

Beaches Link Project EIS SSI - 8862

Additional Objections

I endorse the **objections** and recommendations in:

- the submission of Willoughby Environmental Protection Association (WEPA) on the Beaches Link Project; and
- the submission of the Community Representatives of the Bicentennial Reserve and Flat Rock Gully Advisory Committee and Bay Precinct Committee on the Beaches Link and Gore Hill Freeway Submission.

My additional **objections** to the Beach Link Project are set down below.

1 Groundwater drawdown and impacts on biodiversity

I object to the Project on the grounds that there will be groundwater impacts of more than 20 metres in some areas which is likely to result in water stress for vegetation and settlement.

1.1 Impact of groundwater drawdown at Flat Rock Reserve

The drawdown impacts are stated as: “Northbridge as a result of the project will be 28m, in Flat Rock Reserve 21m and at Willoughby Leisure Centre 22m”.

The groundwater drawdown means that the impact of the Project on the trees and other vegetation at Flat Rock Reserve is much greater than described in the EIS. This will impact the wider ecosystem.

The Sydney Coastal Councils Group submission also notes with concern that “the proposal has the potential to affect water dependent ecosystems by drawing down on the water table. There are many environmentally sensitive areas within the project area including known locations of threatened and protected species and communities. **Of particular concern...[is that] there is a no proposal for tunnel lining to reduce this impact.**”

Groundwater dependent ecosystems are located at the upper reaches of Flat Rock Creek and Quarry Creek such as the rare turpentine scrub and these will be impacted (either die or suffer water stress).

The Project is in essence a mine - Dr Pfautsch’s (2015) study notes the implications of changing groundwater levels owing to mining, which can potentially extend several kilometres beyond the boundaries of mine:

“A study has found ... mines that modify groundwater levels can affect trees and ecosystems several kilometres away from mine sites. ...**We know Australian trees, such as eucalypts, can extend roots 30m or deeper into the ground to find water...the water use of trees some several kilometres away from mine sites was sensitive to changes in groundwater levels.**

“Where the water table had fallen to 19 metres below the surface, water use of trees was much lower compared to trees where the water table remained unchanged at around six metres below ground level. The tight connection between water use and the growth of trees implies that a reduction in water use will lead to a reduction in growth. **In extreme cases trees can die of thirst**”:
<https://www.theguardian.com/environment/2015/sep/08/diverted-groundwater-near-mines-may-cause-trees-to-die-of-thirst-study-finds>.

There are tools to predict and monitor the impacts of groundwater drawdown on vegetation: <https://www.environment.gov.au/system/files/resources/1f3ca8af-a881-4c3a-b6bb-07d7ebaef0ca/files/what-are-the-ecological-impacts-of-groundwater-drawdown.pdf>

1.2 Recommendations

- The DPIE should apply the precautionary principle (knowing that groundwater drawdown is more than 20m at Flat Rock Reserve) and **require the dive site to be moved out of Long Bay Catchment and the Wildlife Corridor. This is to prevent serious or irreversible environmental damage to the ecosystem in the Wildlife Protection Area at Flat Rock Reserve.**
- If the site is not moved, the DPIE should obtain expert advice (eg from Dr Sebastian Pfautsch or a relevant government agency) on the impacts of drawdown on the trees/vegetation at, **and** surrounding (1) Flat Rock Reserve (2) other parts of Northbridge and Willoughby (3) other areas of the Project subject to significant groundwater drawdown. As noted above, there are tools to predict and monitor the impacts of groundwater drawdown on trees or other vegetation, and the Project may have impacts on trees (in particular Australian natives) located several kilometres from the tunnelling.
- At the very minimum, the DPIE should require additional biodiversity offsets for those trees likely to die/suffer as a result of groundwater drawdown, especially in times of drought.
- Households should also be compensated for trees and vegetation lost or harmed because of the severe groundwater drawdown. There should be a compensation fund, or a security deposit, to provide for this.

- The DPIE should mandate that the tunnels be fully lined to minimise drawdown and prevent high levels of long-term groundwater drawdown.

2 Impact of groundwater drawdown on properties - the WestConnex experience

Houses may be damaged by settlement induced groundwater drawdown.

This occurred during the WestConnex Project (in respect of a house built on clay (which reacts to lowered moisture content). The WestConnex Inquiry showed how difficult it is to claim compensation when damage to property results from groundwater drawdown as

- the cause of the damage was disputed
- access to geotechnical reports was refused

<https://www.parliament.nsw.gov.au/lcdocs/other/12124/0268%20-%20Attachment%201.pdf>

2.1 The number of properties likely to be affected is unknown

Transport NSW were asked the following questions. Their extracted responses are given below.

