



Our Yarra: Healthy, Protected and Loved

7 June 2019

Submission by the Yarra Riverkeeper Association: North-east Link Environmental Effects Statement (EES) Draft

Who are we:

Formed in 2004, the Yarra Riverkeeper Association speaks for the Yarra, Melbourne's own beautiful, resilient, iconic river. The Association is the credible and authoritative voice for the River. It is an independent community of citizen-advocates that works solely in the interest of the river. The spokesperson of the Association is the Yarra Riverkeeper. The Yarra Riverkeeper monitors the river in the Association's boat and on foot, by bike and by canoe. That enables the Association to build a detailed understanding of the complex connections and interactions of the ecology of river and its role in the City of Melbourne and in the Yarra Valley. This understanding is shared with the community through the Association's educational programs, website, and social media. The Yarra Riverkeeper Association was also effective in asking for better legislative protection for the river, which resulted in the Yarra River Protection (Willip-gin Birrarung murrong) Act and the changes in planning controls along the Yarra River. Community groups look to the association and the Yarra Riverkeeper as representing whole-of-river views.

The Yarra River (context)

Melbourne is a river city, and the Yarra is at the heart of the city's imagination, connected parklands and habitat. The Yarra is Melbourne's great green space. As the river is a connected flow of water and any project that impacts on the river at any point affects the whole of the river, especially any part of the river lying downstream. The river is home to not only endangered and threatened species but also a wide range of populations of native birds of cultural significance.

General Summary:

We consider the scale of the project is so large it inevitably has significant and irreversible, and to some degree incalculable impacts on groundwater, the natural environment, surface waters, stormwater and the urban environment.

The river is the heart of the city and is lined with magnificent and natural parklands from Princes Bridge upwards to the source. The EES shows that the project in its

current form will diminish the river, both reducing its flow (and the flow into critical wetlands in the floodplain) and shrinking its magnificent parklands, slashing habitat and open space and reducing the effectiveness of the riverine corridor as a migratory corridor, which will be increasing noticeable as the climate dries. The volume of water in the river will be reduced by groundwater drawdown. The quality of the water will be reduced as stormwater flows deteriorate.

The project must adopt as a guide the principle of net gain enshrined in the Yarra River Protection (Willip-gin Birrarung murrong) Act and move away from the language of merely endeavouring to minimize harm. We are asking for more precise and rigorous environmental performance requirements that have prescriptive and clear outcomes. The obligation should be on the contractor to meet these requirements. Should these performance requirements and the outcomes not be met we are proposing a system of financial penalties for failure to do so to allow for reparation and incentivise the contractor.

Specifically:

- The project will involve a drawdown of groundwater, lowering the water table, reducing the hydraulic gradient of flows to the river, reducing river flows, especially in dry times. Radically reduced flows are a result of damming of the river for flood control and water storage over the past 100 years and pose an increasing problem for the river as climate change bites. The groundwater drawdown will impact on wetlands, including the culturally important Bolin Bolin Billabong by up to half a metre. Groundwater drawdown is expected to worsen during the operation of the project.
- The project involves a reduction in habitat by a substantial 52 hectares and a loss of 262 native trees with a further 32 native trees to be lost during operation of the project from the worsening groundwater drawdown. The project will consume 175 hectares of open space parklands and habitat during construction.
- Stormwater has been identified as the major threat to waterway health under all climate change scenarios in the Greater Metropolitan area of Melbourne. We question whether there is sufficient area for bioretention and wetlands to ensure that the project will not significantly worsen stormwater outcomes for the Yarra River. The expectation of the community is that the project would improve the ineffective treatment structure on the existing Eastern Freeway. A worsening of the quality of the water downstream will have knock on effects all the way down to the bay as it strikes at the base of the food chain for the larvae of many species.

- The construction will create noise and vibration disturbance, as well as disturbance from new light sources, in sensitive and currently relatively undisturbed parklands that have been a refuge for both threatened and not threatened species. The lack of broadscale threat to species should not be used as a justification for not maintaining populations within the project area. Wildlife has cultural value to both Wurundjeri-Woiwurung and post-European settlement cultures. The Yarra is the place for wildlife to be found in the city and for many native species to be readily found. The report talks in the language of 'persistence' but it is not sufficient to merely have a species persist in an area. Populations need to thrive for them to retain healthy numbers over the long run. Disturbance combined with the loss of habitat and of trees to double down on the reduction of sustainable wildlife populations.

Our focus is on the Yarra River and the Yarra River Corridor, particularly at the southern portal. However, we endorse the submissions of the Friends of Banyule and the Warringal Conservation Society, whose focus is on other parts of the project area. We note in this context that we should be well past a time when it is considered appropriate to put a waterway in culvert, where an engineering solution is imposed on a natural waterway. Further we note that in Chapter 25 'Ecology' Banyule Swamp is predicted to sink due to ground subsidence up to 35mm which may unpredictably alter water flows and levels in the immediate area depending on the pattern of subsidence.

Section 1: Groundwater (Chapter 22 of the EES)

A reduction in ground water to the river and its wetlands is the greatest threat from from the proposed North-east Link project to the Yarra River and its parklands. The effect of the project will be to connect groundwater systems that were previously poorly connected. The EES states that the groundwater drawdown that will occur will lower the level of the water table, reduce the water availability in the wetlands along the Yarra including the culturally and ecologically significant Bolin Bolin Billabong, and reduce the hydraulic gradient, and thus flows, into and in the river itself.

