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Re Westconnex New M5 SSI 14_ 6788
NSW Department of Planning and Environment
GPO Box 39
Sydney NSW 2001

Attn: Secretary, Department of Planning and Environment

Submission in response to Westconnex New M5 Environmental Impact Statement (AECOM 2015): Project application no. SSI I4_6788

The Wolli Creek Preservation Society aims to ensure the preservation of the natural and cultural heritage of the Wolli Creek Valley, its tributaries, associated corridors and their ecological communities, and the ecologically sensitive restoration, expansion and maintenance of these areas. The Society **objects** to the **WestConnex New M5** based on analysis of the information provided in the EIS. We have taken a wide view of this project, and object to its impacts on a broad area within Sydney, in addition to specific impacts in the Wolli and Bardwell Valleys.

Specifically, our objections are as follows:

## TERMS OF REFERENCE

We contend that the EIS has failed to be an analysis of the WestConnex New M5. Instead, the document presents as an advertisement for the New M5 and associated road works rather than as a critical examination of the environmental impacts of the project. Parts of the proposed project are described only with subjective, conditional language such as "where feasible" not providing any meaningful detail, and implying no requirement to meet objective standards. Some results are provided in context whilst others are provided as numbers without a context, and yet others are essentially lists of things that have not yet been surveyed or planned. As such we contend that the project has not had a meaningful EIS conducted or published.

## TIME ALLOWED FOR COMMENT

We object to the period allowed for comment on the EIS. This time frame is grossly inadequate for a document of this length, and the size and complexity of the task involved in reviewing in excess of 7000 pages. This period includes many public holidays, together with a long shut-down period for administrators of the WestConnex project, adding further difficulties within an already short time period. There has been a delay in obtaining additional

information from the project proponents, in part because the USBs made available did not contain the complete EIS (in particular the Appendices), in part as we have had to wait for a response while the WestConnex office was shut over the Christmas break, and in part because of inefficiencies in making the additional information available. We object to the inadequate community information process involved regarding the EIS for the New M5

## IMPACTS ON BIODIVERSITY

The EIS underestimates and understates the very negative biodiversity impacts of the New M5, which we object to.
Specifically this occurs in the following areas:

## FLORA

**Clearance of Critically Endangered Cooks River Castlereagh Ironbark Forest (CRCIF)** - also referred to in EIS documentation as the Plant Community Type Broad-leaved Ironbark *Melaleuca decora* shrubby open forest on the Clay Soils of the Cumberland Plain, Sydney Basin Bioregion.

Significant environmental impacts upon 1.87 ha of Critically Endangered Cooks River Castlereagh Ironbark Forest **urgently require further consideration** by the NSW Office of Environment and Heritage because they are not adequately addressed in the EIS. The EIS fails to identify the very high conservation significance of this bushland stated in previous management reports (NGH environmental 2014, Gibson and Miller 1997). This bushland is critical to the survival of Cooks River Castlereagh Ironbark Forest under size, condition and location diagnostics listed in Conservation Advice under Federal Environmental Legislation (TSSC 2015).

In summary, the key concerns we have with this EIS document in relation to this remnant are;

- This bushland is in a condition class that is classified as critical for the survival of this Endangered Ecological Community under Conservation Advice listed by the Federal Department of the Environment.
- Clearing 1.4 ha from a 1.87 ha bushland remnant leaves a small patch of CRCIF that will be significantly impacted and requires further consideration and/or purchase of additional BioBanking credits to offset significant impacts.
- RMS must have a clear contingency plan if ‘like for like’ BioBanking credits are unavailable to offset the clearing of this Critically Endangered Ecological Community. Destruction of the bushland appears to be scheduled for mid 2016. Even under the dubious arrangements of the BioBanking scheme, this vegetation cannot be cleared until appropriate credits are secured, but the EIS has not indicated that complying credits are genuinely available, let alone secured.

- The EIS fails to acknowledge this site is already 'offset' for the impacts of the original M5 Motorway. Clearing the offset area means the original impacts are no longer 'offset' – and a condition of approval of the original M5 is no longer met. Additional BioBanking credits must be secured to cover the loss of bushland cleared for the original M5 project.

Given the possibility that complying offset credits may not be available, that effectively 1.87 ha of bushland will be impacted, and that the site in question is already an offset for previous clearing, alternative locations for the construction compound must be found.

