

**To the Office of the Appeals Convener
Environmental Protection Act 1986**

Appeal form

- 1. Name:** **Senator Scott Ludlam**

- 2. Proposal to which appeal relates**
Proposal description: **Roe Highway Extension**
Location: **Jandakot to Coolbellup**
Name of Proponent: **Main Roads Western Australia**

- 3. Type of appeal** **Environmental Protection Authority**
Report Number **Report 1489**
Date published **September 2013**

Appeal to the EPA Report 1489: Approval of the Roe Highway Extension

OVERVIEW

This appeal covers 19 reasons for appeal. The first 17 are described in detail. The final two are self-explanatory:

1. The EPA made its decision before the Strategic Environmental Assessment of Perth and Peel has been completed
2. The EPA made its decision before the critical *Population Viability Assessment of Carnaby's Cockatoos report* was released, due in late September
3. Misleading information about Aboriginal consultation and heritage and cultural values
4. Cumulative environmental impacts have not been measured
5. Key environmental factors were inadequately and incorrectly addressed
6. Human health impacts were not considered
7. The offsets program is unacceptable: it is not based on scientific evidence that it will work or even be possible to implement
8. The precautionary principle has not been considered or applied
9. The principle of intergenerational equity has not been considered or applied
10. The principle of the conservation of biological diversity and ecological integrity has not been considered
11. Principles relating to improved valuation, pricing and incentive mechanisms were not considered adequately
12. The project assessed by the EPA was falsely and misleadingly described by the proponent as the Preferred Option
13. The rationale for the project and a substantial number of justifications are inaccurate or misleading and remain unquestioned by the EPA report
14. The EPA has ignored evidence showing the project will make no difference to traffic flows, heavy vehicle movements, or congestion on the surrounding network
15. Negative impacts on Stock Road are ignored
16. There are a number of false claims and errors in the EPA report
17. The EPA report glosses over the lack of genuine community consultation and lack of social license for this project and the impact the loss of the wetlands will have on the community
18. The EPA report glosses over the integrity of the Beelihar Wetlands system including North and Bibra Lakes 'as a whole' ecosystem
19. The EPA report does not acknowledge any alternatives to the project, specifically that it would be a better outcome to restore the degraded areas of the Beelihar Wetlands and protect this precious area for current and future generations.

FIRST REASON FOR APPEAL – THE EPA MADE ITS DECISION BEFORE THE STRATEGIC ENVIRONMENTAL ASSESSMENT HAS BEEN COMPLETED

In August 2011 the Commonwealth and Western Australian governments agreed to undertake a strategic assessment of the Perth and Peel regions of WA. The strategic assessment will identify the impacts on matters of national environmental significance from the future development of the Perth and Peel regions. As part of this process, the WA Government is developing a plan to manage matters of national environmental significance and an accompanying Impact Assessment Report. It was expected that these documents would be released in 2013, as well as related planning documents and policies for public comment in mid-2013.

The Strategic Environmental Assessment is a joint project under the EPBC Act and the EPA Act. The EPA is therefore a major stakeholder in the process and its findings.

The broad understanding was that the strategic assessment would identify areas that were and were not appropriate for development.

We also understand as part of this process the WA government is preparing a Greenways network plan, and looking at protecting regionally significant networks of biodiversity.

There is no doubt in the scientific or conservation community that the Beeliiar Wetlands and the Beeliiar Regional Park would be assessed in the strategic assessment process as an area that is not appropriate for development. We also understand it would be included in any future Greenway.

The EPA's decision is not valid until the Strategic Environmental Assessment is complete.

WHAT DO YOU WANT DONE ABOUT IT?

EPA Report 1489 cannot be considered valid or scientifically reliable until the completion of the SEA. It is of extreme concern the EPA has released its determination on a project as significant as the Roe 8 extension before the SEA is complete.

The EPA decision should be reversed until the SEA is complete, and then reviewed in light of its findings.

There is no doubt in the scientific or conservation community that the Beeliiar Wetlands and the Beeliiar Regional Park would be assessed in the strategic assessment process as an area that is not appropriate for development, and should be included in any future Greenway.

SECOND REASON FOR APPEAL: THE EPA MADE ITS DECISION WITHOUT CONSIDERING A KEY REPORT ON THE POPULATION VIABILITY OF CARNABY'S COCKATOOS

The EPA would be aware the *Population Viability Assessment of Carnaby's Cockatoos* report is due in late September. The EPA is a member of the Strategic Environmental Assessment Working Group, where this report has been discussed in detail. The Greens understand this report will provide scientific evidence that:

- the situation for the Carnaby's Black-Cockatoo's (*Calyptorhynchus latirostris*) is even more critical than previously understood
- there has been a critical loss of both nesting and foraging habitats
- the time delay between impact (loss of habitat from development) and establishing 'offsets' is of major concern and to date has not been managed adequately

The EPA did not delay making its decision on the project until this report was released, which places its reputation, judgment and recommendations in question. It means its decision is not based on the most up to date and robust data.

The Carnaby's Black Cockatoo is listed as Endangered under the Commonwealth Environment Protection and Biodiversity Conservation (EPBC) Act and as Schedule 1 ("Fauna that is rare or is likely to become extinct") under WA's Wildlife Conservation Act. It is an iconic species in dire trouble. The results of the 2011 Great Cocky Count found a significant decline in the number of birds per roost, with the average number only 40% of the year before, and the total numbers on the Swan Coastal Plain dropping by one third.ⁱ

Carnaby's cockatoos inhabit the proposed project area and feed on the Banksia, Marri and Jarrah trees that grow in the North and Bibra Lake reserves. The North Lake reserve is now the major feeding area for the locally resident flocks of these birds.ⁱⁱ

The project will destroy 78 ha of its foraging habitat, 2.5 ha potential nesting habitat, and 249 significant trees with hollows suitable for future nesting (p33) The EPA recognises this as a significant impact. For an endangered species this impact should warrant rejection of the project rather than approval.

The EPA has not provided information on the impact of a loss of habitat this size on the species, which also places its decision into question. Specifically it does not describe:

- On a regional scale, the area of proposed disturbance as a proportion of suitable habitat type
- The degree to which further fragmentation may isolate and /or result in interbreeding populations.
- The nesting, feeding and breeding range of populations affected by the development envelope.

The EPA condition to "counterbalance" the loss of habitat is an offsets package of at least 234 ha of Carnaby's Cockatoo foraging habitat, 7.5 ha of potential breeding habitat for both species and 7 ha of Conservation Category Wetland area. This must be made up of land parcels of a minimum of 100 ha in size.

Yet the EPA has not provided key information to satisfy obvious questions about the offset, namely:

- No scientific evidence that existing offsets programs have been successful
- No maximum distance the offset can be located to be effective
- No information on areas that would meet the criteria in the south metropolitan region

Finally, the EPA Report 1489 has not reported or measured the cumulative impact of loss of habitat from land clearing for projects in the south metropolitan region including the Fiona Stanley Hospital and the Jandakot Airport Commercial Development.ⁱⁱⁱ Without this information the decision cannot be considered scientifically or objectively valid.

WHAT DO YOU WANT DONE ABOUT IT?

The EPA decision should be formally reviewed after including issues outlined above.

The EPA decision should then be rejected on the grounds outlined above.

THIRD REASON FOR APPEAL: MISLEADING INFORMATION ABOUT ABORIGINAL CONSULTATION AND HERITAGE AND CULTURAL VALUES

The EPA has not adequately considered the significant cultural and natural heritage values for Aboriginal people in the area. It is of high concern that these values are relegated to a few dot points in a table in Appendix 3.

It has been widely reported that North Lake and Bibra Lake and the track of land between the two swamps are among the most culturally significant sites left in the Metropolitan area. The project will introduce permanent changes to the biophysical environment which will adversely affect historical and cultural associations with the area.

The considerable amount of information, research and consultation on Aboriginal Heritage provided in the Save Beeliar Wetlands submission to the PER (section 5.16 page 22-26) has been completely ignored by the EPA.

For example the following issues remain unresolved and require urgent attention:

- The EPA reports the proponent has consulted with Noongyar representatives and local groups throughout the process. There is no evidence of this, and the Greens are aware of many Aboriginal representatives that are categorically opposed to the project.
- Noongyar Elder Patrick Hume is quoted as saying “What the Noongyar people want is to leave that area alone”
- The report commissioned by the proponent to investigate archaeological and anthropological aspects of Noongyar connection to the wetlands (Goode and Associates, 2010) contains inadequate and questionable evidence of consultation with relevant Noongyar groups. The report contains no quotes from the custodians of the area or other Noongyar representative bodies. The Cockburn Aboriginal Reference Group were not approached and have stated that the correct people had not been consulted and their own opinions and voice had not been heard as there was ‘no room’ in the so called consultation process for opposition to the project.
- The Goode report (2010) notes the South West Aboriginal Land and Sea Council (SWALC) refused to participate in the proponent’s so-called consultation process because there was no option to reject the project outright and therefore no way to represent Noongyar concerns. Custodian Daniel Garlett is one such custodian and SWALSC member who opposes the project. The EPA report does not acknowledge this significant issue of outright opposition to the project by key Aboriginal custodians and representatives. It also provides no condition or requirement for the proponent to consult with these representatives.
- The Goode report (2010 page 3) identifies six sites that will be impacted if the project proceeds – but the EPA report states there are only two confirmed Aboriginal heritage sites on the land (DIA 3709 North Lake and Bibra Lake and DIA 4107 Bibra Lake North). The EPA provides no reason for this discrepancy.
- Representatives of the Garlett, Abrahams, Egan, Coomber and Little families all oppose the Roe 8 extension because of potential to disturb the sites.
- Few intact sites remain in the south metropolitan region due to development, and those remaining such as those in the proposed Roe 8 site assume a greater significance as representative of past Aboriginal activity (Yates, 2002). The sites within the boundary of the Roe 8 extension are therefore of elevated significance in light of the destruction that has occurred in the past (Goode 2010)
- The sites would be covered under the Commonwealth *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* which preserves and protects from injury or desecration areas and objects of significance to Aboriginal people

The EPA report states “The area has significant cultural and natural heritage values for Aboriginal people which will be adversely impacted. These values include significant spiritual values, story lines and where stories say that first contact with European settlers occurred.”

