



Submission

in response to

The Draft Yarra Strategic Plan

prepared by

Environmental Justice Australia (EJA) and the Yarra Riverkeeper Association (YRKA)

28 March 2020

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## 1. Introduction

This submission is made jointly by Environmental Justice Australia (EJA) and the Yarra Riverkeeper Association (YRKA).

EJA was established more than 30 years ago as a legal practice focused on public interest environmental law and in that time has worked in a wide range of environmental, planning and natural resource law issues and cases. EJA undertakes litigation, law and policy reform, campaigns and community legal education.

YRKA is a nongovernmental organisation that was established in order to provide a 'voice' for the Yarra River and its communities. YRKA has engaged extensively for more than a decade on campaigning, policy reform and community engagement for the protection, improvement and restoration of the River.

EJA and YRKA have worked closely and collaboratively for law and policy reform for the Yarra River since 2014. In that year, YRKA published a proposal for a Yarra River Act and a single trust to manage the river corridor. That proposal provide key inspiration for the current Yarra River legislation, under which the Yarra Strategic Plan is to operate.

Adoption by the incoming Government in 2014 of a policy for better legal and institutional protection for the Yarra River/Birrarung also contributed directly to a continuing collaboration between EJA and YRKA. That collaboration produced a series of reports, actions and a campaign influential on passage of the *Yarra River Protection (wilip-gin Birrarung murrn) Act 2017* (Vic) ('Yarra River/Birrarung Act').

A full repository of relevant YRKA policy and campaign documents can be found at <https://yarrariver.org.au/>.

EJA documents relevant to the Yarra protection campaign can be found at <https://www.envirojustice.org.au/our-work/nature/rivers/>.

As continued involvement of our organisations in governance and management of the Yarra River attests, both organisations are heavily invested in robust and transformative outcomes from this current strategic planning exercise.

## 2. Overview

The draft version of the YSP on public exhibition ('Draft YSP')<sup>1</sup> falls well short of the document needed to guide and implement the Yarra River Act. Moreover, the Draft YSP will not, in its present form, serve the central and substantive task set out for it under the Act, which is to stabilise the ecological health of the river and drive a trajectory of improvement in ecological health. Other aspects of 'river health', such as cultural and social outcomes, identified under the Act will depend fundamentally on this pathway toward ecological health.

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<sup>1</sup> Reference in these submission to the exhibited draft is identified as 'Draft YSP'. Reference prospectively to a final and approved Yarra Strategic Plan is to 'YSP'. All references to page numbers in the Draft YSP is to the online version.

The Draft YSP contains extensive omissions and uncertainties. These concern, specifically, matters such as:

- lack of detail (SMART content),
- a lack of strategic and/or technical rationale for key matters,
- lack of technical or other information providing a robust evidence base,
- absence of clear commitments and pathways to operationalising matters set out under the Act,
- failure to include certain content required under the Act,
- absence of consideration of key biodiversity issues (such as invasive species) and nebulous consideration of others (for example, stormwater),
- failure to identify and establish how conflicting uses and objectives will be managed.

The YSP is required to be a device designed to operationalise the statutory scheme of the Yarra River/Birrarung Act. It is not required to do this at a fine-grained scale but rather at a scale appropriate to geography (river corridor), purposes (achieve a 'living' and healthy river), and structure (through the machinery of 'responsible public entities'). Our submissions go to how this might be done as well as our rationale for our approach.

The Draft YSP contains important initiatives, programs, themes and directions that can or will contribute to the trajectories of improvement of river health. Many of these represent platforms or opportunities for further development or iteration of this instrument in progress to the approved YSP. However, many actions identified in the Draft YSP represent matters already in progress or resourced. This is a description in effect of business as usual. Many other actions are affected by the shortcomings noted above. As other key documents, such as the *State of the Yarra and its Parklands Report* and the *Healthy Waterways Strategy*, confirm, business as usual and vague or uncertain intentions will not be sufficient to stabilise the health of the Yarra River/Birrarung and establish trajectories of improvement.

The focus of our submissions is on design and construction of a YSP reasonable capable to achieving the object of a healthy river. Our key submissions encompass:

- Design and construction of the YSP
- Interactions with the planning system
- The decision-making framework
- Performance objectives and target-setting
- Expanded biodiversity considerations
- Stormwater management considerations
- Governance

### **3. A note on matters relating to the Land Use Framework Plan in these submissions**

Section 24(3) of the Act provides that any submissions relating to the LUF not adopted fully by the Lead Agency into the YSP must be referred to a panel and, by extension, contribute to the subject-matter of the panel's inquiry.

In our view it is patently clear that there is material in Part 1 of the Draft YSP that, in substance, relates to the statutory content of the LUFPP as set out under section 21 of the Act. For example, the LUFPP is to contain spatially specific matters and information within the YSP concerning land use and protection, such as ‘areas for protection’ and habitat corridors. A good deal of material in Part 1 equally concerns matters with implications for land-use, development and protection, such as actions to ‘strengthen terrestrial and aquatic habitat’ and floodplain restoration. Similarly, the YSP Map Book contains material with wide-ranging implications for land-use, development and protection. It is not clear how all of these matters are intended to relate to the LUFPP as set out in Part 2 of the Draft YSP.

In light of these uncertainties and intersections, our submission is that the term ‘submissions in relation to the land use framework plan’ in section 24(3) of the Act refers to any submission that in substance touches on:

- The subject-matter in the categories set out in section 21 of the Act; and
- Falls within the ambit of the ‘use and development’ of land as ordinarily understood under the planning system, which is therefore to be interpreted broadly.

Submission to which section 24(3) refers are not necessarily confined to those matters set out under Part 2 of the Draft YSP. Our submissions in this document on matters ‘relating to’ the LUFPP should be read in this context.

We make further submissions below on the preferable approach in the YSP to the design of the LUFPP, as well as to the design of the YSP generally.

#### **4. Planning and policy-making for the Yarra River/Birrarung corridor**

There is a long, if not formidable, history of planning and policy-making for the Yarra River/Birrarung corridor specifically, going back at least to the first half of the twentieth century. As the Yarra River MAC noted in its final report in 2016, key decisions such as protection of forested upper catchment and establishment of public lands along the course of the river have been crucial to its current state. Similarly, urbanisation inexorably led to draining of the lower Yarra delta and conversion of much of the lower river into a de facto drain. Alienation of lands in the mid-catchment for agricultural and settlement led to extensive clearing of native forest, wetlands and vegetation.

All of this involved expropriation of Aboriginal lands, violence and systemic suppression of the river as an existing place of law, obligations and being (Birrarung).

The most recent exercises in policy-making for the Yarra River/Birrarung corridor are those informing the current Yarra River/Birrarung Act and this strategic planning process: the findings and recommendations of the Yarra River MAC and the subsequent Yarra River Action Plan produced by the Victorian Government.