It is unacceptable to have this irreversible impact on a Critically Endangered Ecological Community for the short-term provision of a construction compound. These impacts require further consideration before this development receives project approval.

**1.** This remnant is considered critical for the survival of this Endangered Ecological Community**.**

The good condition, size and geographical location of this bushland remnant qualify it for protection as **critical for the survival** of this Critically Endangered Ecological Community.

The ecological value of the site was assessed in 1997, and the consultants report describes the bushland as having **high botanical integrity**, only weed-affected at edges, with a **relatively weed-free** core area.

*"The conservation value of this site is very high and all care needs to be taken during motorway construction to avoid physical damage."* (Gibson and Miller, 1997).

This bushland remnant has been **managed for conservation** by RMS in accordance with the environmental approval conditions for the M5 East motorway (RTA 2006, approval condition 86). A more recent management plan reinforced the good condition and ecological viability of this bushland under RMS management (NGH Environmental 2014).

We refer to the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) (s266B) Approved Conservation Advice (including listing advice) for Cooks River/Castlereagh Ironbark Forest of the Sydney Basin Bioregion (TSSC 2015).

*"National listing focuses legal protection on remaining patches of the ecological community that are most functional, relatively natural (as described by the 'Description') and in relatively good condition."* (TSSC 2015, Page 6).

*"Given reduced extent of the already limited distribution of the Cooks River/Castlereagh Ironbark Forest, areas that meet the minimum (moderate class) condition thresholds are* ***considered critical to the survival*** *of the*

*ecological community."* (TSSC 2015, Page 10).

The Approved Conservation Advice for this CEEC states bushland areas meeting the moderate class condition thresholds are considered **critical for the survival** of this community.

The Beverly Grove bushland remnant is clearly of moderate-high condition given the criteria and diagnostics provided in the Approved Conservation Advice for this CEEC (see Table 1 attached). Based upon the previous environmental assessment the remnant is largely weed-free, and it is greater than 0.5 ha in area, and it is east of Riverstone. If the understory is >70% native species then it is a remnant of **high condition** and therefore should be considered critical habitat for this community.

In addition to this, the combined remnant bushland area of 1.87 ha makes this one of the **larger** remaining stands of Cooks River/Castlereagh Ironbark Forest, almost all patches (83%) have an area of less than 10 ha (Tozer et al 2010). This is the only remaining patch in the Wolli Creek Valley (NGH Environmental 2014). It therefore has high conservation value because of its **geographical location** in the eastern part of the range for this CEEC.

**2.** The EIS document claims the indirect impacts upon a remaining patch of CRCIF will not be 'significant' despite the inevitable loss of gene flow once the nearby larger patch is removed combined with changes to the groundwater table**.**

The EIS Biodiversity Assessment Report states on page 77 that the isolation of this remnant will reduce its ecological integrity and on page 82 that changes to the groundwater table would stress remaining vegetation, yet erroneously these indirect impacts of clearing are considered to result in 'insignificant' indirect impacts on remaining CRCIF in the study area (Eco Logical 2015 (a)). Clearly there will be significant environmental impacts upon the entire 1.87 ha of CRCIF affected by the proposed surface works.

> "*The project has the potential to result in fragmentation and isolation of remnant native vegetation. Clearing of the Cooks River / Castlereagh Ironbark Forest at the western surface works area would increase fragmentation and isolation of the remaining patch. The impacts of fragmentation increase in edge effects, alteration of light penetration into the patch, increase edge to area ratio and weed invasion. The overall impact of these actions would be to reduce the ecological integrity of the remaining patch."* (Eco Logical 2015 (a) p. 77)
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> *" If vegetation is not cleared, lowering of groundwater table may stress community. "* (Eco Logical 2015 (a) p. 82)

The isolation caused by clearing the only nearby remnant of this Plant Community Type in addition to groundwater table changes could mean the effective loss of 1.87 ha of this Endangered Ecological Community.

This process of dividing and removing fragments piece by piece leads to their eventual extinction across the landscape. This vegetation type has already been 95% cleared in the Sydney Metropolitan CMA (Eco Logical 2015 (a)).

Land clearing is listed as a key threatening process for this critically endangered ecological community (TSSC 2015). The Westconnex New M5 proposal must be modified to ensure the project does not contribute to this key threatening process through the permanent loss of a high conservation value remnant of this CEEC.

