Attention: Department of Planning, Industry and Environment

Objection Submission to Beaches Link and Gore Hill Freeway Connection – Application No. SSI_8862

OBJECTION

I object to the proposal for the Beaches Link and Gore Hill Freeway Connection for the following reasons:

1. Rat Runs and Traffic Congestion in Balgowlah

The proposal does not adequately address rat runs and congestion in Balgowlah as follows:

a) The Executive Summary of the Beaches Link and Gore Hill Freeway Connection EIS (the EIS) indicates that one of the transport challenges is "congestion, through traffic and rat rum traffic impacting streetscapes and liveability in areas" and lists one of the objectives is to "improve amenity and safety in local centres by reducing congestion, through traffic and rat runs". However, simple review of the proposed road design at Balgowlah indicates that with the introduction of the Access Road off Sydney Road this proposal will only increase the rat runs through Kitchener, Wanganella, Rickard and West Streets at Balgowlah. This is confirmed by the post construction traffic modelling indicating an increase in traffic from North Balgowlah using Kitchener and Wanganella (North or Rickard and West Streets) to access the tunnel via Sydney Road and the new Access Road such that the post construction noise modelling has identified a potential requirement for noise mitigation measures to residential properties along Kitchener and Wanganella (North) Streets. Thus, **the proposal fails to even meet one of its own 6 listed Transport Challenges and Project Objectives at the Balgowlah / Burnt Bridge Creek area**.

b) The creation of the single lane Access Road off Sydney Road to the tunnel will create traffic chaos on Sydney Road in Balgowlah between Maritemo Street and Woodland Street without significant changes to local traffic which is not part of the proposal in fact it has been indicated by TfNSW in the Balgowlah Q&A session indicated that providing solutions to local traffic issues will fall on the local Council; essentially obfuscating responsibility when it is their project creating the problem. Sydney Road and the surrounding residential streets (to the north and south) are already congested with traffic in am peak hours trying to access the Spit via 3 lanes and to replace these with a single lane Access Road to the tunnel, through traffic lights, will not result in any reduction in traffic congestion. Thus, **the proposal fails to even meet one of its own 6 listed Transport Challenges and Project Objectives at the Balgowlah / Burnt Bridge Creek area**.

If the project is to go ahead the proponents need to include significant improvements in the design of the tunnel interfaces in the Balgowlah connection and the surrounding local traffic.

2. Contamination and Remediation

Assess whether the land and harbour sediment are likely to be contaminated

The EIS does not adequately address the SEARS related to Contamination as presented in Table 16-1 which states "**the proponent must assess whether the land and harbour sediment are likely to be contaminated**…" The EIS does not meet this requirement in the following instances:

a) Appendix M Technical Working Paper under Scope describes the document as "this Stage 1 Contamination Investigation Report". The NSW EPA (May 2020) Guidelines for Consultants Reporting on Contaminated Land sets out the requirements for a Stage 1 Contamination Investigation report and also includes a checklist (Table 2.1) for a Stage 1 Preliminary Site Investigation (synonymous with a Stage 1 Contamination Investigation). Review of Appendix M Contamination Technical Working Paper against the EPA (2020) reporting requirements indicates many elements required by EPA are missing from Appendix M including:
   - conceptual site model;
   - data quality objectives;
   - sampling and analysis plan and sampling methodology;
   - quality assurance / quality control;
   - tables of analytical results;
   - sample descriptions of media;
   - bore logs;
   - site plans showing sampling locations;
   - site plans showing the extent of soil and groundwater contamination;
   - assumptions and uncertainties in reaching conclusions and recommendations.

   The lack of inclusion of figures showing sampling locations, sample results tables and quality assurance / quality control data is a critical omission which means it is not possible for even experienced practitioners to interrogate the data and actually check if the assessment presented is correct – this is a major omission which calls into doubt the overall assessment.