The YSP is required to be responsive to the legislative directions in the Act, but nevertheless the strategic planning process should also be mindful of the wider legislative and policy settings relevant to the river corridor.<sup>2</sup>

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<sup>2</sup> *Yarra River Protection (Wilip-gin Birrarung murron) Act 2017* (Vic), subs 18(2)(e)

Preparation of the YSP obviously occurs in the context of the accumulated policy and planning for land use and development, public lands management, and water resources management in the Yarra River corridor. This context is captured not only in the draft YSP but also in the Healthy Waterways Strategy, which functions as a ‘companion’ framework for the Yarra River/Birrarung (as well as its tributaries and other water systems).

## **5. The statutory context for the YSP**

The statutory scheme and context for the YSP is contained in the Yarra River/Birrarung Act. Specifically, the framework for the YSP is contained in Part 4 of the Act. The drafting and interpretation of the YSP is influenced by Part 1, including the purposes and objects of the Act, and Part 2 (Yarra Protection Principles), such as the obligation to have regard to the principles in preparation of the YSP.<sup>3</sup>

The Preamble to the Act establishes an important framing context for the legislative scheme as a whole and the Preamble has an important interpretive function.

More detailed consideration of the statutory context and construction of the YSP is set out below.

Certain key messages and intentions are prominent in the legislation, especially as provided for in its objects and in the Preamble. There are four essential objects the legislation seeks to achieve:<sup>4</sup>

- Recognition of the importance of the Yarra River/Birrarung, especially for ecological, cultural and social values;
- Establish a new form of public parkland
- Establish the overarching policy and planning framework that is to be centred on the YSP;
- Institutional reform, including through a new Birrarung Council.

The Preamble to the Act powerfully and affirmatively announces the intention of the Parliament to ensure the Yarra River is ‘kept alive and healthy for benefit of future generations’ and that the intrinsic connection to the Traditional Owners is recognised.

Ultimately, the YSP is an operational centrepiece of the Act, in terms of meeting these intentions.

## **6. The policy context: rooms and elephants**

As the Yarra River MAC pointed out the Yarra River/Birrarung and its environs confront powerful and contradictory forces in urban design and planning. On the one hand, there is the desire to retain and extend benefits from historic environmental protection of a fair degree of the river corridor and headwaters. On the other hand, there is a renewed wave of urban development pressure on the river as Melbourne’s population heads toward 6 million by 2030. Climate change is a further wildcard in this situation and a source of uncertainties.

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<sup>3</sup> *Yarra River Protection (wilip-gin Birrarung murrong) Act 2017* (Vic), subs 18(2)(c)

<sup>4</sup> *Yarra River Protection (wilip-gin Birrarung murrong) Act 2017* (Vic), s 5

Managing the tensions between urban development and pressures on the river, in the face of climate change and urbanization, is the elephant in the room in terms of the preparation and delivery of the YSP.

The Act and the YSP are required to manage the elephant.

The expression of these tensions are manifold in the Draft YSP but focus manifestly on improving biodiversity and ecological outcomes in the context of enabling access and use of the river and its environs.

In our submission, the primary intention of the Act is to sustain and extend the ecological health of the river. This is to occur through a cultural lens of First Nations concepts and approaches, hence the bi-cultural character of the Act's title and preamble. Accommodation of urban uses and pressures is to recognise this primacy, which includes planning for access, recreation, and social or commercial uses.

The long-term outcome for the river corridor should be a revitalised, connected natural urban space, understood in bi-cultural (WoiWurrung-settler) terms, and connected to a revitalised tributary network. The ambit of the statutory scheme should be an extensive rehabilitated space which will be necessary to underpin new models of urban design that are both ecologically ambitious and culturally respectful.

The YSP must also be prepared with regard, potentially, to a wide range of other legislation, policies and plans, including Victorian Government policy and plans as well as those of responsible public entities.<sup>5</sup> These schemes and plans can and should serve this wider intention for the future of the Yarra River/Birrarung. Certain of these instruments are picked up under the Draft YSP,<sup>6</sup> although precisely how regard has been had to those identified is clearer in some circumstances than others. For instance, the interaction between the Regional Catchment Strategy and target-setting for the YSP is identified. Precisely how the YSP will contribute to Biodiversity Strategy targets is far less clear.

### *6.1 Recommendation*

*In our view, more considered and precise response to relevant legislation and policies needs to be set out in the Draft YSP, including explanation of how that has occurred. In addition to legislation and policy referred to in the footnote below, a closer response to, or consideration of, the State of the Yarra and its Parklands Report and the Healthy Waterways Strategy is required.*

## **7. The geographic context**

### *7.1 A regulated river and ecological 'life support'*

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<sup>5</sup> *Yarra River Protection (wilip-gin Birrarung murrn) Act 2017* (Vic), subs 18(2)(e). Relevant instruments include: *Flora and Fauna Guarantee Amendment Act 2019*; *VEWH Seasonal Watering Plan – Central Region 2019*; *Government of Victoria Protecting Victoria's Biodiversity – Biodiversity 2037*; *PPWCMA Port Phillip and Westernport Regional Catchment Strategy*.

<sup>6</sup> Draft YSP, pp 18-19

A clear, if perhaps unavoidable, constraint on the operation of the scheme of the Yarra River/Birrarung Act is its application to the river corridor. It is not a regulatory scheme for the watershed or, in that respect, for the whole actual 'entity' of the river, although we add further submission below regarding extension of the YSP to its full geographic potential.

The 'breath' or 'heartbeat' of the 'living' river would naturally have been annual cycles of flooding and drying, across the entire floodplain, its woodlands and forests, as well as the river channel.

The river now is a regulated river. This fact has enormous implications for reviving a 'healthy' and 'living' river. It means upgrading the life support for the river, in order to mimic the natural state as far as conditions permit.

The entity of the river needs to be understood, for the purposes of law and policy, in terms of longitudinal and lateral connectivity, and a complex and ultimately restorative ecology.

### *7.2 Recommendation*

*In the 'narrative description' of the river corridor include a description of the dynamics of a 'living' river, in Wurundjeri and settler terms, in a manner that aligns with ecohydrological realities of the river, its natural and social histories.*

### *7.3 'Protection' implies a trajectory of improvement as well as response to threats*

The intention of the Act is protective of the river over the long-term. The YSP is to operationalise that outcome. The 'protective' scheme of the Act and the YSP has as its conceptual reference point river health and the 'living' river. This reference point is given very high-level expression in the Community Vision and in the Performance Objectives.

The reference state implies improvement in the trajectory of river health, specifically improved ecological health outcomes, in addition to constraining harms or damage.

In light of this approach the YSP must be transformative and effective. The current state and trajectory of the Yarra River/Birrarung, notably its ecology, is stagnant or in decline.<sup>7</sup>

The YSP is a critical instrument in reversal of declining trajectories and institutionalising of positive trajectories of health. This framing of the Plan should be included expressly in its introduction or 'recitals'.