Groundwater is difficult to understand and cannot be seen. The Domain Tunnel suffered unexpected groundwater complications that are on-going. That is a demonstration of how difficult groundwater flows are to model. The EES cites a range of parameters about the groundwater mounding and drawdown, which further confirms the difficult of predicting what will happen with groundwater and the need to manage groundwater in a conservative way.

The reduction in flows and seasonal levels is the most significant threat to the Yarra corridor parklands and to the river itself, both as a riverine landscape and as connected habitat that is key sizeable and connected piece of habitat in itself and a

key connection for the role of the river as a migratory passageway from source to sea.

Much of the rain and creek fed-flows in the river are from the upper catchment and a reduction in ground water levels around and below Bulleen Road arising from the project, and therefore reduction in flows into river, impacts on instream water flows downstream of the project site. Flows in the river have already been severely compromised by a drying climate. The current regime is inadequately understood as there has not been long term monitoring of the groundwater to see the pattern in terms of periods of low rainfall and high rainfall, including the rate of recharge. There are also insufficient monitoring stations in the river itself to build an accurate picture of river flows. With this lack of understanding a precautionary approach needs to be taken, to pre-empt damage to the environment and ecology, and the net gain principle used to ensure that there is no further loss. Like the economy, healthy habitat in the context of the city and climate change needs growth and improvement or decline will become irreversible.

Two critical statements in the report are made. The first states:

Small drawdowns are predicted to extend beneath the Yarra River which may reduce the hydraulic gradient between the Yarra River and groundwater, with no loss of flow from the Yarra River, as gradients would still result in discharge from groundwater to the waterway

The language of these points seeks to minimize the impact of groundwater drawdowns. 'Small' is a relative term, and the use of the word 'may' implies uncertainty. The phrase 'gradients would still result in discharge' fails to acknowledge that a reduction in pressure from a reduced gradient results in a reduction in flow. The language is stating that as long as discharge does not actually stop, it is acceptable. Our advice is, that in ecological and flow terms, the draw down is not small. The evidence presented in the report states that it is predicted to increase over time, and that would be exacerbated by climate change, especially the higher impact scenarios.

The tunnels and other underground infrastructure would continue to influence groundwater conditions near the project once it was operating. While levels of groundwater drawdown are expected to be less, but occur over a greater area in the operation phase than during construction, there remains potential for groundwater-related impacts during this phase as the aquifer readjusts.
(p. 27)

Groundwater is difficult to understand and manage as it occurs below ground where it cannot easily be observed. The language in the EES is highly qualified —'are expected' and 'there remains the potential' This is an area where the margin of error is likely to be large.. The planning for the Domain tunnel failed to correctly estimate the impact of the tunnel on groundwater and this was a costly error that still requires ongoing rectification work. Water is required to be pumped in to the aquifer to maintain water levels so there is no widespread deaths of trees and plants.

The operational phase of the project is on a long time-horizon and the impact of climate change is difficult to predict. Typically, climate change is covered by a range of scenarios yet the impact of varying scenarios on groundwater (and on other aspects of the project) is inadequately addressed.

The drawdown in groundwater must have a great and significant impact on the Yarra and the Yarra corridor, both in the project area and downstream of the project areas. Reduced flows will impact on the river as far down as the estuary as it will alter the dynamics of the saltwater wedge below Dights Falls. The groundwater drawdown is the greatest impact that the project will have on the environment and severely damage the environs of the Yarra River and its floodplain and billabongs.

The drawdown will result in widespread deterioration in the vegetation of the corridor. The drawdown will happen so quickly for plants to respond by deepening their roots systems to follow the water table. The vegetation (and all the vegetation supports) is adjusted to the current levels of the water table. The ability of vegetation to respond to rapid changes in the water table will be further compromised by a drying climate.

The reduction in the water flows in the river will produce not only lower flows but a reduction in water quality as the filtered high-quality flows from groundwater are reduced and proportionally the lower quality overland flows will increase.

We note that this not only occurs out of site but also groundwater flows and recharge over very long time cycles. In Dandenong Creek some of the stormwater is more than 100 years old, for example. The study timeframes were limited to a very short period.

The second critical statement is:

A drawdown of 0.1 to 0.5 metres is predicted at Bolin Bolin Billabong with the potential effects discussed in Chapter 25 – Ecology

The report uses the phrase 'which is within the seasonal groundwater level fluctuation' when referring to drawdowns. It is difficult to understand the justification for this phrase given that the drawdown is effectively being added to the seasonal groundwater fluctuation. The predicted additional drawdown will result in a general drying of the landscape, less opportunity for adequate soil moisture, and lowering of the water table at its lowest point.

The "Influences on Ground Water Level table' (p. 100) fails to mention the anthropogenic effect of climate change on groundwater with the likelihood that groundwater levels will fall over the next 10, 20 and 100 years. A key feature of groundwater is that recharge occurs over long periods of time.

The Figure 22-13 from the EES (below) is striking in its attestation to the impact of the project on the water table during the life of the project.