**3.** Omission of a contingency plan if 'like for like' BioBanking credits are not available for purchase to offset the clearing of this Critically Endangered Ecological Community**.**

The New M5 EIS Biodiversity Offset Strategy acknowledges NSW Roads and Maritime Services has been looking for BioBanking credits to purchase to offset the loss of this remnant for over 12 months (Eco Logical 2015 (b) p. 14).

Until BioBanking credits are secured, the impacts of clearing this vegetation have not been 'offset'. Critically, a 'like for like' plant community exchange may not be possible. This is a test of the BioBanking legislation in practice - BioBanking should protect areas of highest conservation significance where no similar bushland remains.

Potential offset areas may be located far from the site of the existing remnant; this project will effectively reduce the geographical extent of this Critically Endangered Ecological Community. The remnant lost will be a relatively large remnant located at the Eastern limit of the distribution of CRCIF.

In the absence of a nearby 'like for like' site secured in perpetuity, this vegetation must not be cleared, and it cannot be considered that the environmental impacts of clearing this vegetation have been adequately addressed.

The NSW Biodiversity Offsets policy (OEH, 2014) imposes stringent restrictions on the use of offsets for Critically Endangered Ecological Communities. There must be a 'like for like' offset and there should be **further consideration** by decision-makers even if an offset is found (p.18, OEH 2014). It is highly unlikely a 'like for like' offset for this bushland remnant can be located near the existing remnant, because it is the only remnant of this size in high condition in the locality. We insist that the project not proceed with this particular impact in place

**4.** This EIS omits acknowledgement that the site to be cleared is already an 'offset' for the impacts of the original M5 Motorway**.**

The New M5 EIS does not acknowledge the 1.4 ha of Critically Endangered CCRIF to be cleared is an offset from the first M5, to be managed for conservation in accordance with approvals outlined in 2006. If this area is

cleared then the impacts from the original development have no longer been 'offset'.

**NSW RMS must secure additional BioBanking Credits to offset the impacts for which this remnant was originally set aside for conservation management as a condition of approval for constructing the M5 East Motorway.**

NSW Roads and Maritime Services has **managed this site for conservation** in accordance with the environmental approval conditions for the M5 East motorway (RTA 2006, approval condition 86). The WestConnex Delivery Authority described Beverly Grove as "…a biodiversity offset area which was set aside during the initial construction of the M5 East Motorway" (AECOM 2014 p. 41). This bushland was set aside during the initial construction because of its **high conservation value**.

If we cannot guarantee the protection of biodiversity offsets of high conservation value from previous developments then the credibility of the offset approach to impact mitigation is seriously compromised. Without protection in perpetuity offsets will gradually be eroded and the extinction of ecological communities in urban areas is inevitable. We cannot continue to justify the clearing of remnant communities of high conservation by declaring areas of lower value further away to be managed as 'biodiversity offsets' unless these offsets have meaningful legislative protection.

References

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TSSC (Threatened Species Scientific Committee) (2015). Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) (s266B) Approved Conservation Advice (including listing advice) for Cooks River/Castlereagh Ironbark Forest of the Sydney Basin Bioregion.

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| **A. Moderate condition class**<br><br>Represented by medium to large-size patch as part of a larger native vegetation remnant and/or with mature trees | Patch size >0.5 ha (Patch size >0.1 ha in areas east of Riverstone (150° 51’ 38”E))<br><br>And<br><br>>30% of the perennial understorey vegetation cover is made up of native species.<br><br>And<br><br>The patch is contiguous with a native vegetation remnant (any native vegetation where cover in each layer present is dominated by native species) >1ha in area.<br><br>Or<br><br>The patch has at least one tree with hollows or at least one large locally indigenous tree (>80 cm dbh). |
| **B. Moderate condition class**<br><br>Represented by medium to large size patch with high quality native understorey | Patch size >0.5 ha (Patch size >0.1 ha in areas east of Riverstone (150° 51’ 38”E))<br><br>And<br><br>>50% of the perennial understorey vegetation cover is made up of native species. |
| **C. High condition class**<br><br>Represented by medium to large size patch with very high quality native understorey | **Patch size >0.5 ha**<br><br>**And**<br><br>**>70% of the perennial understorey vegetation cover is made up of native species.** |

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| **D. High condition class**<br><br>Represented by large size patch with high quality native understorey | Patch size >2 ha<br><br>And<br><br>>50% of the perennial understorey vegetation cover is made up of native species. |