The threats to river health are set out at pages 11-12 of the Draft YSP in summary form. These might be identified as including:

- Climate change
- Urban development

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<sup>7</sup> Commissioner for Environmental Sustainability *State of the Yarra and its Parklands Report (2018)*, <https://www.ces.vic.gov.au/reports/state-yarra-and-its-parklands-2018/environmental-health>

- Altered flow regimes
- Biodiversity loss.

These threats are interconnected. As such, in response to this ‘matrix’ of threats, the YSP should provide strategic and effective interventions directed to contending with them.

Climate change is already producing declining rainfall<sup>8</sup> and even greater decline in runoff and stream flows.

The Yarra/Birrarung basin, unsurprisingly give its use for Melbourne’s water supply, is the most heavily diverted for consumptive purposes.<sup>9</sup>

Trends in urban development are identified in the Draft YSP. These trends are stark. The Yarra River/Birrarung corridor provides the opportunity for development models and pathways that are more systematically ‘water sensitive’ and ‘biodiversity sensitive’.<sup>10</sup>

Loss and degradation of biodiversity in cities, including within the YSP Area, represent key, cumulative and adverse outcomes of prevailing urban development and infrastructure models.<sup>11</sup> The capacity of the YSP to provide a countervailing force to incremental biodiversity loss is pivotal. The YSP is to be a protective and restorative scheme for urban biodiversity. This intention is inferred, for example, in requirements related to habitat corridors, urban forest, waterway health, and imperatives for net environmental gain.

## **8. The YSP and its construction**

### *8.1 Environmental considerations and the proper construction of the Act*

The YSP operates in a new and unique legislative context.

This unique context is, in our submission, relevant to the interpretation and application of statutory provisions setting out the requirements for the YSP and, by extension, the design and construction of the YSP.

The Yarra River Act is at its heart an environmental statute, focused on protection, conservation and rehabilitation of the natural qualities of the river corridor. Social and cultural factors are clearly prominent in and intrinsic to the scheme of the Act, such as amenity considerations and Wurunjderi perspectives and identity. Integrated decision-making under the Act is intended to incorporate these

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<sup>8</sup> DELWP *Long-term Water Resources Assessment (LTWRA): Basin by Basin Results*, pp 116-125

<sup>9</sup> Ibid

<sup>10</sup> Georgia Garrard et al ‘Here’s how to design cities where people and nature can both flourish’ *The Conversation*, 24 October 2018, <https://theconversation.com/heres-how-to-design-cities-where-people-and-nature-can-both-flourish-102849>

<sup>11</sup> The acute task of turning around trajectories of nature loss in urban and peri-urban Melbourne, including in the vicinity of the Yarra, is compounded by projects such as the Northeast Link Project, which on its own likely contribute profoundly to loss of urban biodiversity in the vicinity of the YarraL corridor. We note that, despite non-application of the Yarra legislation to that project, the expert inquiry into NEL advised application of key features of the Yarra legislative scheme to the Project in any case. This finding highlights the strategic and environmental importance of the Yarra scheme.

factors: environmental, social, cultural. The manner of integration is crucial however. The ‘health’ of the river is essentially an ecological question, to which considerations of cultural health (such as the maintenance and revitalisation of Aboriginal connection) and social benefits (such as amenity or recreation) are intimately tied and on which they depend. In the model of integration assumed by the Act, environmental considerations are foundational. They are, in this regard, to be given a primacy. This applies to the approach to the making of the YSP, as well as to individual actions and decisions of responsible public entities relating to Yarra River land.

### *8.2 Statutory content*

The express statutory requirements for the YSP are set out under Part 4 of the Act. Division 3 of that Part is particularly significant, as it sets out the main parameters for the YSP. The YSP must include a Land Use Framework Plan but it is not confined to that content. The YSP must include the Community Vision. It must include performance objectives and other matters set out at section 20.

The Draft YSP appears to respond to much of this content, including response to the LUFPP requirement, although arguably the format of the Draft YSP does not directly or precisely correspond to the statutory categories under sections 20 and 21 of the Act. Further, there are gaps in the Draft YSP in terms of required content, such as inclusion of a decision-making framework and identification of priority projects. We comment on these issues below.

### *8.3 Recommendations*

*The YSP should state clearly that it operates within the distinctive model of integrated planning and decision-making provide for under the Act. The YSP should state that this model is directed to the ultimate outcome of river health and, as such, ecological or environmental considerations are to be given primacy in design and implementation of actions relating to the Yarra River/Birrarung corridor.*

## **9. Plan design principles**

One key gap in our view in the construction of the Draft YSP is a clear understanding of the principles of its design. An exposition of Plan design principles in the YSP will assist in setting out the rationale and method for the Plan and its implementation. We propose the following elements as key principles for design and construction of the YSP.

### *9.1 SMART content*

In its current iteration, the YSP errs so greatly on the side of generality that many actions and measures set out under it tend to be abstract, indeterminate, vague or unaccountable. A plan must be more than a high-level statement of policy. It is a purposive, operational device. The Draft YSP often reads more as the former than the latter.

The YSP should set out an ordered and systematic framework for the achievement of its purposes. Statutory plans typically have a range of tools or devices laid out under their governing laws, such as objectives, goals, measures, targets, requirements, and so on, depending on their particular construction.

The YSP needs to set out not only with sufficient precision what its objectives are but how they are to be met. The commonly-used device for doing this in policy design is use of SMART (‘specific,

measurable, attributable, relevant or responsive, and time-bound') techniques in preparation and drafting of performative objectives and measures intended to achieve them.

We appreciate that the YSP is a form of framework plan and a degree of discretion on public actors in its delivery is inevitable. Nevertheless, it should be an clear principle of design and implementation of the YSP that SMART techniques are applied, to the maximum practicable degree and appropriate to the scale and subject-matter at issue. This is a matter of good policy as well as accountable governance.

### *9.2 Performance objectives set out distinctly with SMART principled applied*

Use of SMART design applies to drafting of the required performance objectives to be set under the Act.

YSP performance objectives should be set out in a distinct and separate part of the Plan.

Subsection 20(2)(c) of the Yarra River/Birrarung Act provides that the YSP must

contain performance objectives for waterway health, river parklands amenity, landscape amenity and environmental, cultural and heritage values *to be achieved over a specified period in relation to Yarra River land...* [emphasis added].

The preceding paragraph (subs 20(2)(b) requires that the YSP sets out broad objectives and values.

The Draft YSP sets out what are referred to as 'performance objectives' at pp 29-39. In general these objectives are described as:

- A healthy river and lands
- A culturally diverse river corridor
- Quality parklands for a growing population
- Protecting the natural beauty of the Yarra River corridor.

Each objective has further qualitative description and actions attached.

In our submission, these categories may be considered as 'broad objectives... and values' rather than performance objectives. They might also be considered merely as 'themes' or 'directions for the YSP.

*Performance* objectives represent something else. They require indicia and schemes for performance. SMART design and drafting techniques are clearly relevant to this approach. Conditions and expected levels of performance are often set out using these techniques. By comparison, the Healthy Waterways Strategy does include performance objectives prepared with this approach in mind.<sup>12</sup> The YSP should adopt a comparable approach.