   Additionally, due to the nature of contamination studies being staged where one stage builds upon the earlier stages the lack of information in the Preliminary Site Investigation (Appendix M Technical Paper) means the report, and consequently the subsequent conclusions and recommendations, are flawed and therefore cannot be relied upon to assess contamination. **Hence it is not possible for the proponent to adequately assess whether land and harbour sediments are likely to be contaminated.**

b) Landfill Gas (LFG) has been identified as a potential contaminant at Flat Rock Reserve at Northbridge and Willoughby Leisure Centre and Bicentennial Reserve at Willoughby. While in respect of LFG it is stated in Chapter 16 (Section 16.4.3 Page 16-35 Willoughby Leisure Centre and Bicentennial Reserve Willoughby [B10} 2nd paragraph) "although not encountered during borehole investigations in the area,….", close review of Section 5.2

of Appendix M Contamination Technical Paper indicates that" as part of this project there has not been specific testing for LFG ((i.e. concentrations and flow)" as per the NSW EPA (2020) Assessment and Management of Hazardous Ground Gases.

LFG gases are commonly associated with former landfills, particularly those receiving putrescible materials. Methane in LFG can pose an acute and explosive risk while other gases associated with LFG include carbon dioxide (an asphyxiant) and several hundred non-methane organic gases (some toxic), hydrogen sulphide (toxic) and potentially mercury vapour (also toxic). The presence of high levels of methane could have catastrophic impacts to construction workers, the public and the operation of the proposed tunnel while other gases can potentially result in death. The reason for not undertaking appropriate LFG investigations in accordance with NSW EPA endorsed guidelines is a significant omission from the EIS, particularly in light of the TfNSW Gateway EIS which included significant consideration of LFG and related issues at the Council owned former Tempe Landfill. Undertaking a study of this kind and not including LFG monitoring or accessing LFG monitoring records is a significant omission and major deficiency in this study, which means it is not possible to assess LFG contamination related to this source. **Hence it is not possible to adequately assess whether land and harbour sediments are likely to be contaminated.**

c) Balgowlah Golf Course is identified as a construction site in the EIS and is designated as a moderate potential of contamination. However, based on the information presented in Appendix M Contamination Technical Paper there are a number deficiencies in the Stage 1 Contamination study presented for this site including absolute minimal sampling (1 soil sample), omission of contamination sources. Most significant of which is there is a complete lack of consideration of potential contamination from the BP Balgowlah Service Station site which is indicated in the EIS to be 100m from the project site. The BP Balgowlah is identified as a site on the NSW EPA list of sites notified under Section 60 of the CLM Act, but regulation not required. Notification under Section 60 is normally triggered by offsite migration of contamination, presumed to be petroleum hydrocarbons including the carcinogenic benzene. In NSW there is a two-tier system for management of contaminated sites where sites regarded by EPA as significantly contaminated are regulated by EPA, while all other sites are dealt with under the planning approvals process. So the fact that a BP Balgowlah site is not regulated does not mean it is not contaminated and it can be ignored under this EIS, and under the contaminated land management regime in NSW should be assessed as part of the planning process i.e. the EIS. This failure is particularly significant when the evidence indicates there has been offsite migration of petroleum hydrocarbons which would expected to flow to the north towards the Balgowlah Golf Course construction site. This offsite migration of petroleum hydrocarbons can expect to be exacerbated where there is expected to be up to 11m of drawdown on groundwater in this area which will just draw any hydrocarbon contaminated groundwater into the construction site. The main exposure pathway for petroleum hydrocarbons is via vapour pathway (which does not even get a mention in the EIS when discussing risks from service station sites another significant omission). There could be a significant and unacceptable risk related to volatile hydrocarbon vapours, including the carcinogenic benzene, to construction workers (particularly in confined spaces) and during the operational stages of the project as a result of migration and drawdown of groundwater in the Balgowlah construction

site area. This is a significant omission in the assessment of contamination. Additionally, the overall assessment of the Balgowlah site is totally inadequate, particularly as it is Council owned land and should have been accessible for proper assessment similar to the former Tempe landfill in the Gateway EIS. **Hence it is not possible to adequately assess whether land and harbour sediments are likely to be contaminated.**