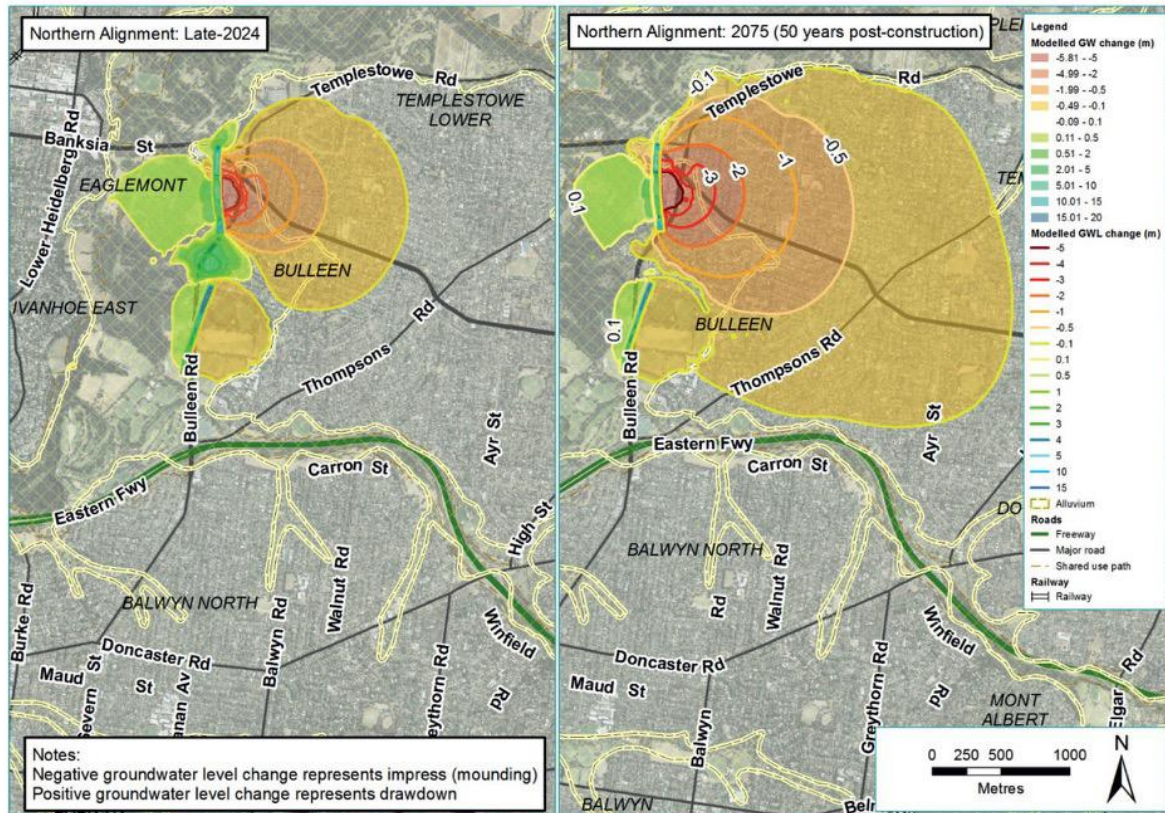


Figure 22-13 Predicted change in groundwater levels around the southern portal during operation

Opportunities for net gain/mitigation:

- The project be required to purchase environmental flows from the upper catchment.
- The project be required to purchase water diversion licences in the lower Yarra in the Bulleen area and upstream and downstream of the project.
- Across the catchment and aquifer, opportunities are identified for groundwater recharge, especially from stormwater from high rain events that are more likely under most climate change scenarios. Wells to pump into the aquifers for recharge need to be considered.
- A separate chapter is commissioned for impacts under a range of climate change scenarios.
- Measures such as lateral grouting be considered to stop flows of water along tunnel.
- Monitoring to be continued over the life of the operation of the project to assess impacts on groundwater and to ensure rectification of those impacts.

Surface Water

Much of the surface water chapter focuses on flooding impacts, with an absence of adequate discussion on stormwater impacts.

24.2.2 Water Quality

This section states that the water quality in the Yarra River has both mostly met the SEPP Waters objectives and is 'improving'. The project will have a significant impact on ending this opportunity to improve the water quality of the Yarra River, especially with toxic stormwater flows production of the expanded Eastern Freeway.

24.2.3 Geomorphology

The form of the river has been changed since the arrival of the first European settlers in 1835. In the lower river below the project the banks have become less stable with the lower flows and sudden storm events over the past decade and this pattern will be accentuated as the climate continues to dry and flows in the river are lowered by groundwater drawdown.

The project will have a negative impact on the geomorphology of the banks unless the banks are actively maintained. There has been severe erosion of the banks downstream of Fitzsimmons Lane.

Baselines have not been established for channel form in the project site or downstream to assess future impacts. It is notable that in the last two weeks there has been a loss of two trees from the Fairfield Mill site, with two more trees likely to go in the next few weeks. The bank has become unstable as the contractors have deferred bank maintenance to the period of landscaping at the end of the project. This incident shows the need to monitor river profiles and stability of trees throughout the life of the project.

The channel form will be affected by groundwater drawdown. The North-east Link project needs to actively monitor and maintain bank stability before during and after construction and take needed iterative steps to maintain bank stability. This work needs to continue for the life of the project.

24.2.4 Water Supply

We advocate that the other diversion licences on the Lower Yarra be purchased or cancelled where at all possible and water flows returned to the river. There is the opportunity to replace irrigation water pumped from the river with stormwater with the benefits that, the quality of the water in river improved and the flow of the river defended.

24.3.2 Water Quality (during construction)

The EES identifies the following changes as occurring during construction:

- Increased or reduced flow
- Peakier flow
- Increased sediments or pollutants

While the EES says that any discharges would be required to meet SEPP (Waters) through (EPR ASW1 – Chapter 27). We believe that the this EPR will only address the third of these three issues. It is also significant how rarely major projects meet the sediment control requirements – they are weak and poorly enforced. Controls are put into place early in the project and then not maintained. They are not checked and maintained prior to major rain events as required. Examples include a lack of hose-down bays and rumble tracks at Metro Tunnel sites. The Chandler Highway project significantly failed to comply with controls that would prevent sediment entering the river, particularly in the latter stages of the project when the contractor was under pressure to meet deadlines. Sediment was spread across roads and washed into stormwater and into the river. Sediment fences collapsed and were not repaired. The mindset of contractors, small and large, is that sediment controls, especially the maintenance of sediment controls are a very low priority.