The EPA however does not provide a recommendation in line with this finding:

- In one statement the PER acknowledges that “the Noongyar people value the total ecological system” (p 540) but the proposed solution to the acknowledged impacts on water, fauna and mythological values contradict this. The design solutions aims to minimise impact (PER p 539) by erecting noise walls, visual barriers and ground level fencing, which is not in accord with the statements in the proponents own understanding of integrity of Noongyar Culture. It is therefore not possible to build the extension and not cause significant adverse effects (p 539) the stated objective of the EPA (ibid).
- The proponent’s archeological report (Goode 2010) contains a discrepancy in the final Summary and Conclusion section 6.9.4 citing “the lack of ongoing, direct cultural practices within the project area” (p 543). This conclusion is also disputed by further findings of Host (2009)in that “Noongyar people demonstrated a remarkable capacity for adaptation and a fierce determination to maintain the fundamentals of traditional law and custom: kinship, attachment to country and the principle of sharing”

(ibid 234). This is also documented in O'Connor, Bodney and Little (1985), O'Connor and Quatermaine (1987). The EPA has not sought to clarify this.

- The PER acknowledges Noongyar Mythological Values in connection with only three aspects of Noongyar culture: the Red Tailed Cockatoo, *Nuytsia Floribunda*; and the Waugal. There is abundant evidence to confirm that the area is rich in other cultural significance; for example, the lakes were a birthing place. The EPA must seek to clarify this lack of detail.
- The project will significantly and unacceptably impact on these three aspects of Noongyar culture identified, including:
 - Loss of 73ha of Forest Red-tailed Black Cockatoo foraging habitat
 - Loss of up to 41 individual *Nuytsia* trees, and
 - Impact on mythological values associated with hydrology
- The PER report acknowledges the importance of the integrity of the lakes as water abundant for the health of the female Wagul (Polgaze 1986, Goode 2010) but refuse to acknowledge the project will adversely affect the hydrology of the Lake system.

WHAT DO YOU WANT DONE ABOUT IT?

There is evidence of inadequate Consultation and misrepresentation of Noongyar consent to the project by both the proponent and the EPA. This must be addressed immediately. The EPA should seek more information from the proponent and clarify the Noongyar representatives that have (a) been consulted with through the process, (b) that were excluded by the process, and (c) identify all Aboriginal groups and individuals that are opposed to the project.

Until this is done the EPA report as it stands does not adequately reflect the views and desires of Noongyar people. A revised EPA report must be prepared urgently to address this. There is also evidence that Aboriginal Heritage sites and values are inadequately reported.

The Roe 8 project is completely inappropriate for the area on heritage and cultural grounds alone. Instead of a freeway extension the Greens believe the EPA should conduct genuine consultation relating to alternatives to the project that would see the road reserve protected as a Greenway. This would be a more appropriate and desirable use and would reflect its current status as a Regional Park, Bush Forever Site, and place registered on the Heritage Estate.

The Greens support an increase in Noongyar involvement in the conservation and management of the wetlands rather than allow another significant site to be destroyed. The EPA should closely look at and report on the Polgaze report (1986) which "recommends that the area be preserved in its entirety with more historic and scientific research and Aboriginal involvement in management"

FOURTH REASON FOR APPEALS: CUMULATIVE IMPACTS HAVE NOT BEEN MEASURED

This reason is self-explanatory.

The EPA has made a decision without consideration of cumulative environmental impacts relating to the accelerated and profound loss of native vegetation and flora and fauna habitat. Its decision is invalid on a scientific or legal basis.

WHAT WOULD YOU LIKE DONE ABOUT IT?

The EPA decision should be rejected on this basis alone: there is no way a project with impacts of this size can be considered without information on cumulative environmental impacts to date.

The EPA decision should be formally reviewed after including issues outlined above.

FIFTH REASON FOR APPEAL: THE EPA REPORT IS IN BREACH OF ITS OWN OBJECTIVES - KEY ENVIRONMENTAL FACOTRS WERE INADEQUATELY OR INCORRECTLY ADDRESSED

The EPA Report confirms the project will involve disturbance of a total 112 ha of fauna habitat, and involves:

- A total clearing (biological) footprint of 97.8 hectares (ha) of native vegetation, including:
- 5.4 ha Beeliar Regional Park
- 7 ha of Bush Forever site 244
- Loss of 38ha intact native flora and vegetation
- Loss of 7ha of groundwater dependent ecosystem sub communities
- Loss of 15 sub populations of Priority Flora consisting of about 7000 individual plants
- Loss of 66 ha of critically endangered Banksia and Xanthorrhoea woodlands
- Loss of 249 significant trees containing 20 hollows
- Clearing and disturbance of up to an additional 15ha of land outside the current project footprint to facilitate construction
- Fragmentation of fauna habitat, assemblages for priority fauna, Swan Coastal Plain significant bird species habitat, and migratory and significant wetland bird species habitat.
- “Unavoidable” clearing of a total of 6.8 ha of protected wetlands, including:
- Cutting 0.95ha from Bibra Lake (Environmental Protection Policy wetland)
- Cutting 0.2 ha from Horse Paddock Swamp (Conservation Category wetland)
- Cutting 5.6 ha from Roe Swamp (Conservation Category wetland)

Habitat for two endangered commonwealth listed species will be destroyed:

- Loss of 78ha of foraging habitat, 2.5 ha potential nesting habitat and 249 significant trees with existing hollows suitable for future nesting for the endangered Carnaby’s Cockatoo (page 33)
- Loss of 73ha of Forest Red-Tailed Cockatoo foraging habitat, 2.5 ha potential nesting habitat and 249 significant trees with existing hollows suitable for future nesting

A significant list of state-listed threatened species will also be impacted:

- The Southern Brown Bandicoot will lose 73ha of habitat
- The Perth Lined Lerista (a striped skink) will lose 91ha of habitat
- The Black striped Snake will lose 43ha of potential habitat
- Habitat will be lost for six conservation significant invertebrates
- Habitat will be lost for ten regionally significant bird species defined in Bush Forever and recorded within the study area are at risk: these include the Splendid Fairy wren, White browed Scrub wren, Western Hornbill, and the Grey Shrikethrush.
- The common brush tail possum, the south western Crevice Skink, Western Bearded Dragon, West Coast Cteotus, and other fossorial reptiles are also at risk.
- Vegetation clearing will result in the removal of habitat from the only known location of a single species of unidentified millipede which may be of conservation significance.

These impacts are unacceptable and are contrary to the EPA’s objectives, which are to protect the environment and to prevent, control and abate pollution and environmental harm.

The EPA incorrectly describes these losses incorrectly as unavoidable. These losses are at a scale that has been found to be unacceptable for the last thirty years of assessments. They are entirely avoidable by determining the project as posing unacceptable risks and impacts to the environment and community.

The EPA does not provide information on the nature of this loss relative to cumulative impacts to date. Without this information the recommendation is not based on the most robust science and is therefore invalid.

The offsets proposed by the EPA are inadequate and unlikely to be realised. (This is covered in more detail in the Offsets section).

There is evidence the EPA evaluation of the key environmental factors relevant to the project was inadequate and is in breach of its own objectives and guidance statements. These are covered in Table 1.

Table 1: Evidence of inadequate and incorrect evaluation of key environmental factors	
Environmental Factor	Finding
<p>Impact on Inland Waters Environmental Quality</p> <p>The proposal requires the total loss of 6.8ha of wetlands, with the clearing and filling of:</p> <ul style="list-style-type: none"> - 0.95 hectares (ha) of Bibra Lake, an Environmental Protection Policy (EPP) Wetland; - 5.6 ha of Roe Swamp, a Conservation Category Wetland (CCW); and - 0.2 ha of Horse Paddock Swamp, a Conservation Category Wetland. 	<p>The following issues are not adequately addressed in Section 5.1:</p> <p>The Recommendation of numerous scientific bodies to the PER for buffers around wetlands of at least 200m has not been adopted and the EPA has recommended buffers of 10m, which is inadequate.</p> <p>The EPA’s environmental objective for this factor is <i>to maintain the quality of groundwater and surface water, sediment and biota so that the environmental values, both ecological and social, are protected</i>. Strong evidence that the social values will be permanently impacted by the loss of the wetlands was provided in 3283 submissions, but this is not described at all by the EPA.</p> <p>The proposal that there will be no dewatering does not adequately prevent the risk of Acid Sulfate Soils (p11)</p> <p>One of the key objectives of the Beeliiar Regional Park Management Plan <i>is to minimise further degradation to the quality of the wetlands and surrounding vegetation</i> (Department of Conservation and Land Management (CALM), 2006). The EPA proposes that the proponent should monitor the health and quality of Bibra Lake, Roe Swamp and North Lake and provide management measures to reduce the risk of adverse changes in the wetland health and or quality <i>after it is cleared</i> (condition 9, page 15) – this is inadequate advice and is in direct contradiction to the Management Plan: the quality and health of the wetlands will be adversely impacted by the project and no amount of monitoring will reverse this impact.</p> <p>The project is not consistent with the Swan Coastal Plain Lakes Environmental Protection Policy. The Lakes are listed on the Register of the National Estate. The EPA does not provide a reason for making a decision in breach of these policies and protections.</p> <p>Numerous other issues listed in Appendix 3 have been ignored without justification.</p>
<p>Impact on Flora and vegetation</p> <ul style="list-style-type: none"> - Proposed clearing of up to 97.8 ha of remnant vegetation. Including the clearing of 6 species of Priority Flora. - Loss of up to 7 ha of Bush Forever site 244. - Vegetation within the project area is 	<p>The following issues are not correctly described or adequately addressed in Section 5.3:</p> <p>The EPA claims four vegetation complexes exist within the development envelope and none have below 10% of their pre-clearing extent remaining (Southmetro Connect 2011). It is impossible to accurately know this before the Strategic Environmental Assessment of Perth and Peel has been completed and released publicly. This data is now two years old and significant clearing has occurred in the last two years, including the banksia woodland at Jandakot Airport.</p> <p>The EPA claims none of these vegetation communities are considered to be equivalent to a Priority Ecological Community (PEC) or Threatened Ecological</p>