d) The NSW EPA (May 2020) Guidelines for Consultants Reporting on Contaminated Land states a Preliminary Site Investigation report must indicate all contaminants of potential concern including emerging contaminants while the NSW EPA (2017) Guidelines for the NSW Site Auditor Scheme requires that contamination for per-and poly-fluoroakyl substances (PFAS) has been considered in the assessment of contamination. There is no discussion of the potential for PFAS contamination within the Appendix M Contamination Technical Paper nor checking of the activities that are commonly associated with PFAS contamination (Appendix B of the NEMP (2020)) along the project corridor.

While Chapter 16 of the EIS includes PFAS in the list of chemicals analysed review of Appendix M Technical Working Paper indicates that the only location identified for PFAS sampling was Middle Harbour, and not at the Spit or other potential locations and or potential impacted media, including soils, surface water and groundwater within the project corridor. Additionally, no information is provided on the number of samples collected and analysed in Middle Harbour, noting there are specific requirements for PFAS sampling which are significantly more stringent than normal contamination sampling, nor are the detailed results provided. The omission of proper and adequate assessment of PFAS, an emerging contaminant which is ubiquitous in the urban environment and has potential significant environmental impacts (including bioaccumulation) and only limited sampling is a significant deficiency in the EIS. **Hence it is not possible to adequately assess whether land and harbour sediments are likely to be contaminated.**

A well known example of where there was inadequate assessment of PFAS contamination within an urban environment on major infrastructure projects is the West Gate Tunnel project in Melbourne where the contractor has encountered significant PFAS contamination and has no way of disposing of the PFAS contaminated soil. This has brought the project to a halt.

e) Based on the information presented in Section 4.4.3 Soil or Appendix M Contamination Technical Paper it is deduced (as no figures showing sampling locations or results are provided) that a total of 19 soil sampling locations were undertaken as part of the EIS with apparently a single sample collected per location. This quantity of sampling is significantly below the Minimum Sampling Requirements included in the NSW EPA (1995) Sampling Design Guidelines. With such limited sampling and analytical data is really not possible to assess whether contamination is likely or not. **Hence it is not possible to adequately assess whether land and harbour sediments are likely to be contaminated.**

f) Information presented in Appendix M Contamination Technical Paper indicates that the site inspection over the majority of the project area was undertaken on 18 September 2017 (a subsequent inspection on 5 April 2019 but was confined to new areas). Sampling investigations were reported in 2017 and 2018 (meaning the actual sampling was earlier). There could have been significant changes in the contamination risk profile (eg. Spills, leakages etc) between the original studies and the release of the EIS, but this potential has not been discussed or considered within the EIS. Again, this is a significant omission. **Hence it is not possible to adequately assess whether land and harbour sediments are likely to be contaminated.**

g) The fact that there has not been an adequate assessment of contamination which meets the requirements of the SEARS, is highlighted in the EIS by the text presented in Table 16-10 Potential Contamination Risks. In Table 16-10 of the EIS under the heading of Potential Contaminants and Associated Impacts (for the various areas of interest identified) when discussing contamination it is commonly stated "may be contaminated with …." or "soil contamination may be present ….." which clearly indicates that the based on the assessment the authors of the EIS realise that the level of assessment completed is not sufficient to conclude if contamination is likely. Further In setting out potential risk it is commonly stated "if contamination is present…" so again the authors clearly feel they cannot conclude if contamination is likely. The wording of these statements clearly indicate it is not known if contamination is present and therefore the EIS has not met the requirements that the EIS must assess **whether land and harbour sediments are likely to be contaminated.**

On the basis of the information presented above it is apparent that the EIS has not met the SEARS requirements and hence the EIS is deficient.

Identify if remediation of land is required

The EIS does not address the SEARS requirements as presented in Table 16-1 which state the proponent must assess whether the land and harbour sediment are likely to be contaminated and **identify if remediation of the land is required**.