24.4.2 Water Quality (during operation)

North-east Link includes the construction of approximately 700,000m² of additional pavement. The EES includes the following ‘medium’ risks:

Risk SW15	Spills from traffic during operation of the project being released into the waterways resulting in adverse impacts on the beneficial uses of the receiving water.
Risk SW16	Increase in impervious area leading to an increase in contaminants being released into the waterways resulting in adverse impacts on the beneficial uses of the receiving water.
Risk SW18	Water from tunnel drainage system being discharged to waterways resulting in adverse impacts on the beneficial uses of the receiving water.
Risk SW21	Project assets reducing the effectiveness of water quality treatment resulting in adverse impacts on the beneficial uses of the receiving water.

This issue is more commonly called stormwater.

*Stormwater runoff from road surfaces **can** contain oils, greases and sediment have the **potential to** affect water quality if discharged to the stormwater drainage system, and subsequently the waterways, without treatment. (p. 26)*

This is disingenuous as it is broadly recognised that stormwater from road surfaces **do** contain *oils, greases and sediment* and that these pollutants have a significant effect on water quality not merely a *potential to* do so. (Note: this pattern of language to reduce the implied significance of environmental impacts is used throughout the report.)

A deterioration in the quality and quantity of stormwater has been identified, across Melbourne, by Melbourne Water as the greatest threat to the health of our waterways as the climate dries. The typical qualified language of the report the EES makes the statement:

*Complying with the BPEMG in operation would **assist** in meeting the SEPP (Waters) over the long term for pollutant concentrations in receiving waters (EPR SW1). (p. 26)*

This is not a commitment to meeting SEPP (Waters) simply that application of measures would **assist**. The project must include a clear commitment that there will be no decrease in the quality of stormwater enter from the paved surfaces including the planned modifications to the Eastern Freeway north of the Bulleen Road interchange and that the opportunity of rectifying the non-existent or poorly designed Eastern Freeway stormwater treatment be taken up in full.

Importantly, the BPEMG only refers to suspended solids, nutrients, litter and flow. They do not cover hydrocarbons or heavy metals to which major roads and freeways are a very significant source of.

We are also uncertain as to the ability of the project to find sufficient suitable area for water quality treatment facilities to treat the volume of stormwater coming off the paved surfaces on the Eastern Freeway. There is insufficient information in the EES to assess whether there is sufficient area to construct facilities such as bioretention systems or wetlands, to successfully treat and remove the heavy metals, PAHs and oils from the road runoff, which typically adhere to the finer silt fractions. The finer silt fractions necessitate very large areas for effective reduction via wetlands. Road runoff rapidly reduces the effectiveness of bioretention systems.

We are also concerned about the significant loss and parkland and habitat for the creation of bioretention systems and wetlands, and the significant excavation required to lower the land to invert levels.

24.4.3 Geomorphology

We oppose putting creeks into culverts and believe this initiative on the part of the project reverses that trend to rectify mistakes of past waterway management by allowing creeks and rivers to have a naturalistic expression, where engineered solutions were used on natural landforms to the detriment of the ecological services provided by the waterways.

Ecology (Chapter 25 of the EES)

The impact of the project on the ecology of the Yarra River, its corridors and its tributaries and their corridors cannot be overstated. The raw fact is that there will be a loss of 52 hectares native vegetation and 262 trees and 32 trees

We begin by noting that natural cycles continue over extended time frames from years, to decades, to centuries. An assessment that does not include an assessment of these time frames is flawed, the consequent limitations on the ecological assessment and the need to apply a net gain principle to help ensure there is at least no further decline in the health of the river and its corridors.

The report presents a risk table:

Table 0-1 Risk table: Construction – non-threatened terrestrial native fauna

Risk ID	Risk pathway	Risk rating
Risk EC02	Land clearing during construction impacting non-threatened flora and ecological communities	Planned (moderate consequence)
Risk EC03	Construction activities resulting in erosion/sedimentation, dust, litter or release of contaminants leading to loss or degradation of non-threatened flora and ecological communities	Low
Risk EC05	Construction activity leading to the introduction or spread of weeds, pest species, or pathogens that leads to the reduction of ecological values	Low
Risk EC06	Dewatering of groundwater during construction resulting in changes to terrestrial groundwater dependent ecosystems	Medium
Risk EC08	Construction activity causes soil compaction that leads to the loss or degradation of non-threatened flora and ecological communities	Low
Risk EC26	Construction of tunnels causes ground settlement or tree root interactions causing death of native trees, degradation of vegetation quality or vitality of native vegetation	Low

Risk EC02 should be rated as **high consequence**. This is the largest project in the state and it is occurring in sensitive parklands. If native habitat is cleared, particularly on such a large scale, then it will impact on flora and ecological communities and its impact will have a high consequence. The EES makes the assumption that the loss of native vegetation within the project boundaries is conservative. What is meant is that the loss will be reduced in the implantation of the project. No evidence is offered to support this. A recent major project, a duplication of a portion of the Western Highway, led to the destruction of 900 trees not the 261 predicted. This underestimation of trees lost was repeated at the Calder interchange upgrade.