**Table 1. Thresholds for condition categories for Cooks River/ Castlereagh Ironbark Forest. (TSSC 2015)**

**FAUNA**

**Wildlife Connectivity and Habitat Fragmentation** (Vol. 2H Appendix G of Appendix S 6.4.3 p. 77) and **Fragmentation and Isolation** (6.4.4 p. 77)

The EIS acknowledges that clearing of the Cooks River Castlereagh Ironbark Forest (CRCIF) remnant at the western surface works area would increase fragmentation and isolation of the native vegetation, yet dismisses this impact on the grounds that "*the surrounding habitat is urbanized, with native vegetation limited to relatively small and highly modified patches with a high perimeter to area ratio and limited connectivity with any larger patches"*. This description could in fact apply to much of Sydney's remaining urban bushland.

It is not a justification for destruction, and indeed the rarity of urban bushland per se in Sydney, whether an EEC or not, and the habitat provided by it for native fauna is cause for protection and restoration. The EIS fails to recognize and acknowledge the connectivity with the larger Wolli valley bushland to the east, which the current M5 linear park with its many native plantings (required and created as part of the initial M5E project) has been providing - connectivity now proposed to be destroyed. *"Relatively*" small patch remnants are also still capable of supporting significant populations of native fauna, such as invertebrates, reptiles and birds, and can be viewed as important 'stepping stones' for wildlife – especially important for bird species undertaking cross-city migrations. The EIS fails to recognize this widely accepted function of relatively small remnants.

**Grey-headed Flying-fox (GHFF)**

Understating of foraging habitat:
The EIS fails to accurately quantify the amount of potential foraging habitat for the GHFF to be impacted. The total area to be impacted has been under-estimated. The EIS identifies a total of 10.76 hectares of potential foraging habitat is to be removed (Chpt. 21 p. 202), which is further described as *"a relatively small area."* Some of this total includes the 1.4 hectares of bushland at Beverly Grove (CRCIF), 1.82 hectares at Kogarah Golf Course (Paperbark Swamp Sclerophyll Forest) and 0.9 hectares of Angophora-Red Bloodwood-Sydney Peppermint heathy open forest at Bexley Rd. The remaining 7.5 hectares cannot be an accurate figure of foraging habitat affected when all the

areas indicated as *"Urban Exotic and Native vegetation"* in the legends of Maps 1-65 of Appendix C within Appendix S (Vol. 2H) (areas of vegetation to be removed) are accounted for. These areas include canopy trees (eg Eucalyptus trees of a flowering age) and such areas should not have been excluded from calculations.

Nor is the potential indirect effect of ground water draw-down on (and possible morbidity of) vegetation in the 3.5 hectare Stotts Reserve (Vol. 2H Appendix G of Appendix S p. 83, & also Chpt. 21, Table 21-10) included in such putative quantitative impacts on foraging habitat. Given this under-estimate it cannot be asserted with any degree of confidence, as the EIS does, (Appendix G within Appendix S p.77) that *"The direct impacts to this potential foraging habitat are unlikely to present a significant adverse impact to this species*"

In the Impact Summary (Chpt 7. Appendix G of Appendix S) it's asserted in 7.1 that the *Smooth-Barked Apple-Red Bloodwood-Sydney Peppermint heathy open forest on slopes of dry sandstone gullies of western and southern Sydney (PCT 1181/BVT ME029)* remnant at Bexley Rd. is an area not requiring assessment or offsets, as "*it is not associated with threatened species habitat*". However the canopy species are species that are used as food resources for Grey-headed Flying–foxes. Further, also at the same site at Bexley Rd., in close proximity to PCT 1181/BVT ME029) and also indicated to be removed, is a vegetated area shown on Map 20 (Appendix G of Appendix S: page 223) as *"Urban Exotic and Native"* which contains further foraging habitat for the Grey-headed Flying-fox. This has similarly not been identified as foraging habitat for this threatened species. This particular vegetated area, one that has been revegetated/reconstructed using local, Wolli Valley provenance native species as a result of negotiation between then RTA environment staff and The Wolli Creek Preservation Society, includes a number of Melaleuca trees (of flowering age); another favoured food tree of the Grey-headed Flying-fox.