Question

Will pre - construction surveys be offered to houses in, or neighbouring, these areas of Northbridge where the groundwater drawdown is 28m, in Flat Rock Reserve where the drawdown is 21 m and in Willoughby Leisure Centre where the drawdown is 22m?

Response

As discussed in Chapter 16 section 16.4.2, in general ground movement may occur as a result of:

- *Tunnel induced movement caused by the relief of stress from the removal of intact rock during tunnelling*
- *Settlement induced by groundwater drawdown.*

EMM SG7 outlines that pre-construction building structure condition surveys will be offeredwithin the zone of influence of tunnel settlement where the degree of severity has been assessed as 'slight' or above and within the minimum working distances for cosmetic and structural damage due to vibration.

Question

Please provide an estimate of the number of houses likely to be offered pre-construction surveys in each of Northbridge, Flat Rock Drive and Willoughby because of groundwater drawdown.

Response

Further design development and associated updates to groundwater modelling would determine the exact number of houses that will be offered the pre-construction surveys required by SG7.

The above responses from Transport NSW shows that the **EIS has been prepared without knowing the number houses that may be eligible for claims in respect of groundwater drawdown**. The Proponent proposes to determine the number **after** the Project is approved.

This is unsatisfactory as it means that:

- the business case for the model is not robust;
- private entities engaged by Transport NSW to carry out the Project works may not have sufficient funds to pay for an unexpected number of houses damaged by subsidence; and
- residents have not been informed during the exhibition period how their property is likely to be impacted and given the opportunity to make representations on this specific issue.

2.2 Recommendations

(a) Pre- construction surveys should be offered to houses **within 100 metres** of the extent of a tunnel or construction site zone (and not the 50 metres offered under the EIS). This is in accordance with Recommendation 24 of the NSW Parliamentary Inquiry into the WestConnex Project: <https://www.parliament.nsw.gov.au/lcdocs/inquiries/2497/Final%20report%20-%20Impact%20of%20the%20WestConnex%20Project%20-%20FINAL%20-%202014%20December%202018.pdf>

This should be in addition to houses offered pre-construction surveys based on subsidence risk.

(b) Pre-construction surveys should be mandatory, unless the owner opts out.

(c) The owner should also have the option of obtaining their own dilapidation report, paid for by the Proponent.

(d) DPIE should require the “further design development and associated updates to groundwater modelling” to be completed before the EIS is approved - this will enable the Proponent to determine the exact number of houses that will be offered the pre-construction surveys, and also to revise their business model.

(e) The EIS should be re-advertised with precise figures of the number of houses to be offered the pre-construction surveys (as interests in property are being affected and people have not had the right to object based on this specific information).

3 Contamination/Dust Suppression objections

I object to the Project as risks posed by dust and contaminants to health and the environment have not been properly addressed in the EIS.

3.1 Recommendations

Before making a decision concerning the approval of the Beaches Link Project, the Minister should require:

- (1) the Proponent to outline in detail adequate measures to deal with dust from construction (including silica dust) (the “**Dust Mitigation Measures**”), noting there should be no spoil stockpiled outside the acoustic shed, including overnight.
- (2) the Proponent undertake a “Stage 2” investigation to define the **nature, extent and degree of contamination**, to **assess potential risk posed by contaminants to health and the environment** and to obtain sufficient information to develop a remedial action plan (the “**Stage 2 Investigation**”),
- (3) the Proponent to outline measures to deal with the properly scoped and identified contamination risks in a Stage 2 Report (“**Contamination Mitigation Measures**”) and develop a Remedial Action Plan, if required.
- (4) the **EIS be re - advertised** to give the public the opportunity to comment on the Dust Mitigation Measures, the findings of the Stage 2 Investigation, the Contamination Mitigation Measures and the Remedial Action Plan. The public should include: children and their guardians, health specialists, workers and their representatives, and SafeWork NSW, the EPA and other relevant government agencies).

These four actions are collectively referred to as “**Dust and Contamination Actions**” below and the Dust Mitigation Measures, Contamination Mitigation Measures and Remedial Action Plan developed after appropriate public consultation following a Stage 2 Investigation will be referred to as the “**Mitigation and Remediation Measures**”.

3.2 Justifications for recommendations

(a) A poorly risk assessed Project will not allow for the Mitigation and Remediation Measures needed to keep children, workers and the community safe

It is critical that from the **very beginning of the Project** that the Project is designed around the Mitigation and Remedial Measures and adequate funds are allocated after a costings of the Mitigation and Remedial Measures.