<p>predominantly made up of <i>Banksia</i> woodland.</p> <p>- Seven of the vegetation communities are identified as being 'locally significant'; one will be completely removed from the development envelope (BAhS – low open forest of <i>Banksia attenuata</i> and <i>Banksia menziesii</i>)</p>	<p>Community (TEC) under either State or Commonwealth listings (Southmetro Connect, 2011). This is incorrect: <i>Banksia attenuata</i> woodland over species rich dense shrublands are listed as an Endangered TEC in the WA list of Threatened Ecological Communities correct to May 2013.</p> <p><i>Banksia woodlands on the Swan Coastal Plain are also listed on the Priority Ecological Communities list,, with Banksia ilicifolia</i> woodlands ('community type 22') listed as Priority 2 and <i>Banksia attenuata - Banksia menziesii</i> woodlands ('community type 23b') listed as Priority 3 (i)^{iv}</p> <p>The Banksia Woodlands of the Swan Coastal Plain IBRA region were formally nominated as a Threatened Ecological Community in early 2013^v.</p> <p>This is due to adequate evidence Banksia Woodlands are under extreme threat. The Urban Bushland Council has proposed banksia woodlands be classified as 'Vulnerable' due to the decline in their geographic distribution; the loss of functionally important species; the reduction in community integrity and the continuing detrimental change. It also believes that only 30% of the banksia woodlands on the Swan Coastal Plain remain; and that the decline has been most marked in the last 20 years with a loss in the order of 30% of the original woodlands since Beard's estimate in 1989 that 61% of the original woodlands remained. However, the situation is much worse in the inner regions, where it is estimated that only 10% remains. Because Banksia Woodlands show great variation in understorey species, this level of clearing has resulted in such loss of species that some of the floristic community types are now listed as Threatened Ecological Communities.</p> <p>The EPA report does not list or name the four vegetation complexes present <i>and</i> uses evidence from the proponent that is now two years old, over which time a significant amount of Banksia woodland has been cleared. Without independent and recent scientific verification this claim cannot be substantiated.</p> <p>The EPA has not adequately addressed concerns raised in submissions to the PER regarding loss of vegetation communities, particularly given the extent remaining. The EPA has not provided evidence of cumulative impact studies.</p> <p>On page 25 of the Report the EPA mentions that the proponent will undertake 38ha of revegetation work but this is not mentioned anywhere in the proposed conditions. This is unsatisfactory.</p> <p>Three of six ecological linkages in the project area will be affected and fragmented. The EPA fails address the fragmentation issue effectively. It mentions fauna underpasses but provides no evidence to suggest that these will work and it ignores the City of Cockburn's advice on this issue. It fails to recognise that many Australian animals are nocturnal and that noise and light spill from Roe 8 will disrupt their life cycles. It suggests that the Roe Swamp bridge should be longer than 120 metres, but fails to include this in their recommended conditions. It recommends a typha control program at Thomsons Lake, which is 10km south of Bibra Lake, as a way of addressing fragmentation of the habitat. Their reasoning on this is completely obscure. It is clear that the EPA has no interest in seriously addressing the fragmentation issue.</p> <p>The EPA has not addressed impacts to <i>Lepidosperma</i> and <i>Caesia</i> species which were raised in the PER submissions.</p>
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	<p>The decision is not compliant with the <i>State Planning Policy 2.8 Bushland Policy for the Perth Metropolitan Region</i>.</p> <p>The decision is not compliant with the EPA <i>Environmental Guidance for Planning and Development – Guidance Statement No. 33. (May 2008^{vi})</i> which provides important considerations on the significance of Native Vegetation, Flora and Fauna. It states: “Once soils, water regimes and microclimates are disturbed, it is virtually impossible to reproduce natural ecological communities and the ecosystem services provided by native vegetation and flora, within the means of most management systems.”</p> <p>The decision does not follow the EPA’s own objective for flora is to maintain the abundance, diversity, geographic distribution and productivity of flora at the species and ecosystem levels through the avoidance or management of adverse impacts and through improvement in knowledge (EPA2004).</p> <p>The decision is in breach of the EPA’s established principles for the protection of native terrestrial vegetation and flora in its <i>Environmental Guidance for Planning and Development – Guidance Statement No. 33. (May 2008^{vii})</i> which are to:</p> <ul style="list-style-type: none"> • Avoid clearing • Maintain biodiversity at sustainable levels • Prepare and implement regional strategies for native vegetation and biodiversity protection • Conserve biodiversity in situ • Reintroduce native vegetation • Prevent loss of biodiversity. (No known species of indigenous plant or animal, or community of indigenous plants or animals should be placed in long-term jeopardy or cease to exist as a result of any project) • Make informed decisions. <p>The decision is in breach of Schedule 5 of the <i>Environmental Protection Act</i> which states ‘Native vegetation should not be cleared if (a) it comprises a high level of biological diversity (b) it is necessary for the maintenance of a significant habitat for fauna indigenous to Western Australia (c) it includes, or is necessary for the continued existence of rare flora (d) it comprises the whole or a part of, or is necessary for the maintenance of, a threatened ecological community (e) it is significant as a remnant of native vegetation in an area that has been extensively cleared (f) it is growing in, or in association with, an environment associated with a watercourse or wetland (g) the clearing of the vegetation is likely to cause appreciable land degradation (h) the clearing of the vegetation is likely to have an impact of the environmental values of any adjacent or nearby conservation area (i) the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water (j) the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.’</p> <p>The decision is in breach of EPA Position Statement No. 9 (EPA2006a) which introduced protection for “Critical Assets” which it describes as the most important assets in the State, for the purposes of environmental impact assessment process and cover:</p> <ul style="list-style-type: none"> • Public conservation reserve system including Regional Parks • Native vegetation
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	<ul style="list-style-type: none"> • Ecological communities • Biodiversity including Declared Rare Flora, Declared Threatened Fauna, Threatened Ecological Communities (including the category of critically endangered; endangered; vulnerable; and data deficient pursuant to the EPBC Act), and Species subject to the China–Australia Migratory Bird Agreement and the Japan–Australia Migratory Bird Agreement) • Wetlands including Wetlands protected by environmental protection policies, and Conservation category wetlands as identified by DEC • Heritage including natural areas of state, national or world heritage significance, natural areas of indigenous heritage. <p>Finally, the project cannot be approved based on Areas of High Conservation Significance as outlined in EPA Guidance Statement Section B1.2.1 and Attachment B2-3.</p> <p>Numerous other issues listed in Appendix 3 have been ignored without justification.</p>
<p>Impact on Terrestrial fauna</p> <p>Disturbance of 112 ha of fauna habitat, which includes clearing of:</p> <ul style="list-style-type: none"> - 78 ha of Carnaby’s Cockatoo’s foraging habitat; - 73 ha of Forest Red-tailed Black Cockatoo habitat; - 5.6 ha of Graceful Sun Moth (GSM) habitat; - 73 ha of Southern Brown Bandicoot habitat; - 90 ha of Rainbow Bee- Eater, Glossy Ibis and Eastern Great Egret habitat; - 91 ha of Perth Lined Lerista habitat; and - Loss of habitat for an unidentified sucking millipede <i>Siphonotidae</i>. 	<p>The following issues are not correctly described or adequately addressed in Section 5.4:</p> <p>The EPA repeats many disparaging comments about endangered species without providing any scientific evidence to support their claims. The report downplays the importance of the loss of habitat and fragmentation of habitat through this approach. Examples are found on pages 25, 26, 27, 34 and 42 which provide evidence a robust or valid scientific assessment has been conducted.</p> <p>Clearing of more than 1ha of foraging habitat is considered by the Commonwealth Department of Environment (formerly SEWPAC) to be the ‘significant impact threshold value’ for black cockatoos.</p> <p>The EPA report does not adequately consider the impacts on all fauna species and fauna habitat present within the 167 ha development envelope which included 120 native vertebrate species comprising eight amphibians, 83 birds, eight mammals and 21 reptiles (Southmetro Connect, 2011).</p> <p>This includes results from surveys of the Southern Brown Bandicoot habitat which suggested that individuals within the development envelope have a small home range, possibly less than one hectare. Movement between sub-populations within the study area appears limited; therefore, impacts of the proposed project are likely to be highly localised.</p> <p>It is misleading to say the proponent “has attempted to avoid and mitigate impacts through design measures such as road width, alignment location and bridge requirements, preparation of a FVFMP to manage impacts to fauna, and proposed fauna underpasses to reduce fragmentation” when there has been no evidence put forward by the proponent of cumulative impacts, regional significance, or the number of equally large or environmentally significant areas of habitat for terrestrial fauna.</p> <p>The EPA has not adequately considered potential impacts of noise, vibration, odour, pollution and light spill on fauna from the proposal – which the proponent described as significant (Southmetro Connect, 2013).</p> <p>With regards to noise impacts on birds, the EPA considers that impacts on</p>

	<p>wetland and migratory birds from the construction and operation of the proposal are likely to be minor at the regional scale (p34). However there is no evidence to support this claim.</p> <p>The decision is in breach of the broad principles of the Environmental Protection Authority (EPA) relevant to land use planning and the protection and management of native terrestrial fauna include the following:</p> <ul style="list-style-type: none"> • All native habitats which significant fauna rely on for their survival should be protected • Protect and manage adequate natural areas • Native fauna is best conserved in-situ and by keeping each ecological community above the threshold level at which species loss appears to accelerate exponentially, this means retaining most ecological communities above 30% of their pre-clearing level in a region • The areas of highest conservation significance for native fauna that should be fully protected are identified as areas which specially protected and priority fauna rely, areas used by migratory species protected by international agreements, habitat specialists with limited distribution in the region, wide-ranging species with declining populations in the region or declining distributions, and undescribed species • The protection of fauna is best achieved by retaining some large, relatively intact bushland areas with a variety of habitat types (B3.2.2, p105) <p>The EPA fails to mention any need to do baseline studies or ongoing fauna monitoring (eg bird counts) so that the impact of the road on the fauna can be assessed. This is a crucial issue because the EPA's report on the fauna studies is very inadequate and they seem to have taken the proponent's data as correct even though DEC and SEWPAC and the public have questioned it and provided counter examples. The SMC data was based on limited monitoring and they made no attempt to access the full set of wildlife data for the site. This oversight by the EPA is another serious flaw in the assessment.</p> <p>With regard to the impact on seven migratory bird species that fly from distant shores to rest and breed in the project area, including the</p> <ul style="list-style-type: none"> • White Bellied Sea Eagle (from China) • Glossy Ibis (from China), • Rainbow Bee eater (from Japan), • Eastern Osprey (from offshore islands including Indonesia, Philippines, and New Guinea), • Eastern Great Egret (from Japan and China), and • Cattle Egret (from Japan and China). <p>there is a lack of scientific evidence in the report relating to the impact on these seven species for which we are signatory to international treaties to protect.</p>
<p>Amenity (Noise)</p>	<p>Amenity issues in addition to Noise such as visual impact, loss of recreation, and social impacts were identified in submissions to the PER but were not considered by the EPA.</p> <p>The EPA has also dismissed concerns about loss of recreational areas, loss of wilderness experience for bushwalkers, loss of Aboriginal heritage and concerns about noise impacts. It accepts that the proposal will produce noise levels at residences that may exceed their own guidelines but they do not discuss any mitigation or compensation for the affected landowners.</p>

WHAT DO YOU WANT DONE ABOUT IT?