Neither Chapter 16 of the EIS nor Appendix M Contamination Technical Paper of the EIS identify if remediation is required at any locations. There is an indication that onsite encapsulation will be used for remediation (even though the suitability of this strategy for the contaminants of concern has not been assessed) and some motherhood statements on remediation being undertaken in accordance with Managing Land Contamination: Planning Guidelines SEPP55 – Remediation of Land (when really it should be as per NSW EPA (Consultants Reporting on Contaminated Land). However, there is no identification if any remediation of the land is required. Thus, the SEARS requirements to "**identify if remediation is required" have not been met.**

SEPP55 Managing Land Contamination, Planning Guidelines SEPP55 – Remediation of Land

Review of the Managing Land Contamination, Planning Guidelines SEPP55 – Remediation of Land Section 2.2 What Decisions Need to Be Made indicates under the Planning Function - Processing and Determining a Development Application that the Decision to be Made "Is the land suitable, or can it be made suitable, for the proposed development". The EIS has not reached a conclusion on whether the site is suitable or can be made suitable. Review of Figure 3 Options Available in the Development Application Process indicates that if there is sufficient information for decision making the next step poses the "Has the land been proven suitable for proposed uses without the need for further testing or treatment?" Based on the information presented in the EIS the answer to this question is further testing is required and treatment maybe required depending on whether the testing shows remediation is required. Thus, it appears the inadequate testing noted above means that the DA should be withdrawn.

Other Contamination & Remediation Related Comments

Additionally, I have the following additional comments:

i. The EIS has identified sea dumping as the remediation method for sediments in Middle Harbour which will be dredged for the immersed tube to be placed on the harbour floor. The EIS identifies landfill disposal, after classification in accordance with NSW EPA (2014) Waste Classification Guidelines, if approval is not obtained for sea dumping. This option could be problematic given the presence of PFAS and dioxin as noted in the EIS. There is no guidance for dioxin (widely regarded as the most toxic chemical known to man) in the NSW EPA (2014) guidelines and while the NSW EPA have released preliminary criteria for PFAS it is well known in the industry that only a small number of landfills in NSW are accepting PFAS impacted soils. Failure to adequately characterize the sediments (as noted above due to deficiencies in the reporting it is not possible to assess the adequacy of the PFAS characterization) and obtain agreement from landfills prior to project approval could result in a situation similar to t Perth's Forrestfield Airport Link where PFAS contaminated soils are stockpiled awaiting a disposal / management solution or the West Gate Tunnel where a lack of options for disposal / management of PFAS impacted soils has virtually brought the project to a halt.

ii. Mitigation Measure SG8 Table 16-19 - the proposed mitigation measure includes engagement of an independent NSW EPA Accredited Site Auditor where contamination is "complex" to review reports and evaluate the suitability of sites for a specified use. There is no explanation of what would be regarded as complex. A Site Auditor should be required for all moderate or high-risk sites and all unexpected finds encountered during the project. The Site Auditor should be required to issue a Part A site Audit Statement confirming the sites are suitable for the proposed land use. The Site Auditor should also review and approve additional investigations proposed and Remedial Action Plan(s), including those related to landfill or ground gas. I am aware this has been a requirement on many road infrastructure projects in NSW for the last 5+ years and should be the case for this project.

iii. The only remedial strategy identified in the EIS is onsite encapsulation. Firstly, as the nature of the contamination has not been adequately identified it is not known

if this strategy will be appropriate. Encapsulation will result in the establishment of mini landfills along the project corridor which is not considered a good outcome. These will require ongoing management whilst ever these remain and could potentially pose an ongoing human health and environmental risk. Will these mini landfills require an EPL licence from EPA? For those handed back to Council in the area of the Balgowlah work site this will result in the local community bearing the ongoing management costs which is not considered appropriate.

iv. The EIS Section 16 and Appendix M includes reference to outdated and superseded documents including Guideline for the Assessment and Management of Sites Impacted by Hazardous Ground Gases (NSW EPA, 2012). This was replaced in December 2019 and amended in May 2020.