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<sup>12</sup> *Healthy Waterways Strategy* (2018), p 19, by which performance objectives:

- 'are quantitative, measurable and achievable in 10 years';
- 'are underpinned by transparent and best available information and knowledge'; and
- 'provide short-term, tangible outcomes, which indicate progress towards less tangible, long-term outcomes'.

Furthermore, the implication of the setting of performance objectives under the Act is that the ambitions of the YSP are both targeted and require measures to be integrated into the Plan that are reasonably likely and capable of meeting those objectives ('performance objectives... to be achieved...').

### *9.3 Nested and subsidiary plans and actions drafted with SMART principles applied*

The YSP is a form of framework plan to which there may be various analogies, such as the Upper Yarra Valley and Dandenong Ranges Strategy Plan or Urban Growth Plans. It operates at a certain level of abstraction given its scale. It is entirely foreseeable and appropriate that the YSP would need to set out, at an intermediate level, actions, plans, programs or policies, in order to operationalise the higher-level content of in the YSP. There are circumstances where this is good practice for reasons of efficiency. In other circumstances it is a necessary response to a contemporary lack of knowledge, resources or priority.

A rough analogy to this process is the formulation of subsidiary plans or instruments in land-use planning or under water planning. It is analogous to a 'secondary consent' process.

For example, the YSP could be redrafted in order to establish specific measures and outcomes directed to floodplain restoration and protection in the Lower Rural Reach (Yering to Tarrawarra), such as text that provides:

Melbourne Water, the Shire of Yarra Ranges and other responsible public entities designated in the program shall prepare and implement a program of work directed to protecting and restoring the environmental and hydrological values of the Yarra River floodplain between Yering and Tarrawarra to the maximum degree practicable over the period of operation of this Yarra Strategic Plan.

The work program should include, but not necessarily be limited to:

- Investigation of opportunities for and barriers to billabong and floodplain restoration
- Collaboration and/or negotiation with landowners in order to enable opportunities and overcome barriers
- Prepare a landscape assessment integrating natural and cultural values, informed by best available scientific and cultural knowledge
- Strengthen planning controls to reflect landscape, environmental and cultural values associated with the billabong system and floodplain
- Identify and implement other legal or policy tools deemed to be relevant or useful to achieving the work program, such as on-title agreements or land acquisition
- Implement a partnership with Wurundjeri intended to protect cultural values associated with Yering Station.

As part of its preparation, a draft work program shall be submitted to the Birrarung Council for its opinion and in order that the Council may advise the Minister. The draft work program must be made publicly available and submissions sought and received on its contents.

A report on implementation of the work program must to prepared and delivered to the Birrarung Council and the Commissioner for Environmental Sustainability no less than 12 months prior to the conclusion of this Yarra Strategic Plan.

By comparison, the YSP may incorporate text that requires identified public entities to ‘conclude and implement the Yarra River-Bulleen Preconct Land Use Framework Plan’. This would be an example of a detailed instrument drafted directly into the YSP. Similarly, the existing text to ‘Protect and strengthen the Watsons Creek biodiversity corridor by implementing the Healthy Waterways Strategy recommendations for catchment links’ represent a comparable form of appropriately scaled drafting.

The type of subsidiary planning and programming suggested here would be, in our submission, an effective and appropriate intermediate step between the YSP and the ordinary exercise of responsible public entities’ functions and powers.

Drafted in the manner proposed above these intermediate instruments provide an appropriate balance between specific content and public entity discretion.

#### *9.4 Set out narrative description of corridor distinctly*

The Act requires a ‘narrative description of the river corridor’ to be set out. This should be done as a distinct Part of the Plan. It is not clear where or how this is done under the Draft YSP, although various content seems to be match the description of a ‘narrative description’. See also our recommendations above on content of this ‘narrative description’.

#### *9.5 Set out a DMF distinctly*

The Act requires the Plan to include a decision-making framework (‘DMF’) to be applied to individual projects or proposals. This should be set out in a separate Part of the Plan. In our submission, the DMF must be reflective of the intent of the Act, applying the distinctive model and principles of integrated management to decision-making at a relatively fine-grained level.

The Draft YSP provides no decision-making framework and expressly defers elaboration of this mechanism to a final version of the Plan.

Paragraph (g) under sub-section 20(2) does not identify to which ‘projects or proposals’ the decision-making framework is to apply. In our submission its application should be taken broadly to refer, at least, to projects and proposals with a material impact on Yarra River land. The decision-making framework is intended to be a discrete assessment and decision-making tool, overlaying other statutory models of decision-making (such as the integrated decision-making model under planning law).

According to the Act, the DMF appears to represent a mandatory direction or consideration on responsible public entities (whether expressed as binding or not under the YSP).

##### *9.5.1 Content of a decision-making framework*

In our submission, the DMF ought to include the following elements:

- The DMF provides the standards and conditions against which particular projects and proposals within the YSP Area, directly or indirectly, are to be assessed and determined.
- The DMF provides a tool for assessment and determination of particular projects and proposals in order that those projects and proposals are consistent with and contribute to the objectives, purposes and vision or the YSP and the Act.

- The DMF requires regard to be had to the range of Yarra protection principles applicable in any particular circumstance.
- Notwithstanding the above point, the DMF operationalises a model of integrated decision-making emphasising environmental, cultural, and social considerations,<sup>13</sup> in order to improve public health and well-being and environmental benefit.<sup>14</sup> Application of integrated decision-making under the DMF should be guided by appropriate tools and models, such as ‘biodiversity sensitive urban design’ protocols and ‘water sensitive urban design’ principles.
- Any individual project or proposal assessed under the DMF must demonstrate its contribution to the protection and improvement of the Yarra River (‘protection and improvement test’).
- Within the scope of the ‘protection and improvement test’, any individual project or proposal must demonstrate a net gain for the environment in relation to Yarra River land (‘net gain for the environment imperative’).<sup>15</sup> Ecological health of the river underpins cultural and social well-being and benefits. ‘Environment’ is defined under the Act and its content is essentially the same as under the Environment Protection Act, encompassing natural values, with the addition of the social value of amenity.
- Where planning decisions under a planning scheme intersect with decision-making under the DMF outcomes must enable and favour protection and improvement of Yarra River land.
- Decision-making by a responsible public entity on a project or proposal relating to natural resource management functions that are within the scope of its functions and powers must similarly integrate the protection and improvement of the Yarra River into decision-making affecting the exercise of those functions and powers.

#### 9.5.2 Application of decision-making framework

For the purposes of subs 20(2)(h) of the Act, the YSP should state expressly that application of the DMF is binding on responsible public entities to the extent of the exercise of their functions and powers as they relate to YSP Area.

A hypothetical example this model of DMF applied to an ‘individual action’ (infrastructure project) is provide at Appendix 3.