The EPA decision should be reversed based on the number of its own guidelines, principles and laws the approval of this project breaches.

The EPA decision should be reversed in light of the number of incorrect or invalid claims described above.

The role and function of the EPA should be subjected to a parliamentary inquiry, particularly in light of the number of decisions it has made which are in breach of its own mandate.

6th REASON FOR APPEAL: HUMAN HEALTH IMPACTS HAVE NOT BEEN CONSIDERED

The following potential impacts on human health were raised in submissions to the PER but were not evaluated by the EPA as they were not considered key environmental factors / did not require further EPA evaluation:

- Concerns with impacts to surrounding school students from noise, dust, vibrations and odour.
- Concerns with mosquito management.
- Outdoor recreational activities will be affected by the vehicle emissions and reduce options for healthy recreational activities.
- Public safety concerns with regards to increased traffic resulting in more traffic accidents, injury and deaths.

In terms of air pollution and local air amenity, since existing bottlenecks to the Fremantle Port will not be solved by the project, local air amenity and efficiency will actually be worsened in local areas. Local air amenity in the residential and environmental areas proximate to the project will significantly be worsened. The health impacts of diesel particulates and vehicle emissions are significant especially for those in the air shed of major roads carrying high truck volumes. It is of concern the EPA did not assess these impacts.

WHAT DO YOU WANT DONE ABOUT IT?

The EPA decision is invalid until these factors are considered.

If the proponent or the EPA is not required to evaluate these factors – who is?

7th REASON FOR APPEAL: THE OFFSETS PROGRAM IS NOT BASED ON ANY EVIDENCE IT WILL BE POSSIBLE TO IMPLEMENT

In an alarming precedent the EPA has ignored the advice from Department of Environment and Conservation about the offsets required, specifically a ratio of 6:1 black cockatoo foraging habitat (or the purchase of 468ha) was recommended. The EPA has *reduced* this to 3:1 ratio (Appendix 3) and has opted for much smaller offsets of just 234ha of Carnaby's Cockatoo and 219 ha of Red-tailed Black Cockatoo foraging habitat.

The EPA has even canvassed the idea of offsetting the loss of nearly 100ha of good quality bushland with degraded land, if the proponent can't find a suitable offset. Surely the EPA would reject the proposal in such circumstances?

To offset the removal of 249 cockatoo nesting trees at a ratio of 10:1, the area will require actual nesting trees to be identified and found suitable.

The EPA has also made an error in regard to the proponent's double counting of areas to be rehabilitated after construction as compensation for areas of wetlands lost due to construction (page 42).

The EPA has not recommended an offset for the loss of recreation or amenity values to the local community.

Finally, the EPA has not considered any peer reviewed studies which demonstrate the failure of offsets programs. These include the study by Burgin (2008) which showed four key weaknesses with existing Australian offsets programs^{viii}. These included:

1. the narrowness of the definition of biodiversity;
2. the concepts are based on a flawed logic and immature, imprecise and complex science which results in difficulties in determining biodiversity values;
3. likely problems with management and compliance; and
4. an overall lack of resources for implementation and long-term monitoring.

WHAT DO YOU WANT DONE ABOUT IT?

The EPA decision should be reversed based on the unsatisfactory, unproven, highly scientifically contested nature of offsets.

Any EPA decision based on the purchase of suitable offsets should not be provided without indicating whether or not the offset it has recommended is actually available. Given the rapid and uncontrolled nature of clearing in Perth metropolitan region in the last decade it is highly unlikely an offset of this size is even available.

The role and function of the EPA should be subjected to a parliamentary inquiry, particularly in light of the number of decisions it has provided using offsets as a response of first rather than last resort.

8th REASON FOR APPEAL: THE PRECAUTIONARY PRINCIPLE HAS NOT BEEN CONSIDERED

Where there are threats of serious or irreversible harm, lack of scientific certainty must not be used as a reason for postponing measures to prevent environmental degradation^{ix}

It is of major concern that the EPA has not considered the Precautionary principle correctly in its decision and in fact has used the principle *to justify* this extremely harmful and expensive project – demonstrating a complete abrogation of the precautionary principle.

The EPA acknowledges the precautionary principle should form the basis of decision-making.

The Environmental Protection Authority's (2004) Statement *Towards Sustainability* discusses the high priority for expanding understanding of complex natural systems being the:

“Identification of thresholds or limits beyond which serious or irreversible change is likely to occur. This principle suggests that there is an obligation to err on the side of caution when there is both uncertainty and a high risk of damage if the wrong decision is made.”

Avoiding this irreversible change, where there are some uncertainties, is the appropriate interpretation of the precautionary principle.

The trigger for the application of the precautionary principle is the threat of serious or irreversible environmental damage^x. There is statutory recognition of the precautionary principle in the EP Act which makes it “a central element in the decision making process and cannot be confined.”^{xi}

A more appropriate application of the precautionary principle by the EPA would have recognised that the project has too many significant risks and impacts. For example:

- The requirement for a 200m buffer zone around wetlands in order to minimise the impacts on the wetland makes the feasibility of the road questionable (PER Appendix D, p128);
- There is an absence of detailed groundwater investigations to fully understand the impacts of the road (PER p 84);

- The impact on migratory birds and endangered species (flora and fauna) is significant.

Ultimately, there is a serious threat or the potential for serious or irreversible environmental damage from this project and there is a requisite degree of scientific uncertainty in respect of this project.

The EPA's consideration of the precautionary principle is inadequate and does not discharge the burden of showing that the threat does not exist or is negligible.

WHAT DO YOU WANT DONE ABOUT IT?

The EPA decision should be reversed based on the precautionary principle.

The EPA should be subject to an inquiry based on its clear failure to understand and make decisions according to its most basic and fundamental principles.

9th REASON FOR APPEAL: THE PRINCIPLE OF INTERGENERATIONAL EQUITY HAS NOT BEEN CONSIDERED

The Environmental Protection Act's definition of intergenerational equity is defined in the following environmental terms, in that "the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations".

The impacts of the project do not comply with this principle. The lack of scientific evidence around the effectiveness of the proposed offset program and the impact on endangered species is key.

A more appropriate application of the principle of intergenerational equity would consider:

- Are the significant environmental, cultural, recreational, economic and social impacts of the Roe Highway extension on the wetlands justifiable in terms of the impacts to the wetlands and the legacy for future generations?
- Is the investment of about \$750 million in building just 5.5km of road infrastructure the best legacy for future generations? Particularly in the context of the state budget crisis and in recognition of the peak of global conventional oil supplies (IEA 2010).

Any decision made under a legislative instrument, such as the EP Act, that adopts the principles for ecologically sustainable development must have regard to them. If these principles are not sufficiently addressed by the PER then Minister will have not been provided an appropriate environmental context from which to view this proposal and this may ultimately affect the integrity of the decision.

WHAT DO YOU WANT DONE ABOUT IT?

The EPA decision should be reversed based on the principle of intergenerational equity.

The EPA should be subject to an inquiry based on its clear failure to understand and make decisions according to this most basic and fundamental principles.

10th REASON FOR APPEAL: The principle of the conservation of biological diversity and ecological integrity has not been considered

Protection of biodiversity is given the highest environmental priority rating in the Western Australian State of the Environment report (Government of Western Australia 1998a). The report found that the Swan Coastal Plain is one of six areas in WA experiencing the greatest pressure.

We have the best biodiversity in Australia and the worst legislation. WA's Wildlife Conservation Act is more than a century old. Premier Barnett committed to a new biodiversity conservation act as a pre-election commitment.

The Beelihar Wetlands are identified as a key area of biodiversity and ecological linkage in the Perth Biodiversity Project, a significant project by WALGA to map, protect and implement planning strategies around Perth's biodiversity.

The 1996 State of the Environment Report found 'the loss of biodiversity is perhaps our most serious environmental problem'; the 2001 update found that 'many key threats to biodiversity identified in 1996 still persist'. One of the greatest threats to biodiversity is now the clearing of native vegetation.

The EPA Guidance statement confirms the national target is to have clearing controls in place to prevent the removal of ecological communities with an extent below 30% of that present before 1750. 30% is considered to be the threshold level below which species loss appears to accelerate exponentially at the ecosystem level. To achieve the national target, the emphasis is on maintaining natural vegetation in-situ (within and outside conservation reserves) and on replacing losses by rehabilitating degraded areas with local native species.

In view of the importance of maintaining biodiversity, the EPA has urged that the issue is fully considered as far as possible during all land use planning processes. Except in an increasing number of decisions its making on major projects such as the Roe 8 extension.

WHAT DO YOU WANT DONE ABOUT IT?

The report has not adequately represented Perth's biodiversity crisis or ways to mitigate it. The protection of Western Australia's biodiversity is one of the EPA's priority areas of concern. Maintaining biodiversity in situ and rehabilitating degraded areas in the project area are an urgent priority and should be the goal for the project area, rather than its wholesale destruction.

The proponent has a key role to play in the protection of biodiversity and must recognise that all of our remaining road reserves are now some of the only 'green ribbons' of native vegetation remaining along the Swan Coastal Plain. The proponent and the EPA should work together on protecting the road reserve permanently as one of Perth's most biodiverse and intact nature reserves.