Further down-playing of the area and significance of foraging habitat and impacts upon it occurs on page 203 of Appendix G, when consideration is given to whether there is foraging habitat to be removed which meets the definition of "*habitat critical to the survival of the species"*, and if so, the significance of the impacts of its removal. With reference to the Gordon camp as a camp with a population greater than 30,000 Flying-foxes, the EIS asserts (p. 203) that *"while habitat critical to the survival of the species would be removed, the impacts are not expected to be significant in the context of the area of habitat available."* No quantitative evidence, or relevant studies are cited to support this *'expectation'*.

Moreover, the EIS fails to address impacts for the far closer camp at Centennial Park. The permanent camp at Centennial Park, which has also had greater than 30,000 Grey-headed Flying-foxes present (eg in March 2014 there were in excess of 42,000; S. Amesbury pers. comm. April 2014) has not been considered, yet it is much closer to the project site boundaries and GHFF would be expected as a first preference to feed at suitable locations

closer to their camp, and so conserve energy. These closer, suitable locations would include vegetation areas within the project site boundaries proposed to be removed. Being forced to fly further within their nightly range to access food resources increases energy use, and can consequently place them in danger of increased negative encounters – eg collisions, conflict with humans over orchard fruit, and associated net entanglement. For females carrying pups the danger of electrocution on power lines when tired mothers attempt to rest is real and would be increased with extra flying distance to access food.

Inadequate information regarding mitigation measures:
There is no detail concerning mitigation of impacts associated with the removal of foraging habitat for the Grey-headed Flying-fox, other than mention in Appendix G, 6.6.2 *(p. 85 Native vegetation management*), of a Flora and Fauna Management Plan. The EIS states what such a Plan should contain; *"The Plan should also outline the planting of native trees, and other vegetation should as far as practicable include habitat species suitable for foraging of a range of fauna, including the Grey-headed Flying-fox."*

However, such a Plan is not evident within the EIS documents. In the absence of this Plan, no scrutiny as to its merits, nor any informed comment on it, is possible. This Plan should have been available as part of the EIS documents. Similarly, while mention is made of a Nest box management plan *(6.6 Mitigation Measures)* to address the loss of habitat hollows where hollow-bearing trees are to be removed, no such plan is contained within the EIS documents.

**Green and Golden Bell Frog (GGBF)**

Down-playing of impacts
The direct and indirect impacts of the New M5 on the 'Key Population' of Green and Golden Bell Frogs located at the Kogarah Golf Course at Arncliffe, pose a significant risk and likely extinction of that population via injury, mortality, and reduction in the area and quality of foraging, sheltering, and breeding habitat.

The EIS downplays the importance for the GGBF of the area on the Golf course that is to be destroyed for the New M5 yet at the same time acknowledges (Appendix G, p. 198) that *"The proposed works are likely to result in a decrease in the viability of the Green and Golden Bell Frog local population due to a large portion of foraging, dispersal and sheltering habitat being removed".* This 7 ha. area is the main area of dispersal, sheltering, and foraging habitat, and an independent expert consultant has confirmed it to be an important additional potential breeding area. Removal of this area will place further strain on the 'compensatory' habitat created as a requirement for approval of the earlier M5E project. The remaining compensatory 'RTA ponds' as they are commonly called, immediately adjacent to the massive construction works, will be impacted by dust, noise, vibration, lighting, and shading (and, with the latter, pond water temperature).

This combination will seriously jeopardise their habitat value, including as a breeding site. The quality of these ponds as habitat has already declined over the 15 years of their existence, and reports prepared by the RMS's own consultant biologist (Dr. White) as to poor breeding success in recent years could suggest they may no longer be functionally suitable breeding habitat. What is needed is a demonstrable reversal of the decline of both this apparent habitat degradation, and the possibly associated decline in breeding rather than the destruction of the current golf course habitat. The EIS does not really indicate any plan (including within the Green and Golden Bell Frog Plan of Management in Appendix K) to ensure this reversal, particularly within a time frame that will ensure that the species does not go extinct in this location.

The Green and Golden Bell Frog species was recently reviewed by the NSW OEH 'Saving our Species' program expert review panel, which concluded that the GGBF was continuing to decline across most of its small number of areas of distribution in NSW. This highlights the increased importance of the population at Arncliffe. The EIS however, also down-plays the threats to and the importance of this population by noting the existence of other Sydney populations without also indicating the status of each of these populations.

Other expert government programs/plans related to the GGBF that the New M5 project is in direct conflict with include the Green and Golden Bell Frog Recovery Plan, and the NSW Government's OEH-endorsed Arncliffe-Lower Cooks River GGBF Population Management Plan.