The act of land clearing will also result in noise, and lighting and there will be an increased presence of people in places previously little trafficked – and on a substantial scale. This will impact on all wildlife from the smaller bush birds, who need to nest in protected spots, to nocturnal birds that need to roost undisturbed

during daytime. If this is judged as low then the mitigation measures will be inadequate.

The EES responds:

Fauna that live in or visit habitats within the project boundary already tolerate substantial disturbance from noise and vibration and have coping mechanisms for persisting in noisy environments, therefore impacts would be considered negligible.

This statement fails to address light pollution at all. The project during construction will bring significant light sources into parklands that are generally not well lit, resulting in inevitable disturbance to native species. The light will be of such a wavelength to impact on insect species, unless measures are taken to assess and then use suitable lighting sources. The statement about coping mechanism is simply not true of species within the Yarra Parklands such as the Boobook Owl and Mopoke. Many of the smaller bush birds such as blue wrens and yellow robins are already on the retreat due to disturbance.

Risk EC05 is again of **high risk** as contractors typically fail to take seriously measures to ensure weeds are not spread. Every disturbance of a natural ecosystem is an opportunity for weeds to invade. The more intact an ecosystem the more it resists weeds. A project of this scale necessarily involves major disturbance. A major protection against the spread of weeds is a mature and adequate leaf litter layer, where weed species have difficulty seeding and growing. Again, this risk needs to be rated as high and measures introduced to limit the spread of weeds into surrounding parklands.

Risk EC06 speaks of the risks to the ecology from dewatering. This is rated at medium (note in the chapters discussed a risk is never rated as 'high' by the NELA). This risk has been discussed in our section on groundwater. The drawdown will happen faster during the construction phase than the vegetation is able to respond to, should it be able to respond at all. During construction water needs to be pumped into the aquifers on an ongoing basis and environmental watering of the billabongs and wetlands expanded.

Risk EC07 addresses soil compaction and rates the ecological risk as low. Soil compaction is a major issue across the Australian landscape. The soil was described by the first European settlers as being like ash, and you were able to stick your finger into it easily (Bill Gammage *The Biggest Estate on Earth*). The spongy nature of the soil allowed the water to store water for slow release so that EVCs were more resistant in drier times. Compaction destroys this capacity to support vegetation with a measured release of soil moisture and favours the spread of weeds.

The project will result in a severe reduction in open space and a reduction in mature habitat, both during and after the project. Before, during and after the project is

completed, there are opportunities to replace the missing open-space. The impacts need to be considered in terms of the impacts not only on threatened and endangered species but also on populations of indigenous species, and the threat to the viability of those populations. The project will isolate populations risking or causing genetic decline and a longer-term loss of that population. Ecologies take time to evolve, and planting needs to be done in a controlled and sequenced way over time so any ecological work needs to commence as soon as construction commences and be guided by a long-term plan.

Risk EC12 is the most obvious impact of the project on habitat and parklands. This is a direct loss of open space with high consequence, both to people enjoy naturalistic open space, and to wildlife.

Climate change

Outside the impacts of increased flooding risk, the impact of climate change, especially on the ecology, is inadequately addressed. There are no projections as to impact of increased temperatures and reduced rainfall compounding the impact of the disturbance of the project on the surrounding parklands and on slowing the growth of replacement vegetation. A drying climate will slow the recharge of aquifers and drop soil moisture levels. It is also changing rainfall patterns with peakier flows, increased flood events, and long dry periods in between.

Construction activities around water bodies

We believe that all water bodies should be protected during the project and excluded from the detailed design stage, and in particular should not be drained. Importantly Simpson’s Lake in the Kew Golf Course supports significant nesting colonies of a range of culturally significant species, and these nesting sites are highly valued by the community. The nesting site provides a source for population dispersal of these species in the lower Yarra.

25.3.5 aquatic species and ecosystems

Table 0-2 Risk table: Construction – aquatic species and ecosystems

Risk ID	Risk pathway	Risk rating
Risk EC22	Construction activities within/around waterways resulting in loss of connectivity and impeded passage for non-threatened native aquatic species	Low
Risk EC23	Construction activities within/around waterways resulting in loss or degradation of habitat for non-threatened native aquatic and terrestrial fauna	Low
Risk EC24	Dewatering of groundwater during construction resulting in changes to aquatic groundwater dependent ecosystems	Low
Risk EC25	Construction of tunnels causes ground settlement that changes drainage flow and/or hydrology of wetlands	Low

The evidence does not support the low rating for these risks. A drop in the water table will result in a loss of connectivity and high levels of flow in waterways to flow over banks to connect wetlands. The dewatering as established in the groundwater chapter will result in changes to aquatic ground water dependent ecosystems and changes to drainage flow and hydrology of wetlands. The drawdown will be faster than groundwater-dependent ecosystems can respond to and there will be a loss of diversity in local communities, and that will be repeated in wetlands across the project site.

'Minimization'

The language of the documents and the EPRs is about minimizing impact. 'Minimization' is critical in the Environmental Performance Requirements yet is ill-defined, open to wide interpretation and subjective, particularly in the area of ecology. There will be offsets within the EPRs when minimization is the operative term as clearly cost becomes a factor when 'minimization' is used as an assessment.

Offsets

We are concerned about tree planting offsets and where these trees that will be used as offsets be planted. Clearly to genuinely offset they need to be near the project site or at the least within the immediate catchment of the waterways and need to be placed so they serve a similar ecological function as the trees and plants that have been removed.