11th REASON FOR APPEAL: THE OBJECTIVE OF ECONOMIC VALUE FOR MONEY HAS NOT BEEN SUBSTANTIATED AND PRINCIPLES RELATING TO IMPROVED VALUATION, PRICING AND INCENTIVE MECHANISMS WERE NOT CONSIDERED ADEQUATELY

Numerous values with economic benefit have not been considered as part of this decision, despite requests for such during the proponent's so called consultation period.

By potentially investing at least \$750 million in the building of 5.5km of road, there is an important Opportunity Cost to consider in terms of other transport projects foregone. For example, the Mandurah rail line linking Perth to Mandurah was built for a cost of \$960 million in 2007, and resulted in 73 km of line and 11 stations.

In a context where global energy constraints are becoming a reality (Aleklett et al 2009; International Energy Agency 2010) and where global and national action on climate change will also likely increase energy costs, the Roe Highway extension is an expensive investment in what will likely be an increasingly obsolete transport system.

More fiscally responsible, cost effective and proven solutions to the problems in Perth's transport system are required, such as building a light rail system. For a similar cost to the Roe 8 extension, approximately 43km of

light rail could be built which would link Fremantle, Canning Bridge, Murdoch and Cockburn Central – see for example: <http://www.perthlightrail.org>.

The substantial base of government resources and peer reviewed literature and research on the economic value of wetlands has not been included by the EPA.

Wetlands are the most productive ecosystems in the world^{xii}. Occupying only about 6% of the earth's land surface, they it's been estimated that the world's freshwater wetlands are home to more than 40% of the entire world's species, and 12% of all animal species. One third of Ramsar listed sites have archaeological, cultural, religious, mythical and artistic significance^{xiii}. Of the 17 different types of ecological services provided by the sum total of the world's ecosystems, all are performed by wetlands (Costanza, et al 1997). These services are:

- Gas regulation – clean air, reduced air pollution
- Climate regulation
- Disturbance regulation
- Water regulation
- Water supply – clean water, groundwater recharge
- Waste treatment
- Erosion control
- Soil formation
- Nutrient cycling
- Pollination
- Biological control
- Providing Habitat
- Food production
- Raw materials
- Genetic resources
- Recreation
- Cultural

(A description for each of these services is at Appendix A with specific examples benefits provided by the Beeliar Wetlands.)

The Water Authority of WA (1994) described the wetlands surrounding Perth as the key landscape feature that distinguishes this city from others around the country and identified 30 economic benefits derived from wetlands (Appendix B)

The following case studies provide examples where such economic values have been measured. For example:

Case study 1	Value of the health benefits of parks (Trust for Public Land, 2009)
Location:	The network of parks in Sacramento, USA (covering 5141 acres with 80 miles of trails, 171 playgrounds, etc)
Method:	Researchers conducted a telephone survey to determine how many park users exercised for at least 30 minutes three times per week. They formulated a Parks Health Benefits Calculator based on the findings of 7 studies identifying common medical problems inversely related to physical activity such as diabetes and heart disease showed regular exercise can reduce medical costs by \$250/year for people under 65, and reduce medical costs by \$500 / year for people over 65 (p.7)
Findings:	Health cost savings of Adult users under 65: \$17,890,750

Health cost savings of Adult users over 65: **\$3,027,000**

Case study 2

Value of water supply and water purification

(University of Adelaide, 2007)

Location: Wetlands of the River Murray, Australia

Method: The researchers studied the impact of the conversion of 600ha of wetlands - where 100ha of wetlands was drained to use for dairy farming. The water taken for consumption from this area then required filtering – and as a consequence 10 water filtration plants had to be built. The Replacement Cost of the service provided by the wetland could then be directly attributed to the lost environmental services.

Findings: The value of filtration destroyed was found to be worth \$7000 per hectare per year.

Case study 3

Value of Recreation

(Trust for Public Land, 2009)

Location: Entire network of city parks in Boston USA (covering 5040 acres)

Method: The authors conducted a telephone survey of residents to determine level of use in the parks and then multiplied the estimated number of visits by a dollar value for each activity, based on their different value in the market.

Findings: *General Park use* (playgrounds, picnics, sitting, dog walking): \$1.91
Sports facilities (bicycling, swimming, running, team sports): \$3.05
Special uses (gardening, festivals, concerts, attractions): \$9.33

Findings: General park use worth \$141,230,236 per year
Sports facilities use worth \$147,812,453 per year
Special uses worth \$60,309,713 per year

Case study 4:

Value of Property values near urban wetlands and parks

(Tapsuwan et al, 2007)

Location: Three local government areas above the Gnangara Mound in Perth

Method: Using GIS and statistical analysis of property sales, the researchers found proximity to wetland and number of wetlands within 1.5km of a property has a statistically significant impact on sales prices.

Findings: More than one wetland within 1.5km will increase the property price by \$6,081. At 245m away from a wetland a reduction in sales price of \$463 per metre is experienced. The total premium on sales due to proximity to a 50ha wetland is \$220 million based on average property characteristics and medium house density.

Of note: Another study estimated that houses within 500 feet of an urban park had an increased sale value of 5%, which in Washington DC translated to \$1,198,858,025 in one year. In turn this contributed to 5% more property tax collected (the effective property tax rate in Washington is 0.58%) which translated to \$6,953,377 in one year attributed to parks (Trust for Public Land, 2009)

A final study calculated the per-acre value of properties adjacent to open space, wetlands, and major roads (Opaluch et al, 1999). It found properties next to open space had had a 13% higher per-acre value than similar properties located elsewhere and properties located within 20 meters of a major road had an average 16% lower per-acre value. Based on these results the value of preserving a parcel of open space could be estimated by calculating the effects on property values adjacent to the parcel. In a hypothetical simple case the value of preserving a 10

Findings: This study found each household was willing to pay \$40 per year to preserve the Jandakot wetlands (median ‘Willingness to Pay’ translated to 2002 dollar values). This translated to a total per annum economic value of \$18.7 million.

Of note: This study is replicated consistently in the literature. For example in a NSW study where people’s willingness to pay for the preservation of local wetlands and remnant bush and forest was found to be \$100 per household for five years (Streever et al, 1998 in van Bueren and Pannell 1999). Another study measuring the annual payment willing to be paid to reserve unprotected East Gippsland forest in national parks was \$58 per household.

Case study 9 **Biodiversity and Protection/Conservation of the whole area** (Whitten and Bennett, 2004)

Location: Murrumbidgee River Floodplain in NSW

Findings: This study asked people to choose between different management options relating to preserving an extra 1000ha of hectares of healthy wetlands. It found social values for protecting areas of natural wilderness and biodiversity to be very high, and people would pay a one-off figure of \$11.39 per household for preservation.

In addition to these case studies, there is a wealth of robust research including guides for policy makers by the Australian and Queensland Governments, and Western Australian studies on the economic value of wetlands and forests. (26 references are listed at Appendix C as examples).

WHAT DO YOU WANT DONE ABOUT IT?

The Report is not valid without consideration of value for money, Opportunity Costs, and improved pricing mechanisms.

The proponent should have been required to complete a cost benefit analysis and in consultation with the community, an economic evaluation of the key benefits of the Beelihar Wetlands.

12th REASON FOR APPEAL: THE PROJECT WAS FALSELY DESCRIBED BY THE PROPONENT AS THE PREFERRED OPTION

The rationale and justification for the project is entirely flawed. The project should be rejected on these grounds alone.

The project was originally planned in 1955 and the road reserve was set aside in 1963. The rationale is built on engineering models and social values that are now outdated by 56 years.

Each of the reasons provided in this section to justify the project are invalidated by examples of more recent reports or government action. The table below summarises an argument against each of the key justifications for the project.

The justifications provided for the project are not robust and can be easily discredited (Table 2):

Table 2: Evidence the project is not the Preferred Option	
Claim by proponent	Evidence to the contrary
“This PER represents a preferred option. A preferred option, which achieves the best environmental and social	<p>Completely false. Decision also in breach of <i>Environmental Guidance for Planning and Development – Guidance Statement No. 33. (May 2008^{xv})</i></p> <ul style="list-style-type: none"> • The preferred option for the best environmental and social outcomes is a no build option. The consultation for this project never included a

<p>outcomes, has been determined in collaboration with the community, stakeholders, and environmental practitioners.”^{xiv}</p>	<p>‘no extension’ option. For this reason a number of key community stakeholders were excluded from the consultation and in turn a very low number of participants contributed to the design options in the PER.</p> <ul style="list-style-type: none"> • The EPA has assessed a project that is not the preferred option. It has no social license, clearly evident from the record number of submissions from the local community. <p><i>The Environmental Guidance for Planning and Development – Guidance Statement No. 33. (May 2008^{xvi})</i> states:</p> <p>In the first instance, during the formulation of a scheme or proposal, the EPA expects that every attempt will be made to avoid adverse environmental impacts on critical asset. Where special circumstances exist for significant impacts on critical environmental assets, the EPA recommends that government approval is conditional on:</p> <ul style="list-style-type: none"> • full consideration of alternatives • a high level of justification and technical information • impact mitigation and management, having regard for the EPA’s latest position (EPA 2004c). <p>In general, there is a presumption against recommending approval for proposals that are likely to have significant adverse impacts on ‘Critical Assets’.</p> <p>The PER and EPA Report did not provide a full consideration of alternatives, the project does not have a high level of justification and technical information provided on the rationale (eg traffic modelling is highly contested), and the impact mitigation is outweighed by the significant amount of clearing and loss of habitat involved.</p>
<p>“The preferred design was selected following an extensive options analysis and consultative process. During this process project objectives; as well as specific environmental, social and economic criteria were examined”. (Executive summary pi)^{xvii}</p>	<p>Completely false.</p> <ul style="list-style-type: none"> • Environmental, social and economic criteria were not examined in community information sessions or during design workshops. The only information provided at such workshops were posters and a promotional video which featured motherhood statements on sustainability. • <u>There were no expert presentations on aboriginal heritage values, matters of national environmental significance, ecological communities or threatened species.</u> • Main Roads representatives at community information sessions were highly supportive of the extension - and dismissive of community concerns for the preservation of the wetlands. The economic values of the wetlands were never included in the PER, despite a request from stakeholders during consultation on the Terms of Reference for the PER.
<p>“The purpose of the preferred option selection process was to identify a sustainable road transport solution, with specific</p>	<p>The task of the proponent (AECOM) was to identify a route between Stock Road and the Kwinana Freeway, rather than identify actual transport solutions to a stated problem, for example, truck congestion on Leach Highway, or access to the Port of Fremantle.</p>

emphasis on meeting the highest possible environmental and community engagement standards.”	
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WHAT DO YOU WANT DONE ABOUT IT?