Methodology: shortcomings in field surveys and assessments

Field surveys for the GGBF were not carried out as part of the Biodiversity assessment carried out by Eco Logical for the EIS. Table 15 (P.51) *List of Candidate species and Second Filtering Step (for threatened species)* states that "Targeted surveys for the species (Green and Golden Bell Frog) were not undertaken during the survey period… Annual monitoring reports (Biosphere 2015) from known habitats for the species within the study area were used to assess the presence of the species and suitable habitat".

It is a shortcoming of the Biodiversity surveying and assessment process for the EIS that no additional surveying and assessment in relation to the GGBF was done by Eco Logical as part of the overall 12 days of surveys between November 2014 and May 2015, and on June 5, 2015 (with the latter being the Aquatic survey) *(2.2.2 Table 3: Survey Effort*). Moreover, the single aquatic survey and assessment process (June 5), which may have had the potential to report possible incidental detection of GGBF, was however, conducted at the beginning of winter from 8 am to 5pm on a day of zero rainfall and with the lowest maximum and minimum temperatures recorded across the 12 surveys. *Section 2.2.1 (p. 18) of the Aquatic assessment,* also states that no access on to the Kogarah Golf Course was available. All of these factors would have acted against any even incidental detection of GGBF's. So further, additional verification and reporting of the GGBF population, including any breeding activity, and identification of potential impacts is not available via surveys conducted for the EIS.

Inadequate and high risk protective and mitigation measures

*Frog exclusion fencing*. Even if this actually works in preventing frog dispersal into the construction zone and certain death, it also poses a real risk of trapping the frogs within a no longer suitable breeding site (see above). There will be no place left to breed, nor to disperse to for survival. Physical prevention of the dispersion of such a widely dispersing species also carries the likelihood of increased cannibalism amongst the population.

*Translocation*: This is a very high-risk strategy with a rare success rate. The functionality of any recipient habitat site should be demonstrated **before** any approval to carry out activities that will impact upon/destroy the current habitat. This means it must be proven, in accordance with the NSW GGBF EIA Guidelines, that the habitat to which the frogs are to be translocated is capable of supporting two complete life cycles (not just two breeding events), without any supplementation by captive-bred frogs. The EIS does not indicate any plan to follow this process.

*Captive Breeding*: This is a 'last chance' strategy. Re-introduction of captive-bred animals is only effective if this is done regularly (ie. to supplement) **during** the course of construction, not after construction when depletion has already occurred.

The GGBF population across NSW and Victoria has experienced "a widespread yet unexplained contraction in south-eastern Australia" (Hamer et al., 2002). Based on this lack of scientific explanation for the growing disappearance of the GGBF throughout its range, we consider it impossible that the GGBF population at the Kogarah Golf Course could be maintained by any mitigating actions after the New M5 construction was completed, in particular considering the amount of their golf course habitat that will be destroyed.

It has been best practice to create offset areas where needed in order to protect any species, threatened or not (Pickett et al., 2013). The GGBF population in particular would require a disproportionally large offset area to ensure its survival at the site (Pickett et al., 2013). Therefore it appears impossible to maintain the GGBF population at its current level, even if mitigation activities should include offset areas.

Although the GGBF is said to have the ability to disperse over longer distances and to find new breeding habitats, its decline has to date remained largely a mystery. The species is said to have disappeared from about 80% of its original habitat range and research shows that the protection of local populations is important in order to halt further decline (Burns, 2004). Changes to habitat and its loss are amongst the reasons noted for the decline of species (Pickett et al., 2013). Considering the habitat requirements of the species described above and the planned destruction of habitat, the remaining habitat would clearly be insufficient to prevent the GGBF population at Kogarah Golf Course from being severely impacted by the New M5 and possibly driven to extinction.

In addition to the likely significant negative impact of the New M5 on the Arncliffe GGBF population, this negative impact is highly likely to remain permanent, should the proposed F6 component of Westconnex be constructed. Considering the added pressure on the GGBF habitat by the proposed F6 project, it is clear that mitigation measures will be insufficient to protect the population, because the GGBF population would be under severe stress for years to come. Construction of both the M5 and F6, would likely impact on the GGBF population significantly, to the extent that the Arncliffe population may not survive. These cumulative impacts are not adequately addressed in relation to the GGBF in the EIS for the New M5.