#### *9.6 LUF set out in accordance with categories of section 21 and breadth of land-use planning as commonly understood*

In general, the organisation of the text for the LUF should be set out according to the categories required under section 21. The current drafting in the Draft YSP does not clearly set out Part 2 of that document (referred to as the Land Use Framework Plan) in this way. Moreover, there is content in other parts of the Draft YSP, including Part 1, that in substance traverses material within the ambit of section 21 categories. This approach is confusing and unhelpful.

What should guide the allocation or incorporation of content into the LUF are:

- The section 21 categories; and

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<sup>13</sup> *Yarra River Protection (wilip-gin Birrarung murrong) Act 2017* (Vic), Part 2 generally.

<sup>14</sup> See *Yarra River Protection (wilip-gin Birrarung murrong) Act 2017* (Vic), subs 8(1)

<sup>15</sup> *Yarra River Protection (wilip-gin Birrarung murrong) Act 2017* (Vic), subs 9(4)

- The established ambit of land-use planning, which functions broadly and extends to uses, development and actions with some nexus to land.

Within this principle of YSP design there are certain additional matters that will need to be clarified and resolved to enable the LUFPP to function effectively and transparently. These include:

- Spatial plans need to include management zonation as well as descriptive reaches
- The concept of ‘areas of protection’ needs to be developed and general principles underpinning that concept expressly stated. In particular, do such ‘areas of protection’ refer to exist and anticipated ‘protected areas’ and do ‘protected areas’ encompass land subject to appropriate tenures (eg conservation tenures), on-title conservation measures, relevant planning controls, or all of the above?
- Wurundjeri tangible and intangible values may include stand-alone Wurundjeri text (as per current draft) but must include plan or program of work setting out method to *recognise and protect* identified values: 21(d)
- Define and set out principles for the concept of ‘urban revitalisation or renewal’
- Set out principles for recognising climate change impacts, flood and bushfire risks in the LUFPP

#### *9.7 Identify and attach all reference and technical documents*

Identify and attach all reference documents or subsidiary documents intended to inform the Plan and clearly establish the status of each under the Plan. These may be technical documents, project plans, management plans, or other studies. A list of some of those documents referred to in the Draft YSP as far as we can discern is set out at Appendix 1.

In some cases, technical documents are referred to but not available and it is not possible to comment on them. If technical or reference documents are in production or yet to be prepared this should be accounted for and set out in provisions of the Plan. For example, a program of work or production of reports or technical input can be and action or measure set out expressly under the Plan. A process analogous to secondary consents can be used to accommodate that work into the overall framework.

#### *9.8 Express responsiveness to key assessment or policy documents*

Within the constellation of policy and legislative instruments potentially relevant to preparation of the YSP, there are certain key documents to which the YSP should expressly and specifically respond. In particular:

- *The State of the Yarra and its Parklands Report*
- *The Healthy Waterways Strategy*.

On our reading this response has occurred to some degree, such as in reference to matters or actions within the HWS, but the responses are not clear. Neither are they necessarily proportionate. For example, the *State of the Yarra and its Parklands Report* is intended expressly to present an assessment of the ‘environmental condition’ of the Yarra River/Birrarung. The YSP should respond clearly to matters raised in it. Take the example of this finding:

Environmental objectives for seasonal watering will not be fully met without simultaneously addressing a number of issues such as: excessive catchment erosion, barriers to fish movement, high nutrient loads, loss of streambank vegetation and invasive species.<sup>16</sup>

The YSP should include an appropriate response to the issues set out here. Such a response would likely include actions not only referencing the Seasonal Watering Plan but designed to influence or affect waterway management, planning controls, and land management. Submissions elsewhere in this document propose responses along these lines.

*9.9 Include express identification and recognition of conflicting or competing YSP objectives and how these are to be managed or reconciled*

Land-use and other forms of resource planning typically confront competing or conflicting objectives. The YSP will be no exception. The YSP needs to articulate, clearly and candidly, where such conflicts lie and how they are to be responded to. The response needs to, in accordance with the intentions of the Act and its planning scheme, prioritise environmental and river health outcomes to the maximum degree practicable, including recognising the primacy of environmental outcomes (and net environmental gain) in respect of any particular action or decision.

At the macro level conflicting objectives will lie in ecological protection and restoration, on the one hand, and pressures of urbanisation, on the other hand, including but not limited to pressures to access and use environmentally sensitive areas within the YSP Area. These are current pressures and they will only expand. Not only are they best tackled robustly and honestly, even where this is perceived to cause inconvenience or cost, but they are best tackled through appropriate assessment and decision-making tools. The DMF will be central to this exercise.

Currently, there are notable instances where the Draft YSP does not properly represent competing interests, for example the upgrade to Jumping Creek Road, North East Link, and various sporting facilities. The benefits of these projects are small or, more likely, contrary to the ecological and biodiversity values of the river corridor (for example, through habitat fragmentation or loss).

Portraying these types of action as beneficial to the environmental conditions of the river corridor or consistent with the framework of the Act is disingenuous. It is also important to address conflicts identified in the YSP in an objective manner and recognise both benefits and its costs relevant to the Act. Any project that conflicts with the principles of the Act should certainly not be represented in a way that makes it appear to make a contribution towards the goals of the Act.

*9.10 Recommendation*

*YSP design principles and methods as set out above should be adopted into a final YSP. These principles and methods apply as relevant to the YSP generally and to the LUF.*

**10. An appropriate and adapted land-use planning framework**

It is plainly envisaged and intended that the YSP interact with the planning system. This is implied in the requirement for a LUF and in requirements to set out matters enumerated in section 21. Certain

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<sup>16</sup> CES *State of the Yarra and its Parklands Report* (2018), 88

matters in section 20 also have separate planning implications, such as identification of regional infrastructure networks and projects for protection and improvement of Yarra River land.

Key shortcomings of the Draft YSP occur at both the substantive level (for example, insufficient or abstract planning response proposed to effectively go beyond BAU) and governance (for example, setting out how the planning system and institutions will deliver).

The planning system is important for the regulation of actions and conduct of land managers, whether public or private. It also frames regulation and decision-making in an institutional and participatory context. Planning is less useful for facilitating proactive programs and works. Both regulatory and other approaches are anticipated under the Act. We make submissions on both in this document.

### *10.1 Preliminary comments on planning and the Draft YSP*

#### 10.1.1 Connections between Parts 1 and 2 of the Draft YSP not clear

The Draft YSP purports to include land-use planning matters in the LUPF in Part 2. In substance, there are various matters and proposals included in Part 1 of the document that deal with planning or would require a planning response. The precise connections between Parts 1 and 2 are not clearly spelt out in the document nor the rationale underpinning the relationships between them.

As noted elsewhere in these submissions, the design of the YSP needs to be revised in line with categories set out in the Act. The Draft YSP needs to be revised in order to set out matters that in substance concern planning or require a planning response.

#### 10.1.2 Performance objectives and planning implications need to be set out

The performance objectives set out in the Draft YSP have the potential to influence matters regulated under planning. These implications are not explained, set out or rationalised in the document. For example, Performance Objective 1 has implications for habitat corridors, stormwater controls and sewerage systems, Performance Objective 2 has implication for heritage sites, Performance Objective 3 for the open space network and community access, and Performance Objective 4 for public access and land-use changes integrating new open spaces and ecological corridors.