Opportunities for net gain/mitigation:

- Sites are bought by the project and converted into open space habitat this establishes a greater footprint along the river itself than the consumption of open space. Sites include;
 - 'Greek/drive-in' site,
 - the Yarra Valley Country Club site,
 - the Bulleen Golf Driving Range,
 - the HV Claus site (which has recently been re-leased by Parks Victoria),
 - the Sonoco site.
- These purchases and acquisition of leases should be done as early as possible in the build to allow staged restoration and replanting and building of layers within the vegetation to maximise
- Wetlands that have been filled in be identified and restored.
- The project funds environmental water purchased for and directed to wetlands adjacent to the river.
- Providing flows to wetlands downstream that are threatened by reduced ground water

- Restoration of wetlands (some of which have been filled in). Wetlands provide resilience in drier times storing water and soil moisture and acting as refuges for species.
- Long term maintenance and monitoring is required, that is public reported on an annual basis. With the scale of this massive intervention in the landscape, it is not a matter of set and forget. It will require constant reviewing and adjusting of management policies.
- There is little need within the current contracting structure for the contractors to prove that minimization was achieved through objective standards. We support the role of the environmental auditor, as long as the role is properly resourced and funded.
- Connecting parklands isolated from each other by the Eastern Freeway are reconnected via habitat tunnels.
- No expansion of the Eastern Freeway for a bike path between Hoddle Street and Bulleen as this will result in very significant loss of mature trees. The bike path needs to be shifted to within the current footprint of the Eastern Freeway.
- A corrected EES is issued with a more appropriate distribution of risk across low, medium and high with a detailed description of how the levels are assessed.
- We propose the language of the EPRS be changed to deliver a net gain for the environment with a measurable increase in species populations and healthy habitat over the life of the project with yearly reports and an iterative management to improve the planning of this measurable improvement. This work should be tied in to the work of the Yarra Strategic Plan, the required annual reporting, and the long-term vision.
- There is a dedicated and significant proportion of the initial budget for the environment, and then there is an on-going environmental contribution from the road for the life of the project.

Land Use Planning (Chapter 13 of the EES)

The chapter opens by stating (emphasis ours)

*North East Link would traverse a range of land uses in north-eastern Melbourne. Construction and operation of North East Link would require **permanent acquisition and temporary occupation of land**. It would also involve activities with the potential to result in changes to current and ongoing land uses, **land use character**, consistency with strategic planning policy, and future land redevelopment potential.*

One of the two most significant key impacts of the project is the acquisition of land, both permanent and temporary. (The other most significant key impact is the impact on groundwater and the availability of water. The acquisition changes the land use. Once that land use has changed there is the opportunity for the land to be rezoned for open space and environmental uses.

There is also the opportunity to rezone land and apply overlays. A key site is the Bolin Bolin Billabong. Attachment II, the Urban Design Strategy, acknowledges that 'the Bolin Bolin Billabong was part of a larger network of billabongs, offering a plentiful supply of food. This aerial photo (below) from the State Library of Victoria, shot in 1945, shows the connecting billabong to the east of what is now the Bolin Bolin. Parts of this billabong remains on the Trinity Grammar Marles Sports Ground, especially along the escarpment. This needs to be protected by suitable planning instruments. The North-east Link highlights this need and is the appropriate opportunity to implement this planning scheme change. Ideally the, out of respect to the Wurundjeri-Woiwurrung, much of the billabong in Trinity and Marcellin sports grounds should be restored.



Landscape and Visual (Chapter 16 of the EES)

The EES scoping requirements set out the following evaluation objective:

Landscape, visual and recreational values – to minimise adverse effects on landscape values, visual amenity, recreational and open space values and to maximise the enhancement of these values where opportunities exist.

To assess the potential effects of the project on the landscape and visual environment, a landscape and visual impact assessment was undertaken. This included a landscape values assessment, which informed the development of the landscape character areas, identifying a zone of theoretical visibility, viewpoint analysis, and an assessment of potential shading and light spill impacts.

(p. 16-1)

Arboriculture (Chapter 15 of the EES)

The number of planted amenity trees planned for removal to allow space for proposed infrastructure is around 16,000 with approximately 65 per cent of these being MLTV trees. Another 10,000 planted amenity trees within the project boundary would be potentially impacted (that is, at risk of removal or damage), with approximately 65 per cent of these being MLTV trees.

The impact of the project on amenity trees and therefore on the landscape of the project area is very substantial.

Climate change (no chapter)

Climate change is the key issue facing our community and environment yet it has no separate chapter in the EES and the impacts and challenges of modelling climate change and its impact on the project area over the life of the operation of the project is not discussed/.. It is only significantly addressed at all in the chapter on Surface Waters but only with regards to flooding and to some degree in the chapter on groundwater. The potential impact of climate change on the river and its parklands cannot be underestimated and it will be a multiplier of the impacts that result from the project.

Environmental Management Framework (Chapter 27 of the EES)

The key to impact that the project will have on the environment is the adequacy, rigour and the prescriptiveness of the Environmental Performance Requirements (EPR) set in the Environmental Management Framework (EMF), and the assumptions and language underlying them. The chapter makes much use of the word 'minimization' and we contend that the word is difficult to define and measure and believe that the project should also include a 'net gain', reflecting the principles of the Yarra Act where at all possible for each EPR. As a further comment the operational phase continues for the life of the project and the operational EPR must be required for the life of the road project. Environmental investment from the

revenues project must also continue for the life of the project and these need to be built into the EPRs as part of the planning stages. Environmental changes occur over long periods of time and changes triggered by the work on the project may not be seen for many years, even decades. The Yarra Act takes a longer-term view of 50 years and this is the minimum that should be built into EMF.