References

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## TRAFFIC MODELLING

We object to much of the traffic data presented. The operational or network performance modelling was conducted using Paramics software yet there is no information about who ran this software, nor what the limitations of the software are. The input data to the WestConnex model was provided by government agencies and therefore it is not clear that they are suitably independent. This data, (to do with population, employment, road, rail etc. networks, tolls, induced traffic, land use) is all from the Strategic Transport Model (STM). The STM is managed by the Bureau of Transport Statistics. The Bureau of Transport Statistics lies within the Planning and Programs Division of Transport for NSW.

All traffic modelling should consider errors in inputs and provide error estimates of the outputs, yet this has not been done. No error bars are provided.

The traffic modelling and results are too confined in area and do not report on the impact of thousands of additional cars on the city centre.

## AIR QUALITY

We object to the three, unfiltered emissions stacks proposed for Kingsgrove, Arncliffe and St Peters. The densely populated suburbs of Wolli Creek and Arncliffe, already affected by the unfiltered M5 stack at Turrella, will now additionally be affected by the new stack on the Kogarah Golf Course. The planners of the road admit that any new developments proposed after the stacks are built will need to carefully assess where the exhaust pollutants are going because they currently do not know.

The stacks are unfiltered yet more and more pollutants are diesel particles, which in 2012 were upgraded by the World Health Organisation to the highest cancer warning level because they are particularly dangerous for the lungs of growing children.

Furthermore, the impact of Ultrafine particulates (0.1 microgram) is not considered at all yet these are believed to have several more aggressive health implications than those classes of larger particulates.

## SOCIAL AND ECONOMIC IMPACTS

We object to the project on the grounds that many of the communities the project is being built for did not list it as a priority. A review of the different Councils' strategic planning documents undertaken to identify the values and aspirations specific to each community, did not include the construction of large roads. Instead, the priorities that were listed included "high quality public transport" (Sydney LGA); "clean streets, open space" (Botany LGA); and the protection of the natural environment (Canterbury LGA).

We are concerned about the disruption of community and social cohesion due to the intrusion of road infrastructure into well established and socially integrated suburban areas. The project will remove valuable social amenity for residents of Beverly Hills, Kingsgrove and Bexley North through the removal of the current M5 Linear Park green open space and landscaped vegetated buffer zones. Additionally, residents will be subjected to multiple heavy truck movements, dust, noise and vibration occurring within these formerly green open spaces as well as local streets. This will exacerbate the loss of this amenity. Pedestrian and cycling access, and links between residential areas will be severed during construction, and, post construction, the reconstructed and considerably longer pedestrian/cycle access tunnels under the toll road present safety concerns.
Areas of St Peters around Campbell St, Unwins Bridge Rd and May St will be greatly disrupted by the expansion of local roads to accommodate the additional motorway traffic generated by the New M5.

## PROPERTY AND HERITAGE IMPACTS

We object to the destruction of property and heritage caused by the construction of the road. The New M5 will result in the loss of 48 residential

properties and the destruction of significant and irreplaceable heritage items. What is euphemistically described in the executive summary as “works to enhance and upgrade local streets and intersections near the St Peters interchange” in fact refers to the demolition of private homes, destruction of heritage listed items, removal of public open space and disruption of an established community to make way for a motorway interchange.

We object to the road that will bring new vehicles into city centres without considering where these vehicles will be parked. By 2031, the New M5 is predicted to accommodate 81,500 vehicles per day, which will require many new carparks to be built on land better suited to residential development.

We object to the location of the road being determined and documented without consulting with local communities. A landscape and design consultation process with locals is proposed for the future yet the plans have already been drawn up.

## IMPACTS ON PUBLIC TRANSPORT USAGE

We object to the superficial analysis of the impact of the road on public transport. The project does not consider how people may elect to use private motor vehicles to travel rather than public transport once the new M5 is constructed. This would reduce patronage of public transport that could make services unviable and encourage people to become more sedentary therefore leading to poor health outcomes.

## ENVIRONMENTAL RISKS ASSOCIATED WITH USING LANDFILL SITE

The Landfill Closure Management Plan (LCMP) identifies serious levels of contamination at the Alexandria landfill site. There are major environmental concerns with redeveloping this site for the proposed St Peters interchange but the LCMP included in the present EIS (appendix F) does not address these. The document states that the “LCMP does not document construction and/or environmental management protocols associated with the future construction and development of the St Peters interchange.” This is a major project risk and a serious shortcoming in the EIS that ought to be addressed.