Performance objectives need to be more expressly and systematically tied to planning and planning outcomes. We make submissions on this point elsewhere in this document.

#### 10.1.3 Amended spatial scheme in LUPF

The LUPF sets out five whole-of-river directions which may be summarised as:

- Refine and introduce permanent design and development and landscape management controls between Richmond and Warrandyte
- Prepare similar controls upstream of Warrandyte
- Review heritage values and protections and introduce new controls
- Identify areas of high riparian and biodiversity value and apply controls
- Develop new guidelines for landscape design and planning at the river interface.

As useful as these proposals are they do not cover nor address adequately matters at the regional and metropolitan level required under the Act, in particular under paragraphs (b), (f), (g), (l), (m), (n) and (o) under section 21.

In our view, as noted elsewhere in these submission, the YSP requires an amended spatial architecture, including what might be called a 'regional framework plan' responsive to municipal boundaries and geographical realities within the YSP area as a whole (not only Yarra River land) and 'precinct' or 'nodal' plans subsidiary to this type of framework plan. 'Reaches' remain a useful, but imprecise, device. Specific planning measures can be set out within that structure, responsive to section 21 content in particular and performance objectives.

Design principles informing this revised Plan 'architecture' is considered elsewhere in these submissions, including the need for 'nested' (cascading) and subsidiary planning actions.

#### 10.1.4 Land use categories used in the Draft YSP

The Draft YSP identifies a scheme of land-use categories and these are applied in the Map Book. These are helpful but require revision if they are to be used:

- 'Bush residential' is a misnomer to the extent it implies forms of residential land use. This category essentially applies to rural land with sensitive interfaces with the river and environmental uses.
- No actions or strategies or cross-referencing to 'Parklands and recreation' and 'rural environmental' characterisation occur in the Draft YSP.
- New 'areas for protection' should consider areas that are currently relatively free of human disturbance. These areas may be on private land, where there is no public access. This should be protected from further disturbance and steps taken to reduce disturbance. An example of inappropriate disturbance is the presence of mountain bikes in nature reserves. Disturbance and fragmentation of habitat are principle threats to biodiversity in the Yarra Catchment, and world-wide.
- The 'area of protection' proposed for downstream of Evershed Park should extend also upstream as far as the boundary of the Yarra Ranges National Park. Recommendations for the Upper Rural Reach in the LUFPP imply greater protections. That reach contains abundant wetlands with insufficient planning protection and which should also be subject to assessment. The riparian corridor is fragmented and narrow. This area is a priority for protective measures. Such measures would respond to concerns expressed in the State of the Yarra Report,<sup>17</sup> in particular in respect of habitat loss and fragmentation and poor land practices, such as grazing, sediment generation, chemical and fertilizer runoff.
- Planning responses in this 'area of protection' would need to be complemented by land management incentives, on-title arrangements, compensation and/or strategic acquisition.
- In terms of drafting in the YSP, similar techniques and design of a work program to establish and progress an 'area of protection' in the Upper Rural reach could take a similar form of that proposed below for the Lower Rural Reach corridor and floodplain.
- The floodplain of the Lower Rural Reach should also be designated an 'area of protection'.

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<sup>17</sup> CES *State of the Yarra and its Parklands Report* (2018), 47

10.2 *Responding to the planning complexities and geographic realities of the river corridor: strategy 1 – review, revision and implementation of existing planning tools*

It is a trite observation that there are an abundance of planning controls in the YSP area (whether as currently devised or expanded). Urban and peri-urban geographic realities mean an inherently complex planning landscape. A key question for the YSP and LUFP is how best to navigate that situation in accordance with the requirements of the Act and using the machinery of the planning system. The submissions below on this point go to the design and construction of the LUFP and the wider YSP.

Even planning controls that deal specifically with, or touch on, the Yarra River/Birrarung and its environs are multifold and not necessarily well coordinated or aligned with the intentions and scheme of the Yarra River/Birrarung Act. Heavy reliance on local government to manage and coordinate strategic planning responses to protect the river corridor contributes to this state of affairs.

10.2.1 GC48 planning controls and review

For example, planning controls in place currently, such as DDOs and SLOs, introduced by Amendment GC48, provide consistency in construction but are confined geographically. The content and purposes of those instruments differs and they do not address hydrology, hazard management, or heritage values, all of which are addressed by other means. A comparison of the key provisions in the GC48 controls is set out at Appendix 4 of these submissions.

Moreover, various other controls such as ESOs, VPOs and/or LSIOs apply to land in the YSP Area, as these have been prepared and implemented progressively (and ad hoc) over time. The GC48 controls are proposed for review in the Draft YSP and to be extended up-river. Elsewhere in these submissions we comment on the necessity to extent environmental controls up-river beyond their current extent and to the tributaries within an expanded YSP Area. These should be minimum measures to strengthen the LUFP.

Any such review should be expressed in the text of the LUFP in terms of a ‘program of work’, appropriately allocated and organised, for that review, in order to accord with SMART principles for YSP drafting. In anticipation of this work, all existing temporary Yarra planning controls need to made ongoing.

Included in any such review should be:

- Assessment as to whether the Environmental Significance Overlay is a more appropriate tool than the Significant Landscape Overlay to govern land management practices on private land within and adjacent to the Yarra River/Birrarung floodplain outside the Urban Growth Boundary.
- Assessment as to whether controls that apply downstream from Richmond align to determine whether they are appropriately aligned with the land use framework, its overarching objectives and those of the YSP. While the GC48 controls may not be relevant in the highly urbanised context of central Melbourne and its ports, a review and audit of the current controls within the lifetime of the strategy is warranted.
- As noted, application of protective planning controls on the tributaries.

### 10.2.2 Environmental controls

For land supporting habitat corridors, significant biodiversity values or landscape features or processes, environmental overlays (such as ESO schedules) need to be extended and applied to that land. This may require further assessment and investigation to occur in the course of the YSP. The LUFPP should include a requirement for a program of work to assess, revise and implement planning controls directed to the protection of biodiversity and ecological values in the YSP Area. This should occur in accordance with refined Performance Objectives and targets. We make submissions on those matters elsewhere in these submissions.

At a minimum, effective environmental overlays need to be applied to all land of biodiversity significance within the YSP Area beyond the Urban Growth Boundary. This type of planning control needs to respond to the multiple threats presented to high value biodiversity in the river corridor, including habitat loss or fragmentation, excessive nutrients, invasive species, and grazing pressures. Specifically, environmental overlays need to be applied to the floodplains in the 'lower rural reach' in combination with other actions. Our submissions on tributaries are also relevant here.

### 10.2.3 Stormwater and agricultural runoff controls

A program for the further strengthening of planning controls in relation to stormwater management and agricultural runoff, including beyond those contained in VC154, needs to be set out under the Plan. We make additional comment on the nexus of planning and stormwater elsewhere in these submissions.