There is the potential that risks posed by dust and contaminants to health and the environment would not be addressed if any of the Dust and Contamination Actions occur at a later state because:

- it would then be too late to redesign the Project to implement the required Mitigation and Remediation Measures; or
- there may not have been sufficient funds allocated to the Mitigation and Remediation Measures which are needed to keep the public safe: or
- a decision could be taken that any fines imposed by the EPA for pollution and contamination incidents would be less than adopting the required Mitigation and Remediation Measures.

The problems resulting from a poorly risk assessed project are demonstrated by WestConnex. CFMEU noted in their submission to the NSW Parliamentary Inquiry into the Impact of WestConnex project that there was “**lack of attention given to minimizing the risk** [from the amount of silica dust being produced on the project]. We believe that the **project has allocated insufficient funds to appropriately manage the safety of the workers and the surrounding community.**”

(b) There is potential for the DPIE to be acting contrary to the rules of procedural fairness if the public are not given the opportunity to comment on the findings of the Stage 2 Investigation, the Mitigation and Remediation Measures

The decision to approve the Project has the potential to adversely affect the health of the public, particularly sensitive users, like children who live, go to school, and use playing fields close to construction sites. The Project has the potential to expose children and other members of the public to high amounts of construction dust (including silica dust) by placing what are in essence mining operations in dense urban areas for 5 - 8 years.

The Project proposes a change in land use that has the potential to increase the risk of exposure to contamination.

However, the public only have been given an incomplete Stage 1 investigation into contamination, even though the SEPP 55 Guidelines make clear that a **detailed [Stage 2] investigation** is needed to define the nature, extent and degree of contamination and to assess potential risk posed by contaminants to **health** and the environment”.

Procedural fairness requires that the public are given information from a detailed Stage 2 Investigation to be properly informed of “the nature, extent and degree of contamination” and the opportunity to comment on the findings of the Stage 2 Investigation and the Mitigation and Remediation Measures. It is only then that they can assess the potential risk to their health (and the environment) posed by the Project.

(c) SEARS requirement 13 has not been satisfied as there has not been a Stage 2 investigation

SEARS requirement 13 provides that:

(3)The Proponent must assess whether the land and harbour sediment is likely to be contaminated and **identify if remediation is required**, having regard to the ecological and human health risks posed by the contamination in the context of past, existing and future land uses.

(4)Where assessment and/or remediation is required, the Proponent must document how the assessment and/or remediation would be undertaken in accordance with current guidelines.

(5) Where contaminated spoil and/or sediments are to be handled, the Proponent must provide details of contamination characteristics and measures to manage this spoil to avoid adverse impacts to land and water quality.

The SEARS states that relevant guidelines include SEPP 55 guidelines (which the DPIE in uses as a guide in carrying out its functions under the EP&A Act and which reflect best practice). These guidelines state:

“The objectives of a detailed [Stage 2] investigation are to define the nature, extent and degree of contamination; to assess potential risk posed by contaminants to health and the environment; and to obtain sufficient information to develop a remedial action plan (RAP), if required (page

A detailed [Stage 2] investigation will also need to be conducted as part of a remediation proposal.

SEPP 55 guidelines therefore makes clear that a Stage 2 investigation is needed to satisfy SEARS 13(3) - (5), noting that it is only after a Stage 2 Investigation that is possible to:

- identify if remediation is required and obtain sufficient information to develop a remedial action plan
- provide details of contamination characteristics
- accurately assess the risks to ecological and human health.

Clause 7(1)(d)(iv) of Part 3, Schedule 2 of the EP&A Regulation requires the EIS to include a **full** description of the measures proposed to mitigate any adverse effects of the development, activity or infrastructure on the environment - a full description of mitigation measures for contamination risks is only possible after a Stage 2 Investigation.

(d) Representations by Jack McGovern

At the virtual information session on 19 February at 1:27 to 1:30, Jack McGovern made certain representations as to the management of dust:

*I just wanted to talk though maybe some of the management measures at a higher level in the first instance just to really ensure that **impacts never materialise such that there would be any impact to users across the road***

Very much we try and limit ... dust and things like that would be retained on - site.

There would be management measures in place, particularly like on site itself, and along the site perimeter even potentially, such that dust wouldn't be leaving site in the first instance such that it could be an issue of concern for obviously recreational users across the road on Flat Rock Drive there.

So first and foremost we will have water carts on site and sprinklers, there would be site exit controls such as rumble grids and the like before trucks leave site to make sure they are not mud tracking onto the local road and taking dust and sediments out onto the local road.

Loads would be covered prior to leaving site.