The chapter page 1 states:

This EMF responds to the EES scoping requirements, which require the EES to include an environmental management framework that provides: ‘a transparent framework with clear accountabilities for managing and monitoring the environmental effects and hazards associated with construction and operational phases irrespective of the final form of the ultimate design to be implemented for the project’. [Emphasis ours.]

This chapter opens with the statement that:

This chapter presents the Environmental Management Framework (EMF) that has been developed for North East Link. The purpose of this EMF is to provide a transparent framework to manage the environmental effects identified in the North East Link Environment Effects Statement (EES) in order to meet statutory requirements, protect environmental values and sustain stakeholder confidence. This EMF forms one component of the overall governance framework for delivery of North East Link. In setting out the proposed governance framework for managing the environmental effects of the project, the EMF provides clear accountabilities for the implementation of the Environmental Performance Requirements (EPRs) in the development and delivery of the project. The EPRs are a suite of performance-based environmental standards and outcomes that apply to the design, construction and operation of North East Link, and are set out in Section 27.7.

This statement raises several questions:

- Is the framework transparent?
- Does the EMF provide clear accountabilities for the implementation of the EPRs?

Further,

- Does the EMF protect environmental values?
- Does the EMF sustain stakeholder confidence?

We contend that because of the lack of performance outcomes specified in most of the environmental EPRs the EMF fails to provide confidence that it will protect environmental values.

27.2 Roles and Responsibilities

We applaud the concept of an independent ‘Environmental Auditor’. However, for clarity this would need to be an adequately funded and staffed office that reports transparently and continuously on a publicly available website so all parties would

be fully informed while the project was being constructed and throughout its operation. The Auditor would be supported by a panel of community stakeholders. The Auditor would be paid in an arm's length arrangement such as a trust. In the context of the Yarra, the auditor would also report to the Birrarung Council. The auditor would need to have the ability to levy a financial penalty on the lead contractor for failing to meet EPRs or to demonstrate and justify that they had 'minimized' the impact. This would help satisfy the criteria of transparency and accountability. The EES state that audits would cease ('up to') two years after the opening. This would be unsatisfactory and would not sustain stakeholder confidence as natural cycles, including the groundwater response, operate over long time-frames. The ongoing work of the auditor would be funded from the tolls levied on the road.

All environmental management documentation and any issues raised to NELA in audits and corrective action required by NELA must be made publicly available. The six-monthly summary reports as to the compliance with the EMF and EPRS provided to the Minister for Planning must also be made publicly available.

The independence of the Independent Environmental Auditor is critical to the quality of all the programs and plans that the Auditor approves. A clear and transparent 'hands-off' process needs to be established for stakeholders to have confidence in this role.

27.7 Environmental Performance Requirements

The EES states that:

The EPRs that define the minimum environmental outcomes that must be achieved during the design, construction and operation of the project.

The EPRs are described as having a performance-based approach yet most of them do not state the outcome that tenderers must achieve but describe a process that the tenderers need to practice. This is centered typically around the word 'minimize'. The EPRs in general rely heavily on the word 'minimize' yet this word is not defined. There are few 'must's and many 'minimise's'. Minimize is a relative and subjective term and is highly dependent on the interpretations of the cost to minimize something. The EPRs therefore lack rigour. Nor do they place a clear obligation on NELA or contractors. We suggest the EPRS especially the ones involving groundwater and ecology be made more rigorous and set specific targets. There are also no mechanisms for assessing the EPRs across the life of the operation of the project.

We note that some of the EPRs have specific requirements, but many others are phrased in the language of minimising impact. The term 'minimization' is critical in the Environmental Performance requirements in Chapter 27 yet is ill-defined, open

to wide interpretation and subjective. It will also be subject to offsets in terms of the cost of minimization and competition between EPRs that require minimisation

The language of ‘minimization’ leaves little confidence that the EPR place any significant restraint on the work of the contractor in designing the most profitable and least costly option that can be delivered within the time frames required of the contract. There is little need within the current contracting structure for the contractors to prove that minimization was achieved through objective standards. We support the role of the environmental auditor, as long as the role is properly resourced and funded.

Opportunities/Net Gain

- We propose the EES be changed to place emphasis delivering a net gain for the environment with a measurable increase in species populations and healthy habitat over the life of the project with yearly reports and an iterative management to improve the planning of this measurable improvement. This work should be tied in to the work of the Yarra Strategic Plan, the required annual reporting, and the long-term vision.
- There is a dedicated and significant proportion of the initial budget for the environment. A model for this is how artwork on the peninsula link was funded. Then there is an on-going environmental contribution from the road for the life of the project.
- Monitoring be required for the life of the project – estimated at 75 years.
- Investment in the environment be required to continue over the life of the project and a portion of the tolls be dedicated to environmental maintenance and improvement.
- Current monitoring of the environment is inadequate as a base line, and much of the work done for the EES was done during a low rainfall period with low flows. Monitoring of the project needs to be continuous.

Attachment II Urban Design Strategy

The Urban Design Strategy is a critical part of how the project will be executed. In his opening foreword, Duncan Elliott says, ‘Urban design supports natural systems and cultural and heritage values.’ In the foreword from the Wurundjeri-Woiwurrung Cultural Heritage Aboriginal Corporation, it is stated, ‘Wurundjeri now expect that our cultural values will inform design teams moving forward.’

The function of the Urban Design Strategy is to establish, ‘the expectations of what contractors must achieve with their design’. Importantly it will have Place-specific requirements, detailed requirements and qualitative benchmarks. Urban design is not only about what is built but what is not built, what is protected and maintained and what is improved. It is about landscape.