### 10.2.4 Public acquisition controls

In those areas where significant environmental or landscape values are on private land and, as a consequence of negotiation, the conclusion is reached that other protective and restorative measures are not available or cannot reasonably be implemented, public acquisition of land should be used. In order to effect that outcome the LUFPP needs to contemplate introducing public acquisition controls into planning schemes. The intention to establish public acquisition controls on key ecological sites (for example, habitat corridors and land representative of key biodiversity values) needs to be signalled clearly in the YSP and LUFPP

### 10.2.5 Zones

The Land Use Framework should include an action to audit existing zones within the Yarra Strategic Plan area to ensure that they appropriately align with and support the objectives of the framework. This should include examining zoning outside the urban growth boundary to avoid the introduction of inappropriate land uses within the floodplain and on immediately adjoining land.

## 10.3 *Responding to the planning complexities and geographic realities of the river corridor: strategy 2 – new models of planning and its implementation*

Complementary to many of the actions outlined above in 'strategy 1', we submit that a more radical approach needs to be taken for planning to respond effectively to the needs and opportunities of Yarra River/Birrarung protection.

### 10.3.1 Amendment to VPP cl 12.03-1R

The Draft YSP proposed amendment to VPP cl 21.03-1R in order to link the YSP to the planning system. In principle, we do not object to this but submit that what is proposed is ambiguous and does not go far enough. For example, it is proposed that the YSP is a reference document or incorporated document under that clause, each of which have potentially different legal status and functions. Similarly, there is a reference to planning scheme amendments being consistent with 'strategic objectives' of the YSP. That term does not appear in the YSP or in the Act and it is not clear what it refers to. All of this is at best unhelpful.

The proposals to amend clause 12.03-1R should be strengthened. The focus of any refinements to this clause should be on ensuring that the strategic and statutory effect of the YSP and LUPP are optimised. This should include:

- Defining the Yarra Strategic Plan area so that the extent of application of the provision is unambiguous;
- Incorporating the performance objectives for the river;
- Outlining high level strategic directions and actions for the entire river corridor
- Describing the strategic priorities for sub-regional planning units, which may be 'reaches', precincts or nodes;
- Including the YSP (including the LUPP) as a reference document;
- Requiring that all planning scheme amendments address the *Yarra River Protection Principles* outlined at sections 8-12 of the Act, particularly the reference to a 'net gain for the environment' for actions and policies that have an environmental impact on Yarra River land.

### 10.3.2 Introduce a new Yarra River (Birrarrung) Strategy clause

In our submissions the VPPs should be amended to include a new Yarra River (Birrarrung) Strategy clause. This effect and intention of this clause would be to align underlying planning scheme provisions with the YSP in a manner comparable to the *Upper Yarra Valley and Dandenong Ranges Regional Strategy Plan* ('Strategy Plan') and clause 51.03 of the *Yarra Ranges Planning Scheme*, as underpinned by *Planning and Environment Act 1987* (Vic), Part 3A. In essence, strategic planning in Yarra Ranges Shire requires consistency between the Strategy Plan and the planning scheme.

The current proposed approach (no binding content in the YSP and the YSP as a document referred to or incorporated into the VPPs) would likely allow planning scheme amendments inconsistent with a YSP to be implemented, thereby undermining the intentions of the Act.

### 10.3.3 Create a new Yarra River (Birrarrung) Strategy Overlay

Complementary to the 'Strategy Clause' and building on underlying planning provisions, we submit that there is a need to create a Yarra River (Birrarrung) Strategy Overlay to be applied across the entire YSP Area. This instrument would provide an overarching set of decision-making objectives and referral requirements for specific types of application, whether triggered by the underlying planning provisions or the overlay directly. It could give effect to 'nested' planning and decision-making

arrangements in a manner similar to a DPO, facilitating or regulating projects, uses or development in accordance with the YSP.

#### 10.3.4 New referral authority provisions

Introduce new determining or recommending referral requirements under Clause 66 for defined applications types within the YSP area. A key question here would be identifying an appropriate referral authority that has the breadth of skills and resources to deal with the range of applications that may be referred. In this regard DELWP itself may be the most appropriate entity to take on this role.

#### 10.4 Recommendation

*The changes and additions to the YSP and LUFPP as proposed in this section of our submissions should be adopted into the final YSP.*

### 11. Interactions with other forms of planning

#### 11.1 Environmental watering

As noted elsewhere, the hydrological regime of the Yarra River/Birrarung is extensively altered. Indeed, it is the most altered of any Victoria waterway in terms of extractions for consumptive uses.

The Draft YSP anticipates environmental watering programs, likely in concert with provisions set out under the Healthy Waterways Strategy.

Environmental watering arrangements will need to be coordinate and closely integrated with the LUFPP, especially in relation to floodplain programs in the Upper and Lower Rural Reaches proposed in these submissions. In effect, for protection and restoration programs to work in relation to floodplain and/or in-stream ecological trajectories the YSP will need to include measures relating to water management and establish those as measures binding on an appropriate responsible public entity. For flows management that will be Melbourne Water.

A watering program complementary to the LUFPP and supporting Performance Objective 1 and 2 will need to be designed with regard to the following elements:

- Moratorium on greater levels of take on high value creeks, eg Cement Creek East and West
- Review of passing flows conditions in all Yarra River/Birrarung tributaries and the Yarra River/Birrarung in order that an environmental water reserve, based on the EWR objective, is set for each that based on best available science and that a pathway ('program') is put in place to achieve the EWR objective for each waterway.<sup>18</sup>

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<sup>18</sup> See eg EJA and Friends of the Barwon *Protecting and restoring the rivers of the Barwon (Barra Wallee Yulluk) system* (2019), 9-10, on method of better connecting the environmental water reserve and watering regimes: <https://www.envirojustice.org.au/wp-content/uploads/2019/11/Protecting-and-restoring-the-rivers-of-the-Barwon-Barra-Wallee-Yulluk-system.pdf>

- Review the environmental entitlement for the Yarra River/Birrarung and accompanying Seasonal Watering Plan based on the same principles as the above point.
- In order to achieve the above requirement, an updated and comprehensive assessment program needs to be implemented, such as those that have taken place on the Upper Barwon and Moorabool systems.
- Review the impact of in-stream barriers (for example, weirs and dams) to natural nutrient cycling in streams, including downstream reduction of carbon cycling and adverse impacts on macroinvertebrates. This needs to be considered as part of the management of passing and environmental flows.
- The YSP needs to include a provision, binding on Melbourne Water and on the Secretary of DEWLP, to design and implement a program based on the above principles and objectives capable of informing and being integrated into a new Sustainable Water Strategy for the Central Region.
- To the greatest degree practicable, this program should build on and progress the Healthy Waterway Strategy, such as by informing a 'refresh' or mid-cycle review of that HWS, although not be constrained by the HWS 2018.

