern is raised at the application of this sensitivity level, particularly as the area of earthworks will be 6-7 hectares. Also, the AQIA does not provide a time schedule for the works.

The AQIA concludes that the *'unmitigated risk of air quality impacts during earthworks and construction have been predicted to be low'* and recommends broad mitigation measures as precautionary management. However, the AQIA does not provide an assessment of what actual air quality impact the construction works will have on surrounding receivers and for what period of time. Therefore, it is unknown what the actual air quality impact will be during the construction phase at St Marys High School and nearby residential, commercial/industrial properties.

The proposed mitigation strategy for managing stockpiles during construction includes *'orientating them in a direction that reduces exposed surfaces to prevailing winds'* and watering when required. Details of the maximum height of stockpiles and storage location are not provided in the AQIA (although the EIS states on page 53 that stockpiles will be a maximum height of 1.5m). Furthermore, the AQIA does not discuss the long-term storage of stockpiles as proposed in the EIS. The management strategy proposed for construction stockpiles is not appropriate for the management of the long-term stockpiles and further consideration is required about the management and incorporation of permanently stored material on site.
Whilst the AQIA identifies operational exceedances of $PM_{2.5}$ at the residential area to the southwest of the site (Kalang Avenue area), the report does not include a contour site plan that clearly identifies all surrounding receivers in relation to the site, including predicted concentrations of pollutants at the receivers. Also, whilst it is recognised that the AQIA attributes the $PM_{2.5}$ exceedance to existing elevated background concentrations, it does not discuss whether there are potential options to mitigate the additional contribution.

It is noted that the AQIA does not discuss complaint management and this will need to be addressed in the CEMP for the development.

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Finally, given the extent of earthworks (6-7 hectares) it is considered appropriate that monitoring be undertaken during the construction stage to ensure mitigation measures are effective. Importantly, monitoring will provide a mechanism for detecting and responding to any exceedances should they occur.

State Environmental Planning Policy (SEPP) 33 - Hazardous and Offensive Development

The EIS includes a risk screening assessment which concludes that the proposal is not potentially hazardous. The assessment identifies that materials entering the Freight Hub will need to comply with the Australian Dangerous Goods (ADG) Code ensuring correct segregation, packaging, labelling and storage. Furthermore, hazardous materials within containers will not be accessible by site activities as containers are not opened. It is noted that only approximately 1% of the containers moving through the Freight Hub will likely be transporting a classified substance under the ADG Code.

Waste Management Plans (WMP)

The Construction WMP is presented as a dynamic working document to be reviewed and amended as circumstances require and this fluid style of plan is supported.

It is noted that the Construction WMP does not anticipate asbestos waste during construction works. An Unexpected Finds Protocol (UFP) will be developed for the site to address any unexpected material, including asbestos. Given that the construction WMP is a working reference document for site personnel, ideally it should reference the UFP to ensure the provision of information relating to unexpected waste management.

The Construction WMP identifies a stockpile location, however, this is not referenced or discussed elsewhere in the EIS reports.

The Construction WMP discusses liquid waste management and disposal, referring to sandbags, geofabric and the staging of works. It also refers to the onsite recycling of wastewater from the wash bay if possible. The Construction Environmental Management Plan (CEMP) including Construction WMP will need to clearly detail the provision of bunding and other pollution controls to demonstrate and ensure that all liquid waste generated during construction is diverted to sewer (subject to Sydney Water approval), or lawfully disposed of off-site.

The Operational WMP predicts 600 waste tyres will be produced annually with storage in 'stockpile areas' on site. The WMP does not detail the maximum number of tyres to be stored at any one time, nor does it detail the location and design of the proposed storage area. The SEPP 33 assessment does not include an assessment of tyres stored on site. Furthermore, the storage of more than 500 waste tyres will require an Environment Protection Licence (EPL) issued by NSW EPA. The storage and disposal of waste tyres requires further consideration, clarification and assessment.

Noise and Vibration Assessment (NVA)

The NVA uses modelling to predict the noise and vibration impacts that will occur during the construction and ongoing operation of the development, based upon

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the 'worst case scenario'. It is understood that NSW EPA will review the NVA, including conducting independent modelling, to ensure that the NVA is representative and accurate. Given the nature of the proposal and the noise exceedances predicted, this independent technical review is critical to confirming noise impacts upon surrounding receivers and to informing the assessment process.
From the information provided in the NVA, several significant issues have been identified, including:

- The NVA is based upon construction work occurring during 'standard construction hours'. These hours are not detailed, however, it is assumed that standard hours refers to those recommended in the Interim Construction Noise Guideline (the EIS also refers to 'standard hours' that are outside those recommended in the Guideline). However, page 51 of the EIS states that work outside of standard hours is proposed for a period of up to 4 months, including work between 6pm and 6am Mondays to Fridays, of a 10-hour duration. The NVA does not assess construction noise during these hours;
- The EIS states that it takes 4 hours to unload a train using 3 reach stackers. The number of reach stackers used in the noise modelling is not clearly stated. Again, independent modelling by NSW EPA will ascertain whether the NVA predictions are representative of the proposed operations, including equipment used;
- Whilst the NVA recommends mitigation measures that 'may' reduce the impact of construction noise on receivers, it does not predict what the actual reduction is likely to be with those mitigation measures implemented. Similarly, the NVA recommends the use of 'soft landing technology' to minimise container handling noise, however, it is not clear whether the noise level predictions account for the implementation of that technology.
- The NVA does not provide a schedule of works that indicates the proposed timing and duration of works and as it currently presents, the NVA is inconsistent with the EIS with regard to work hours and scheduling;
- Regarding rail generated noise, the NVA assesses rail noise generated from within the site only. The NVA does not discuss the process involved in trains entering the site from the main line. Therefore, it is unknown whether the movement of trains from the main line to inside the property will have any noise impact on nearby receivers;
- Concern is raised about the noise exceedances, particularly exceedances in sleep disturbance criteria, that will result from operation of the Freight Hub, particularly from the 'clangs' (10-20 per hour) as containers are stacked. The NVA predicts significant noise exceedances in Kalang Avenue with the worst affected properties experiencing noise levels up to 13dB(A) above sleep disturbance criteria. The NVA identifies 6 properties (37,39,41,43,45 and 47 Kalang Avenue) as requiring house treatment works (air conditioning and treatment to windows and doors to bedroom areas). Whilst page 93 of the EIS states that measures will be taken to meet with those residences affected by operational noise and requiring house treatment, neither the EIS nor the Consultation Strategy discusses this aspect of noise management in detail. Further, the existing construction of affected homes has not been discussed or considered. It has not been demonstrated that treatments to windows and doors alone will achieve required noise reduction. Construction issues that may affect the internal noise levels experienced by affected receivers such as sub-

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floor areas, roofing materials and cladding, are not discussed. Again, review and modelling by NSW EPA will be crucial in confirming and further informing the noise impact to the residences and the suitability of the proposed house treatment measures. Targeted consultation and engagement with all affected residences should be given high priority at the earliest stage possible and all possible on-site operational mitigation measures investigated to reduce off site impacts;

- In providing air conditioning as a treatment measure to affected properties, consideration will need to be given to noise impacts associated with those air conditioning units, ensuring compliance with applicable noise criteria and the provisions of the Protection of the Environment Operations Act 1997; and
- The NVA proposes noise monitoring during construction of the development, however, operational monitoring is not discussed. An approval issued for the development should include conditions that reference noise criteria and require monitoring to ensure the applicable criteria is achieved.

Sediment Basins

The EIS and technical documents do not adequately address the sediment ponds that exist on the site. The proposed dewatering and filling of the small pond is not discussed, and further consideration needs to be given to this aspect of the development having regard to soil and water quality and land contamination considerations. In regard to the large sediment basin, it is unclear as to how the development shall consider, protect and manage it in terms of short and long-term land and water quality impact management. The application also does not detail whether water from either of the ponds is proposed to be used on site at any time during construction or ongoing operational activities. The presence, removal and management of the sediment basins needs to be addressed.

Waterway (WSUD) Matters

A review of the information provided with the application indicates a commitment to install 2 x Vortechs VX16K GPTs, 4 x enviropod pit inserts, a vegetated swale (length unspecified), and 1 x 25KL and 1x 100KL rainwater tanks with associated reuse.

The proposed stormwater treatment does not meet Council's Water Sensitive Urban Design (WSUD) Policy requirements for pollutant removal. The applicant is seeking a merit-based assessment for the site. This is not supported given that the site discharges to Little Creek and ultimately to South Creek, which is highlighted as a significant waterway in the Western City District Plan. In addition, the site will be largely impervious with significant new areas of hardstand being proposed. Removal of Total Suspended Solids, Total Nitrogen and Total Phosphorous must be adequately addressed as nutrients have a detrimental effect on receiving waterways, not just gross pollutants, sediment and hydrocarbons (as attested by the applicant).

The following concerns are also raised for your consideration:

- No electronic MUSIC modelling file was available for review. As such the proposed treatment could not be fully assessed including what level of pollutant removal is achieved by the proposed devices. The MUSIC model

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(i.e. *.sqz file) must be provided to Council for assessment. The treatment train must meet the following pollution retention criteria:

  - 90% Gross Pollutants;
  - 85% Total Suspended Solids (TSS);
  - 60% Phosphorous (TP); and
  - 45% Nitrogen (TN).

- Modelling parameters for the determination of size and configuration of WSUD elements must be in accordance with the MUSIC Modelling Guidelines for NSW (eWater User Guide) and with the parameters developed for use in Penrith. Council has developed a range of parameters to be used in the Stormwater modelling, which is available in Council's WSUD Technical Guidelines (available at www.penrithcity.nsw.gov.au).
- There are no details (i.e. dimensions, length, cross-sections etc) provided on the Civil plans for the proposed vegetated swales. The applicant should amend the plans and details must correspond to the MUSIC model node parameters.
- The location and size of the rainwater tanks is not shown on the Civil Works (i.e. Stormwater Layout) Plans.
- The location and number of Enviropod pit inserts is not specified on the Civil Works Plans. The applicant should amend and provide details to correspond to the MUSIC modelling.
- Cross section details (including site specific levels) for the proposed Vortechs GPTs must be provided on the Civil Works Plans.

Thank you for the opportunity to provide comment on the proposed development.

Should you require any further information or would like to discuss this matter further please do not hesitate to contact me on 4732 7992.

Yours sincerely,

Sandra Fagan
A/Principal Planner

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