The question is will the strategy deliver on the community vision for the Yarra River that was created for the Yarra Strategic Plan? In the light of that community vision, we endorse the intent of the Urban Design Strategy. In particular:

Objective 1.2 Recognise the Yarra River (Birrarung) Provide a design that respects and promotes the Yarra River (Birrarung) and its environs which encompass its tributaries, wetlands, billabongs, native vegetation and parklands such as Banyule Flats, and seek opportunities to celebrate this iconic Melbourne asset and ceremonial meeting place for the benefit of Traditional Owners and the general public.

Objective 1.3 Landscape & visual amenity Sensitively enhance landscape and visual outcomes and reduce physical and visual impacts associated with the project.

Objective 1.4 Existing landscape character Provide a high quality design outcome that responds sensitively to the distinctive character of this part of Melbourne, takes advantage of existing landmarks and vegetation, views and significant places, protects landscape and vegetation, and seeks to enhance the way in which people experience and interact with the landscape.

That future land use change opportunities are identified and created.

Attachment III Risk Report

Risk is really divided into two parts:

The risk or likelihood of an impact occurring.

The scale of the impact

So, a high risk has likelihood of happening and it will have a high impact. The EES is confounding two aspects of the definition into one, making the risk matrices difficult to assess. A planned risk has a certainty of happening and therefore the rating in the matrix is assessing its impact. The EES claims that there are no **high risks** as new or revised EPRs were created to reduce risk. Though the language of the Attachment is confusing at this point talking about 'considering' risks and an 'impact assessment process'. Given the wording of AS/NZS ISO 31000:2009 that is used here it is difficult to distinguish a consequence from an impact and an impact from a risk. The language used lacks precision which brings makes the analysis of the risk associated with the project difficult to follow. This leaves us with a lack of confidence that the EIS adequately addresses the full extent and consequences of risks carried by the project.

According to the EES (Chapter 25) there is a good probability that there will be a drawdown of the groundwater at the southern end of the tunnel that will lower the water table of the Bolin Bolin Billabong, which is of high cultural and ecological value. Because of the impact of a drawdown that happens during construction and continues and worsens during the life of the project, the risk for non-recoverable impact is very high. The impact/consequences are very high so the response to this in the EPR is to require the draw up of a groundwater plan, that however does not show whether or how or at what cost and whether that cost is affordable within the funding constraints of the project. So, the risk must remain rated as high.

There is a planned reduction of habitat and open space which will impact the ecological quality and continuity of the continuous parklands and habitat of the Yarra river with the consequential decline in the biodiversity and the number of species and the gene pools. The impact or consequence of that is that the ecosystems will be more vulnerable, and more vulnerable to climate change. To the Association that is an inevitable consequence of a reduction in habitat so there will be a high risk (certainty) of a reduction in biodiversity across Melbourne as the parklands are the refuge, the sink, that supports biodiversity and the impact of this will be high on the ecosystem services provided by the Yarra Parklands and the river itself. That is, it will have a high impact/consequence.

There will be disturbance of light, noise and vibration in sensitive parklands that are a critical habitat and migratory corridors. Again, this is guaranteed to happen as a consequence of the construction and operation of the freeway. This under the EPRs is to be minimized. Yet there is no clarity about that 'minimization' actually significantly reducing the risk. 'Minimization' can be construed as simple the cost to the environment of building the project.

The language is clearly phrased to reduce the sense of the impact of the project on the environment. The words 'potential risk' is used, when clearly a risk is always a potential, as that is carried in the definition of risk.

'Risk treatment' is of concern to the Association as the re-rating as a result assumes the successful implementation of the EPRs with adequate funding to mitigate the impacts. Many of the EPRs themselves are phrased in general imprecise 'minimization' terms. Without specific and rigours and measurable outcomes the EPRs actually constitute a risk in themselves – the risk whether or not they will generate a successful outcome. A clearer approach would have been to leave the risks at the level they were originally evaluated at. As the Attachment states (p. 17)

In practical terms, 'successful implementation' means that the types of controls known to be available to achieve the EPR have been implemented by suitably qualified and competent practitioners.

We would add to this that the practitioners need to be adequately resourced and the contractor adequately incentivised to achieve 'successful implementation'.

Conclusion

The EPRs lack the rigour, content and specificity to give stakeholders confidence that the scale of such a project will not be more environmental damaging than in the EES and that the contractors EMF will fail to be effective in managing the impacts of the project on the environment. Innovation is being valued over a confidence in the protection off the environment.

The Yarra River Protection (Willip-gin Birrarung murrn) Act and the Yarra Action Plan are intended to provide better co-ordination of public work along the river to avoid duplication of effort and co-ordinated consideration of a holistic and integrated view of the river. It is important therefore that panel consider the draft Yarra River–Bulleen Precinct Land Use Planning Framework as part of its deliberations.

The project represents a tension between the projected transport requirements of greater Melbourne and the ecology and open space values of our parklands. We believe that that scale of the project has not achieved that balance. Its footprint, including the expansion of the Eastern Freeway, including the bike path, between Bulleen Road and Hoddle Street, is unnecessarily destructive of our parklands and green spaces. Every effort should be made to reduce the scale of the project as that is the only way of substantially limiting the impacts on groundwater, on surface water and on the ecology.

Yours sincerely,

Andrew Kelly,
Yarra Riverkeeper
on behalf of the Yarra Riverkeeper Association
and the community groups we represent