If the EPA is not responsible for requiring claims put forward in the PER are correct and based in fact, who is? A formal inquiry and public report should be undertaken into the legal and social implications of the EPA assessing a project that was not the preferred option.

13th REASON FOR APPEAL: A SUBSTANTIAL NUMBER OF RATIONALES AND JUSTIFICATIONS FOR THE PROJECT HAVE BEEN FOUND TO BE INACCURATE OR MISLEADING

Each of the rationales provided by the proponent in the PER has found to be out dated, misleading or simply untrue. The rationale and evidence of false or misleading information for each is summarised below (Table 3).

Table 3: Evidence of false and unsubstantiated information relating to meeting the Objective of Transport needs	
Rationale	Finding
<p>It was identified in the 1955 Stephenson Hepburn Plan</p> <p>Roe Highway was identified as a strategic orbital route around Perth connecting Fremantle Port with the eastern suburb of Midland in the 1955 Stephenson and Hepburn Plan for the Metropolitan Region^{xviii}</p>	<p>Outdated and misleading.</p> <p>The Stephenson Hepburn Plan was devised as a plan for the city of Perth that could accommodate 1.4 million people by 2005. Its purpose is now passed and it no longer reflects the transport needs and environmental values that the community holds today.</p> <p>The same 1955 Plan also proposed wildly inappropriate measures to complete the ring road, such as demolishing most of the iconic West End of Fremantle including the Fremantle Markets and Fremantle Town Hall in order for the freeway to make it from Marine Terrace and disgorge its traffic into the city and port via a multilevel interchange on Philimore Street.</p> <p>Perth commuters were once served by a vibrant tram network, which was established in the 1890s. The 1920s and 1930s were the heyday of Perth as a “transit city”, with 68 trams carrying in excess of 35 million passengers by 1933. In the wake of the Second World War, the advent of cheap oil and post-war wealth saw the piecemeal abandonment of the tram and trolley-bus network in favour of a new freeway system mandated under the “Stephenson-Hepburn Plan” of 1955 and consolidated as the Metropolitan Region Scheme in 1963. The last tram ran in 1958, and the private automobile has largely ruled the city ever since, with 100 kilometres of low-density, car-dependent coastal sprawl the direct consequence.</p> <p>The review and update the MRS is way past overdue. Our city is not serviced by a planning document that builds in car dependence and urban sprawl.</p> <p>The new Perth planning framework, Directions 2031 and Beyond, includes the purpose to “lead to a reduction in the length of individual trips and reliance on</p>

	motor vehicles ^{xxix} - yet this project encourages an increase in both.
It provides a vital new east-west link	<p>This is simply not true.</p> <p>The 5km continuation from the existing freeway to Stock Road is not a “vital” link and does not provide “a more direct route to various destinations”.^{xx} The project will not change the fact that Leach Highway is the primary access route used by industry to access the port.</p>
It reduces congestion on existing east-west links	<p>Evidence demonstrates the contrary.</p> <p>The reality has been that the more roads are built, the more traffic congestion there is.^{xxi} Examples of research that argues against the need to build more roads to improve urban transport are detailed in Appendix 1 and include Carmen Hass-Klau (1999) Engwicht (1992), Goodwin (1997), Litman (2009), Newman & Kenworthy (1999), SACTRA (1994) , STPP (1999) and Samuels (1994)^{xxii}. Traffic engineers in the past have argued the need to build new roads to ‘keep up with demand’ as our populations grow. However, Litman and others critical of this old paradigm argue that traffic is better understood as a gas that expands to fill spaces:</p> <p>“If road capacity increases, the number of trips also increases until congestion again limits further traffic growth.”^{xxiii}</p> <p>When a new road is first built, traffic congestion may be lessened for a time, allowing for faster and easier travel for vehicles. In fact,</p> <p>“Road improvements that reduce travel costs attract trips from other routes, times and modes, and encourage longer and more frequent travel.”^{xxiv}</p> <p>This increase in traffic volumes on a new or improved road is known as ‘generated traffic’. A new road may not only take traffic from other roads, it may also encourage travel that would not have occurred otherwise. This new travel increases the total vehicle kilometres travelled; this is called ‘induced travel’. New roads do both – attract existing traffic and encourage people to drive more often and for longer distances.</p> <p>There are many examples of induced trips and generated traffic here in Perth.</p> <p>Before the Graham Farmer Freeway was built, 134,792 vehicles were entering the city each weekday from the Causeway and Garrett Road Bridge roadways (1998-99). Five months after the Graham Farmer Freeway was opened in April 2000, an <i>additional</i> 31,100 vehicles entered the city on a daily basis from the three eastern crossings. That is an increase in traffic volume of 23%. These figures clearly demonstrate the new Farmer Freeway encouraged more people to drive into the city. There is no reason why Roe 8 will be any different.</p> <p>WA is under-investing in rail and other forms of transport our city and state desperately need. For every dollar Australia spends on rail infrastructure, we spend \$4.60 on roads. Australia spent \$2.6 billion on rail in the 2007/2008 financial year but almost \$12 billion on roads^{xxv}. WA spent \$1.55 billion on roads in 2006/2007 – which is more than South Australia, Tasmania, the NT and the ACT combined. In the decade between 1997 -2007 more than \$12.5 billion has been spent on WA roads. In terms of increased trip length, studies have shown low-density housing on the fringes of our cities is perhaps the single greatest cause of congestion. (Newman & Kenworthy, 1999; STPP, 1999)</p>

<p>The project supports economic development.</p> <p>“In the short term it will support the growing number of vehicles using the Fremantle inner harbour. In the long term it will provide the necessary infrastructure for businesses to operate effectively.”</p>	<p>Unsubstantiated.</p> <p>Existing bottlenecks to the Fremantle Inner Harbour will remain and be exacerbated by the project if an increased number of heavy vehicles approach the port from Stock Road. In the long term any strategy which ties economic development to rising fuel prices and growing road congestion is a recipe for disaster.</p> <p>In broader terms of economic development, low urban population densities increase the travel distances, costs and energy needed for transport per person. Perth residents have more roads per person and travel longer distances than residents in other Australian capitals. By contrast, European and wealthy Asian cities that have higher densities travel shorter distances and rely much less on cars.^{xxvi}</p> <p>Perth spends more than three times its income on transport as wealthy Asian cities (17% compared with just 5%).^{xxvii} In a study of 37 international cities commissioned by the World Bank, Perth devoted the highest percentage of its wealth to transport. The study found the more dependent on the automobile, the higher the proportion of a city’s wealth was spent on transport.^{xxviii}</p> <p>The Australian Transport Council identifies five performance indicators to assess an urban transport system. According to their criteria, urban transport systems should be efficient, reliable, productive (for volumes and speed), have high accessibility (for all) and minimise environmental harm (such as greenhouse gas emissions).^{xxix} Roe 8 fulfills none of these criteria.</p>
<p>The project provides access into the Murdoch Activity Centre (MAC) via an extension of Murdoch drive.^{xxx}</p> <p>The PER states “The Murdoch Activity Centre (MAC) further underscores the need for the proposed project. At present there is no access to MAC (which includes the Fiona Stanley Hospital) from north bound traffic on the Kwinana Freeway, except via South Street, which is already heavily congested. Connection with the proposed project would improve traffic efficiency, reduce congestion on South Street and provide efficient access to the MAC^{xxxi}</p>	<p>Categorically false.</p> <p>South Street provides efficient access to the MAC and is also the closest access point to Fiona Stanley Hospital for north bound traffic on the Kwinana Freeway. Congestion on South Street is generally limited to areas west (towards Fremantle) of the MAC.</p> <p>The Murdoch Activity Centre which will employ thousands of people further underscores the need for high quality, efficient public transport service.</p> <p>For the cost of the proposed project a 43km light rail service could be built instead linking the MAC directly with Fremantle, Cockburn, and Canning Bridge.</p>

Evidence the broader rationales provided for Roe 8 are false, incorrect, discredited or unfounded	
Rationale for the project	Finding
Roe Highway was initially designed to connect Fremantle Port via South Fremantle and along Marine Terrace	Irrelevant. South Fremantle section of Roe Highway was deleted from the MRS in 1991
Roe Highway will link the port via the Fremantle Eastern Bypass (Healy Road to High Street Fremantle)	False. Fremantle Eastern Bypass deleted in 2004
Studies in the 1990s identified a requirement for the completion of Roe Highway to Fremantle Port a strategic freight route.	Misleading and irrelevant. Numerous studies and reviews in the 2000s recommended upgrading existing rail and rail freight infrastructure instead. The Metropolitan Freight Network Review (2001-2004) incorporated a high level of community and stakeholder involvement. It ranked the option for the proposed project as low, and instead ranked the option to upgrade Leach highway west of Kwinana Freeway as high. It recommended a Six Point Plan to improve the current freight network.
The Roe Highway Strategic Review (GHD and Meyrick 2009) found the proposed project is required due to inadequate existing transport infrastructure to support present and future development and to ease congestion.	Incorrect, discredited, unfounded. <ul style="list-style-type: none"> • The Freight Network Review Second Congress (2002) suggested intersection improvements and congestion management solutions along Leach Hwy and South Street would ease traffic congestion in the region. • The Local Impacts Committee (LIC) established in 2002 by then Minister for Planning and Infrastructure undertook technical investigation in conjunction with community consultation and made five key recommendations relating to reducing congestion through a broad and comprehensive road congestion management strategy in the South East metro region, retrofitting existing road infrastructure, and pursuing further studies on the effects and perceptions of noise and vibration. • The proponent has failed to consider other options to reduce traffic congestion. It is widely acknowledged that building more roads does not relieve congestion. The proponent has acknowledged this itself, with Mr Wooldridge saying “Congestion is not something that can be ‘cured’ with extra roads... and tackling this problem is more complex than just building new roads or widening old ones.” (RAC Horizon members’ magazine Feb. 2010) • Studies show that increasing traffic capacity invariably increases traffic volumes. Whilst congestion may be temporarily alleviated, vehicle numbers will increase until the new road too becomes congested.^{xxxii}
Roe 8 will reduce congestion	False; modelling shows the opposite. <ul style="list-style-type: none"> • Traffic modelling detailed on pages 27-29 of the PER shows there is likely to be no significant reduction in traffic congestion as a result of this road. The figures suggest that building Roe 8 will actually make the congestion worse at the intersections of Stock Road with Phoenix Road and South