*As Tony mentioned also, **all of our stockpiling would be within the spoil shed itself** - so whilst the primary purpose of the acoustic shed is as a noise mitigation measure, the fact that **all of that material is contained within the spoil shed, and** generally we would have a side entrance or a shared entrance and shared exit, means that **we can manage dust within that shed**. I mentioned also the use of sprays and the like and misters and the potential at the shared gate whether be that entry or exit.*

There would also be the option of closing the doors to prevent even dust getting out of that area.

So talking through these other mitigation measures which would be applied:

*Stabilisation of any stock piles and **we would provide polymers and treatments to ensure that any stockpiles are appropriately protected from the elements.***

There would be management as well of any dust generating activity during any unfavourable weather conditions such as we might for instance have to shut down work for a small period of time if it's too windy or anything, or as I said before, the potential to close shed doors and the like.

I would also reference then in terms of the monitoring, the construction contractor would be required to prepare a Construction Air Quality Management Plan - again that document would be prepared in consultation with the EPA and the Department, and would include measures such as monitoring of dust on the side of the perimeter and what not, and we would have to report any issues essentially and any rectification measures that had been applied.

Jack McGovern has represented to the public that

- impacts to users across the road from construction sites would **never** materialise
- all stockpiling would be within the spoil shed itself
- there would be no stockpiles outside - unless polymers and treatments are used to ensure that any stockpiles are appropriately protected from the elements.

Recommendation

The Conditions of Approval should require that mitigation measures dealing with construction dust at least include those outlined in Jack McGovern's representations ie there would be no uncovered stockpiles outside, including overnight.

Jack McGovern's representations appear contrary to the WestConnex experience and to the observations in the EIS that dust is difficult to contain. If the represented construction dust mitigation measures prove to be untrue, and the statements made false or misleading, the DPIE should take action under section 10.6 of the EP&A Act.

2.3 Other recommendations

(a) Handling of construction dust - no stockpiling outside as experience shows that dust is almost impossible to contain

The EIS acknowledges that dust is difficult to contain. Dust exceedances have occurred throughout the WestConnex Project, including recently (where dust exceeded the annual maximum level threefold at Campbell St, in part because of uncovered stock piles in adjacent sites).

Recommendation

No stockpiling should be permitted outside under any circumstances, including overnight.

(b) Water restrictions during drought

The record of complaints during WestConnex project includes houses coated with construction dust but with no means to remove the dust by hosing hard surfaces because of water restrictions during times of drought.

Recommendation

Households should be permitted to hose down construction dust from their properties at all times, including during periods of drought.

2.4 Handling of contaminated spoil at Flat Rock Gully

There is the potential that the Project may expose the Community (including young children) to contaminated spoil (which may include asbestos) at the construction site at Flat Rock Drive - which is situated in close proximity to playing fields, and walking paths. The proposed mitigation measures are insufficient to deal with the risks of exposure during the 5 year period while contaminated spoil is to be kept on site, before encapsulation and reburial.

Recommendation

Remove all contaminated spoil immediately from Flat Rock Reserve construction site and other sites.

2.5 Contamination sediment in Middle Harbour

It is submitted that the Beaches Link Project should only be approved if it is consistent with the objectives of the Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005, ie it should only be approved if it can ensure that the catchment, foreshores and waterways of Sydney Harbour are protected and maintained:

- as an outstanding natural asset,
 - as a public asset of national and heritage significance,
- for existing and future generations,
- to ensure accessibility to and along Sydney Harbour and its foreshores.

It is submitted that the standard of care to be exercised by the DPIE should be higher given that we are dealing with “an outstanding natural asset” and “a public asset of national and heritage significance”.

Scientific evidence has been provided in the Western Harbour Tunnel **and** Beaches Link submissions, and is widely available, to the DPIE about the contamination risks with dredging the Harbour/Middle Harbour, and that their proposed silt curtain as a mitigation measure will be ineffective in containing the contamination: see submission by the NSW Australian Marine Sciences Association: <https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=SUB-9777%2120200330T061320.656%20GMT>. This has been confirmed by the Sydney Coastal Councils Group in their submission on the Beaches Link: <https://www.sydneycoastalcouncils.com.au/wp-content/uploads/2021/03/SCCG-Submission.pdf>

Recommendations

1 The **precautionary principle** should apply, given the scientific evidence already submitted, and the **principle of intergenerational equity** should require the DPIE to choose an alternative to this Project.

2 A full length silt curtain anchored to the sea floor should be used while dredging, otherwise a new project should be chosen.

3 The DPIE should review all objections for the Western Harbour Tunnel and treat them as objections to the extent that the objections overlap with the Beaches Link eg the objections of the Australian Marine Sciences Association in relation to the spread of contamination not identified in the EIS through dredging, and the need for full length silt curtains anchored to the sea floor, are still applicable to this Project and have been confirmed by the Sydney Coastal Councils Group.

Diane Staats