## BLASTING

We object to leaving consideration of the scope, method and impact of Blasting, a significant and potentially dangerous process, to the post-approval stage. The blasting will need to be carried out along the length of the tunnel alignment during excavation and will affect a great many communities.

## NOISE AND VIBRATION

The EIS information concerning both noise and vibration indicates significant, unacceptable impacts upon residents in the vicinity of most surface works. While claiming that noise has been “*minimised”,* the EIS acknowledges that

noise levels will **still exceed stated guidelines**; *"Construction noise levels would exceed the criteria in most of the noise catchment areas for work activities undertaken during earthworks, demolition of existing structures, site establishment road tie-ins and road and intersection modifications. The most affected receivers are located at both the western surface works (NCA19 and NCA23" and St Peters interchange (NCA 6 and NCA 7).*
It is also not acceptable that affected residents will only be kept *"pro-actively informed of likely timing and impacts of noisy activities" (p.ix)*
While "*timing"* may be a straightforward, objective process, impacts are quite subjective and will in any case be different for each receiver, so not susceptible to 'a one size fits all' process.
Merely informing, whether pro-actively or not, is not sufficient. There is an absence of any mitigation and compensatory measures such as provision of alternative, suitable temporary accommodation to all within the noise catchment areas.

Page xii regarding "*Operational noise"* uses the phrase *"where feasible and reasonable"*; a phrase of empty 'weasel words' which usually means 'do nothing if it will require effort or cost to the contractor'. Who exactly decides what constitutes *"feasible and reasonable"* and who determines this?

Similar unacceptable impacts and a deficient response applies to vibration levels predicted to be experienced by residential properties and their occupants, particularly overnight when people are in need of adequate sleep to maintain their health. And similar mitigation and compensatory measures are absent from any consideration in the EIS.

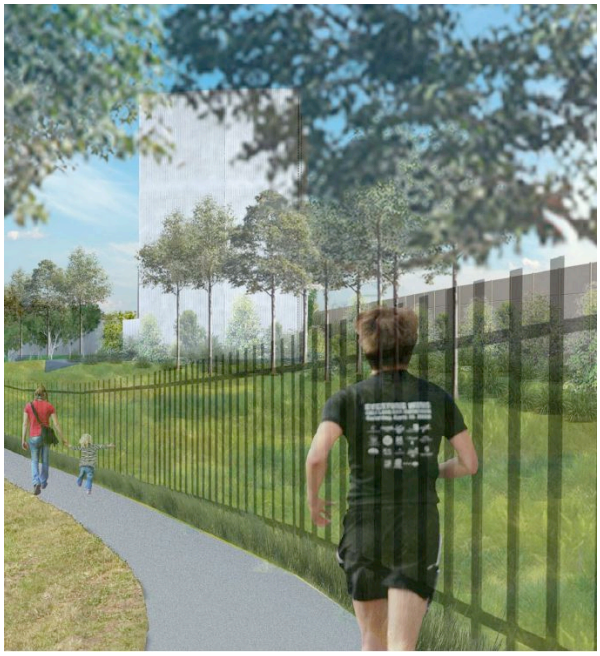
## SOIL AND WATER

Soil disposal sites are indicated in *Table 9-39 (p.9-114).* It is implied but not made explicit that some of these sites will require separate planning approval. In failing to disclose which sites will require approval, and which sites will not, the EIS is failing to inform the public and precluding public discussion.

Chapter 9 also fails to address potential impacts upon the natural environment resulting from soil disposal.

## DOCUMENTATION

We object to the artist's impressions of various views of the proposed road and adjacent infrastructure because they are unrealistic and deliberately misleading. Many of the views show how the new infrastructure would appear from above, and from inside a low flying aircraft. This causes the top of the new stacks to appear blended into the urban environment. If they had been realistically presented from a pedestrian's perspective, the stacks would tower over the environment, reach into the sky and dominate the landscape. In addition, when views are presented from a pedestrian's perspective, trees are shown unnaturally high and deliberately placed, screening even the tall stacks from view. The picture below is of the new stack at Kingsgrove yet it is concealed behind already mature trees.



**IN SUMMARY**

Based on the information available in the New M5 EIS we have several substantial objections to the New M5 as proposed. In addition we object to the style of the information made available, the way in which all aspects (such as all the Appendices) of the EIS were made difficult to obtain, and the short time period allowed for comment on such a large, multi-volumed, multi-paged document.

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