	<p>Street.</p> <ul style="list-style-type: none"> • On page 30 of the PER, a 2005 Government investigation of traffic issues in the south west Perth metropolitan area recommended intersection improvements and congestion management solutions, working on the theory that building new infrastructure only solves congestion in the short term.^{xxxiii} • The most cost effective solution to traffic congestion reduction includes a combination of public transport improvements, road pricing and ‘smart growth’ land use policies.^{xxxiv} • The PER claims “Since 1955, justification for the proposed project has been reviewed in numerous reports, the majority of which conclude that the proposed project is required to ease congestion” (p26). Yet these “numerous reports” have not been provided or cited in the PER.
Stock Road is identified as a future urban freeway (2010, Main Roads representative revealed in a community consultation session).	<p>Discredited.</p> <p>South West Metropolitan Region Transport Strategy (Travers Morgan Pty Ltd 1992) recommended deleting Roe Highway west of Stock Road because building it would go against the philosophy of demand management and the aim of reducing car dependency.</p>
The project was designed to connect Fremantle Port with the Kewdale, Welshpool and Canning Vale industrial areas. ^{xxxv}	<p>Misleading.</p> <ul style="list-style-type: none"> • The project only replicates a tiny section of Leach Highway. Existing rail freight infrastructure already connects Fremantle Port with Kewdale, Welshpool and Canning Vale. • Existing bottlenecks to the Fremantle Inner Harbour will remain and be exacerbated by the project if an increased number of heavy vehicles approach the port from Stock Road.
The project is expected to convey an average of 60,000 vehicles per day by 2031, which would otherwise be using local roads [including 6000 heavy vehicles]. ^{xxxvi}	<p>Incorrect and misleading.</p> <p>The traffic modelling to 2031 is based on business as usual scenarios where no significant improvements are made to public transport or demand management.</p>
The project will provide a route designed for only 6000 heavy vehicles a day. Roe 8 will take trucks off Leach Hwy.	<p>Incorrect, discredited.</p> <ul style="list-style-type: none"> • The project only provides a 5km diversion for heavy vehicles from a small portion of Leach Highway - after which the vehicles will have to return back to local roads to complete their journey. • Replicating Leach Highway between the Kwinana Freeway to Stock Road will only force trucks back onto Leach Highway or South Street in order to get to the Fremantle Port. Taking Roe 8 would involve additional distance and more traffic lights making it inconvenient for truck drivers. • Building the road merely shifts traffic problems, rather than solving them. There is no question that there are massive inefficiencies with Perth’s freight network. More trucks are on our roads than necessary. Port access and cargo distribution problems would be better solved by increasing rail use and improving coordination of freight transport
Justification for the proposed project has been reviewed in numerous reports, the majority of which conclude that the	<p>Unsubstantiated.</p> <p>The “numerous reports” justifying the project were not been provided in the PER and are not available now.</p>

<p>proposed project is required to ease congestion.^{xxxvii}</p>	
<p>The strategic rationale for constructing the proposed project determined that managing the existing network without the proposed project would not adequately satisfy key freight requirements, thereby jeopardising safety, local air amenity and efficiency.^{xxxviii}</p>	<p>Incorrect, misleading, discredited.</p> <p>The so called strategic rationale is nothing more than a self-fulfilling prophecy and the Main Roads Department is not integrated with other areas of transport such as freight, or other land use and planning agencies. Key freight requirements would be better satisfied by:</p> <p>(a) increasing rail freight to Fremantle Port, and</p> <p>(b) establishing as planned an intermodal terminal in Kwinana with access from the Rowley Road exit of the Kwinana Freeway.</p> <p>Since existing bottlenecks to the Fremantle Port will not be solved by the project, local air quality and freight efficiency will actually be worsened in local areas. Local air quality in the residential and recreational areas adjacent to the project will also be significantly worsened. This constitutes a lose-lose scenario.</p> <p>Health impact studies have not been completed.</p>
<p>The project will improve access to Fremantle or Kwinana Ports</p>	<p>False.</p> <p>Regardless of how many roads lie between Fremantle and the Kewdale Terminal, access to the Port is limited to Port Beach and Tydeman Roads. Roe 8 would do nothing to ease this bottleneck for trucks accessing the Port. Funds allocated to Roe 8 could be redirected to build a better intersection at High Street and Stirling Highway or to increase rail freight.</p> <p>Road and rail freight will increase for new ports south of Fremantle. To cope with the expected shipping growth, a new Outer Harbour is planned for Cockburn Sound and an intermodal terminal is planned in Hope Valley near Kwinana. Rowley Road is to be upgraded to become the main east-west truck route accessing the terminal making Roe 8 redundant for these port facilities.</p> <p>The WA Government Metropolitan Freight Network Review brought together industry, the community and government in 2001-2 to devise better ways of moving freight in the metropolitan area. Instead of building yet another stretch of road leading trucks into suburban streets, the Metro Freight Network Strategy's 6-Point Plan should be implemented with additional measures. Here's a brief summary of what is needed:</p> <ol style="list-style-type: none"> 1) Upgrade port and terminal facilities. 2) Make better use of rail. Only 12% of freight from Fremantle Port is transported via rail. This can be increased to at least 30%. 3) Improve the efficiency of freight movements. Now, less than half of port-related trips could be considered efficient. Many trucks make extra trips to depots and at least 28% travel empty. 4) Improve existing freight routes, including Leach Highway. The freight traffic noise problems along Leach Highway should be solved by measures such as building overpasses to avoid the need for frequent braking, banning trucks between certain hours, and promoting or even subsidising

	<p>double-glazed windows for residences to reduce noise.</p> <p>5) Investigate new technologies like the Cargo Sprinter that have the potential benefits of noise reduction and the elimination of other environmental impacts.</p> <p>6) Improve the sustainable options in Perth's transport system. The \$620 million estimated to plan and build the Roe 8 extension could be far better spent on alternative infrastructure projects to reduce congestion. This could include fixing our dilapidated regional rail network and building light rail through the southern suburbs.</p> <p>7) Ensure that land use planning and economic policy encourage and facilitate local purchasing to reduce the need to move freight.</p>
<p>The project will facilitate direct freight movement between Perth Airport, Kewdale-Welshpool and Fremantle Inner Harbour via Stock Road; as well as to Latitude 32, Fremantle Outer Harbour, James Point Port, and industrial areas in Kwinana.^{xxxix}</p>	<p>Completely false.</p> <p>Direct freight movements to the Inner harbour still rely on trips along Stock Road and back on to Leach Highway and in to local Fremantle roads that are already at capacity; direct freight movements to the outer harbour will be made using Kwinana Freeway and Rowley Road, further to the south.</p> <p>Key freight requirements would be better satisfied by (a) increasing rail freight to Fremantle Port, (b) duplicating the rail bridge to the port to allow freight trains unhindered access, and (c) establishing as planned an intermodal terminal in Kwinana with access from the Rowley Road exit of the Kwinana Freeway.</p>
<p>The total quantity of imported freight in Perth will double in the next 20 years which will be reflected in a growth of Perth road freight of between 2-4% per year to 2025 (p19).</p>	<p>Misleading.</p> <p>Current rail freight targets aim for 30% of port-related traffic to be moved by rail. This will take road freight off the road, and the proportion is also expected to increase as oil prices inevitably rise and the carbon price is introduced to road freight</p>

The proponent's "strategic rationale" is nothing more than a self-fulfilling prophecy by a Main Roads department that is not integrated with other areas of transport such as freight, or other land use and planning agencies.

WHAT WOULD YOU LIKE TO BE DONE ABOUT THIS?

The EPA has assessed a project with such a substantial number of incorrect, discredited and misleading rationales. Its decision should be overturned.

We request a formal investigation or inquiry to review the evidence that has been accepted by the EPA on face value.

14TH REASON FOR APPEAL: THE EPA HAS INGORED MODELLING AND EVIDENCE SHOWING THE PROJECT WILL MAKE NO DIFFERENCE TO TRAFFIC FLOWS OR CONGESTION ON THE SURROUNDING ROAD NETWORK

Traffic modelling in the PER shows the project makes no significant difference in daily traffic flows and virtually no reduction in daily heavy vehicles on any of these roads by 2021. This was a key rationale for the project.

Private passenger vehicles

PER Figure 2.2.6^{xi} illustrates the projected impact on Leach Highway, South Street, Farrington Road and North Lake roads in 2021 with and without the project going ahead.

For example, forecast daily total traffic flows to 2021 show:

- Leach Highway is unchanged whether Roe 8 is built or not. There is a net reduction from 57,000 without the project to 56,500 with the project
- Farrington Road increases slightly without the project from about 15,000 to 16,000
- North Lake Road is virtually unchanged rising from 28,000 in 2006 to 32,000 with the project or 35,000 without.

These insubstantial reductions do not justify such a major project.

Heavy Vehicles

The proponent stated the project will provide a route designed for movement of 6000 heavy vehicles a day. It is unclear where these numbers come from.

The PER shows the number of trucks it will take off Leach Highway is absolutely minimal. The differences in forecasted heavy traffic with and without the project to 2021 are:

- Leach Highway - a reduction from 2900 to 2600 with the project
- Farrington Road - a reduction from 700 to 400
- North Lake Road - a reduction from 1400 to 1300

The key rationale for the project is unfounded: it will not reduce heavy traffic on Leach Highway significantly. The project is therefore not justified.

Forecast changes to Level of Service (congestion) along roads and at intersections

Forecasts of traffic growth on major roads is shown in Figure 2.2-4 (midway between two intersections) and Figure 2.2-5 (PM peak hour intersection congestion) to 2021 without the project^{xii}.

Figure 2.2-7^{xiii} illustrates forecast levels of service (congestion) in the surrounding network. Again it clearly shows zero or marginal change to 2021 if the project goes ahead:

- On Leach Highway there will be zero change in level of service with the project
- On South Street there will be a marginal change, with some intersections worse but some marginally better
- On Winterfold Road to Farrington Road there is zero change
- On Phoenix Road to North Lake road there is slight improvement north of the project but a worsening south of the project.

Further, parliamentary questions^{xiiii} have confirmed:

- The congestion on South Street and North Lake Road is unlikely to be improved from that currently experienced if Roe 8 is built
- In some cases congestion will be worse, especially at all intersections on Stock Road and Murdoch Drive

- All intersections on Stock Road will worsen and have increased congestion when Roe Highway is extended. Therefore it is planned that Stock Road will be upgraded to a six-lane fully grade-separated highway to address this congestion.
- Congestion on South Street and North Lake Road is likely to be a problem only in peak hours

Conclusively, total traffic flows will only be marginally lower with the Roe Highway extension, and there will be no significant change to congestion at most intersections -in fact congestion will worsen in half of the areas surveyed. This section proves conclusively the project not justified. These forecasts do not justify the project.

The proponent's claim (page 28) that the project will convey 60,000 vehicles per day by 2031 which would otherwise be using local roads [including 6000 heavy vehicles] is not supported by the data previously described; which instead shows daily traffic flows will not be significantly different if the project goes ahead.

WHAT DO YOU WANT DONE ABOUT IT?

The key justification for the project has always been that it will reduce traffic, including heavy traffic, on the surrounding road network. However the PER clearly shows the project makes no significant difference to traffic volumes to 2021.

The discredited and unsubstantiated rationale for the project puts the decision by the EPA into question.

15TH REASON FOR APPEAL: NEGATIVE IMPACTS ON STOCK ROAD

The PER acknowledges the forecasted deterioration of Level of Service on Stock Road - which "is explained by the diversion of traffic to Stock Road via the proposed project. Stock Road is planned to be upgraded to a freeway to carry these high volumes of traffic, including high volumes of freight".^{xiv} This statement proves that building more roads to solve congestion only creates problems elsewhere, and worse, creates a domino effect of road widening and conversion to freeways. It is a dangerous and outdated approach to traffic planning which the EPA should not have accepted.

16TH REASON FOR APPEAL –THE LARGE NUMBER OF FALSE CLAIMS AND ERRORS IN THE REPORT

The EPA Report has many errors in it. There are several serious claims that are unsubstantiated by science or evidence in the EPA report. These include:

- The EPA has accepted several questionable claims by the proponent about the impact of the proposal on fauna and flora (pages 29, 33, 34 and 35). No scientific evidence is quoted to support these claims and the proponent clearly has a vested interest in minimizing the expected impacts.
- On page 42 the proponent makes unsubstantiated claims about two wetlands, one of which is CCW and the other EPP listed.
- The EPA has previously found the Roe 8 extension to be unacceptable to approve on environmental grounds – a relatively minor adjustment in the design does not alter this fact and is not sufficient grounds to justify a reversal of EPA position.
- The cumulative impacts of clearing of this scale are missing
- The number of regional parks of similar size and quality in the south metro region so as to compare the regional impact of losing a significant amount of native vegetation and wetlands
- The location of offsets to be purchased, whether these are actually available, and whether the proponent would purchase these before any work whatsoever begins
- The failure of other similar offset programs and translocation projects in WA

- No Net environmental benefit
- No analysis of the highly political nature of this project. The state government made a commitment to the project in the last state election, and only enjoys support for the project from Liberal held state and federal elected members. The project is highly political and the state opposition recently promised to delete the project from the MRS if elected. The election commitment therefore is the only rationale behind this project - and such an expensive and environmentally destructive project with zero transport benefit should not go ahead without bipartisan support.
- No analysis of the economic viability or impact of this project on the state's budget, or comparison with the current operating budget of the Main Roads Department. Main Roads simply cannot afford this project alone, and the federal government has already confirmed it will not be providing funding for the project.

There are also a number of errors made by the proponent in the original PER that are not addressed and that throw the credibility of the proponent's research. These are:

- The claim that only five percent of the area covered by groundwater dependent ecosystem (GDE) sub communities within the GDE study area will be cleared. **This is in fact a miscalculation - the figure is 16%.** That is three times the impact reported in the PER^{xiv}.
- The claim that the maintenance of the water cycle is essential to the continued long-term function of Roe Swamp. This will be achieved by the provision of a bridge that spans a significant extent of very good condition vegetation within Roe Swamp. (pvii). However the impact of reduced rainfall on the vegetation covered by the bridge (essentially a large roof over the vegetation) is not adequately explored.

WHAT WOULD YOU LIKE TO BE DONE ABOUT THIS?

The number of errors and falsehoods the Report are sufficient grounds to have the decision overturned.

17th REASON FOR APPEAL: The EPA report glosses over the lack of social license for this project and the impact the loss of the wetlands will have on the community

The EPAs *Environmental Guidance for Planning and Development – Guidance Statement No. 33. (May 2008*^{xvii} (p88) Guidance Statement provides an overview of environmental protection policies in place to guide proponents going through the process of environmental impact assessment (EIA) of planning proposals (p2).

The *Checklist for Site Planning to Protect Key Native Vegetation and Flora* provided in the Guidance statement includes the recommendation to retain natural areas for their contribution to the community's 'sense of place' and experience of wellbeing, and retain areas of scientific, evolutionary or cultural importance, and retain natural areas that regionally and locally have the best quality native vegetation.

The Guidance statement also states the EPA is unlikely to recommend the approval of projects that have significant adverse impacts on high value assets which are environmental assets that are in good to excellent condition, are considered valuable by the community and/or government, but are not identified as critical environmental assets. The EPA Report does not reflect or uphold any of these responsibilities in relation to community wellbeing, sense of place or local protection of important assets. The EPA Report does not reflect the complete lack of social license the project has. The local community has categorically rejected the proposed project due to the high and irreplaceable value of the Beeliar Wetlands.

WHAT WOULD YOU LIKE TO BE DONE ABOUT THIS?

The Report does not represent the wishes of the local or broader community or convey the abject lack of social license for the project. The Report is therefore invalid and the decision should be reversed.

Appendices

Appendix A: Values of Beelias Wetlands		
Ecosystem Service		Example of Measurable Benefit provided by Beelias
1	Gas regulation	Clean air – chemical balance and pollution
		Produces oxygen
2	Climate regulation	Climate change mitigation (carbon sequestration)
		Local microclimate and rainfall
3	Disturbance regulation	Reduced damage from floods and storms
		Reduces stormwater runoff
4	Water regulation	Source of fresh water & habitat over dry summers
5	Water supply	Groundwater recharge
6	Water purification	Purifies water supply (Jandakot mound)
		Filters fertilizer/nitrogen from runoff
		Filters pollution from road runoff
		Increases water quality downstream
7	Erosion control	Protects Coastal plain
8	Soil formation	Provides fertile land and nutrients in immediate area
9	Nutrient cycling	Stores and processes algae and other nutrients
10	Pollination	Fertilisation of local gardens and agriculture
11	Biological control	Keeps local pests (insects) under control (?)
12	Habitat	223 local plant species
		4 WA listed endangered species
		Extensive array of fauna
		123 native bird species
		24 uncommon species
		2 endangered species (national)
		Habitat and Breeding Grounds to national and international
		Migratory birds
		International agreement protecting migratory birds
		Nursery to aquatic species
Migration route for animals moving from breeding ground/nursery to larger Lakes		
Human appreciation - biodiversity and species		
Human appreciation – iconic and endangered species (Carnaby's Black Cockatoo)		
15	Genetic resources	Medical or scientific discoveries at the wetlands (?)
16	Recreation	Bushwalking, Cycling, etc
		Bird watching, wildflower appreciation groups etc
		Ecotourism and visiting tour groups
		Children's playground
		Health benefits (physical/mental)
17	Cultural	Social Cohesion (12 local groups)
		Education
		Heritage
		Social significance – strategic location & rarity
		Amenity and proximity to a natural environment (increased

		property prices)
18	Indigenous	Unbroken, direct, ongoing connection to wetland by traditional owners
		Aboriginal mythological and spiritual site
		Seven Aboriginal archaeological sites

Appendix B: Benefits derived from Perth's Wetlands identified by the Water Authority of WA (1994)	
FUNCTIONS aspects of a wetland that potentially or actually support or protect a human activity or human property without being used directly	Groundwater recharge
	Flood control
	Shoreline stabilisation / Erosion control
	Sediment retention
	Nutrient / Pollutant absorption
	Storm protection / Windbreak
	Flow regulation / Maintenance
	Nursery / Breeding area
	Habitat for fish
	Habitat for wildlife
	Maintenance of existing processes or natural systems
	Wildlife corridor
USES are a direct utilisation of one or more of the wetland's characteristics	Extraction of naturally occurring plant products
	Extraction of naturally occurring animal products
	Water supply / Storage
	Production of plant products
	Production of animal products
	Recreation / Tourism
	Research site
	Monitoring site
Education site	
ATTRIBUTES The characteristics (single or in combination) that don't necessarily provide a function or support a use but which are valued by the community	Richness or diversity of flora or fauna
	Landscape / Aesthetic qualities
	Valued as a cultural, symbolic or spiritual place
	Presence of rare, endangered or uncommon flora, fauna, communities and ecosystems
	Wilderness
	Type, locality or taxon or wetland type
	Constitutes significant gene pool
	Source of information which has led to a better understanding of evolutionary processes
Presence of a distinctive way of life, custom, land use or function in danger of being lost	

Appendix C – Environmental Economic Valuation techniques and peer reviewed examples

- Queensland Government (2003) Environmental Economic Valuation. An introductory guide for policy-makers and practitioners. Prepared by the Inter-Departmental Committee on Environmental Economic Evaluation. State of Queensland EPA. August 2003. At <http://www.epa.qld.gov.au/publications/p00870.html>
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