In our submission, the LUFPP must set out, in SMART format, how planning and land management for Yarra River/Birrarung floodplains and wetlands will operate in a complementary manner with the program above, to the maximum extent practicable. As noted elsewhere in these submissions, these aspects of the LUFPP need to apply to the floodplains of the Lower and Upper Rural Reaches and to other wetlands assessed as significant in the lower reaches of the river corridor.

### *11.2 Recommendation*

*The changes and additions to the YSP and LUFPP as proposed in this section of our submissions should be adopted into the final YSP.*

## **12. Ecological and biodiversity considerations**

### *12.1 Floodplain and riparian connectivity*

An essential precondition for health of the river corridor is ecological connectivity, or more precisely reconnection of landscape ecology and ecological functions. Connectivity in this context functions according to various 'axes': longitudinal (connectivity of the river corridor), lateral (connectivity of river channel and floodplains), and catchment (connectivity of river channel and tributaries). The longitudinal connectivity reflects the importance of the Yarra River/Birrarung as a migratory corridor connected the upper catchment, especially the closed catchment, and the length of the river all the way to the bay. The river is a relatively safe movement corridor in terms of the food supply and protective resting places as well as habitat for a wide range of species. Lateral connectivity needs to consider also groundwater connection between the river and its floodplains and wetlands. A key task of the YSP in our submission is making substantial advances in reconnection of the river system in ecological terms over the 10-year plan horizon. The Draft YSP adverts to this outcome but fails to provide sufficient detail and direction at the strategic level.

Plainly, re-establishing ecological connectivity is a difficult and long-term task.<sup>19</sup> Also, protection and restoration of this nature will not achieve ecological conditions characteristic of pre-European settlement. A different reference condition will be needed. A goal of ecological connectivity will not be achieved over the 10-year life of this YSP. The goal needs to be reformulated in the YSP as the maximum restoration of ecological function targeted at a 50 year timeline. This YSP however can embark on important and useful steps in that direction.

The Draft YSP contains two main sets of high-level strategies concerning connectivity. These include:

- Billabong and wetland restoration (including ‘complementary land and water management’),<sup>20</sup>
- Protection and restoration of vegetation corridors (habitat and biodiversity corridors), in order to establish a ‘continuous vegetation buffer’ on riparian and/or floodplain land.<sup>21</sup>

Additionally, there are certain references to connectivity between tributaries and the river corridor in terms of terrestrial habitat rehabilitation,

These strategic approaches broadly accord with section 20-21 categories of YSP content.

At page 36 of the Draft YSP, ‘actions’ enumerated under Performance Objective 1 include lateral and longitudinal restoration intentions, attributable to certain agencies and to be delivered in a 1-3 year timeframe.

In our submission, these ‘actions’ are necessary but not sufficient to enable the performance objective to be met, or to establish a basis on which meeting that objective is reasonably likely. We reiterate that designing, undertaking or implementing any such ‘action’ is compromised by conditions and/or ambiguities attached to them, including:

- Conditionality on funding,<sup>22</sup>
- Expression of strategic conduct as indeterminate ‘opportunities’<sup>23</sup> or aspirations.<sup>24</sup>

## 12.2 *Wetland and floodplain restoration*

Proposals in the Draft YSP for floodplain and wetland restoration include general measures and more specific actions directed to particular reaches. At the general level actions are to ‘protect, rehabilitate and reengage floodplains, wetlands and billabongs to sustain their natural, cultural and spiritual values and minimise water quality impacts’. At the reach level key actions include floodplain reconnection in the Lower Rural Reach and certain floodplain reconnection projects in the Suburban Reach.

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<sup>19</sup> See also Submission of Mr Scott Seymour, Principal, Aquatic Systems Management Pty Ltd

<sup>20</sup> Draft YSP, pp 36, 45, 50, 51-52.

<sup>21</sup> Draft YSP, pp 36, 44, 45, 50, 52-53, 55, 58, 60.

<sup>22</sup> Notably, pp 36-39: ‘All actions are subject to funding’

<sup>23</sup> For example, ‘Opportunities for future projects and alignment...’

<sup>24</sup> For example, ‘The land use framework aims to...’

Floodplain restoration will be particularly important to long-term rehabilitation and river health. This is recognised in the commentary and measures on page 51-52 of the Draft YSP concerning the billabong system between Yering and Tarrawarra. As the Draft YSP notes most of the disconnected floodplain and wetlands in this Reach are on private farmland and this land has largely been cleared.

We propose amendment of the strategies set out for this land on page 52 in the following terms.

- Prepare and implement a program of work directed to protection and restoration of the river and floodplain corridor between Yering and Tarrawarra over the 10-year horizon of the YSP.

With many of the billabongs situated on private land, there is an opportunity to create relatively isolated biodiversity notes (or a biodiversity 'precinct') through the planning scheme and landowner support.

This program would be a pathway for commencing substantial protection and repair of stranded floodplains and their revegetation. In addition to the list of threats on page 90 there should be added 'nutrient pollution', specifically agricultural chemicals.<sup>25</sup> Re-establishment of vegetation corridors will assist to manage these problems.

Concurrently those ecological pathways would need to be accompanied by a pathway for changes in their legal underpinnings. Planning controls, such as environmental or inundation overlays, are relevant but not likely to be sufficient. Changes to ownership, obligations under title and/or contractual arrangements may all be relevant or required. Acquisition of land, acquisition of rights to land, and/or 'ecosystem payments' operating under agreement may all be needed. Support for the covenanting on land will likely be needed.

The protection and restoration program should be treated as analogous to a major infrastructure project in terms of engagement with landowners.

The following general principles for the protection, management and rehabilitation of floodplains in the YSP Area should be incorporated into the YSP under a program of work set out in the LUPP:

- Identification and assessment of all wetlands in the YSP Area, in order that a pathway of planning and investment can be established according to appropriate criteria for prioritisation;<sup>26</sup>
- Design of an environmental overlay appropriate and adapted to protection and restoration of significant wetlands across the river corridor (this may or may not be distinguishable from an appropriate planning instrument for the protection of other biodiversity values);
- Identification of and integration of other measures necessary to manage adverse ecological influences on wetlands (for example, runoff, grazing, water 'take'), as noted elsewhere in these submissions.
- Design and implementation of effective methods for collaboration and/or negotiation with landowners.

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<sup>25</sup> See submissions elsewhere in this document on this point.

<sup>26</sup> According to the VBA existing data on Yarra River corridor wetlands is poor or does not exist.

### 12.3 *Other wetlands: Bolin Bolin Billabong*

Assuming it proceeds according to its current design and regulatory framework, the North East Link will have a significant hydrological impact on Bolin Bolin Billabong. This site is of consideration cultural and ecological value. Groundwater drawdown resulting from tunnel works under the Yarra River/Birrarung floodplain will need to be compensated for by an environmental watering program which may need to run for years or decades.

The requirement for an environmental watering program for Bolin Bolin Billabong should be incorporated into the YSP, as a binding obligation, to be resourced in addition to any other environmental watering programs in the Yarra River/Birrarung system, preferably to be funded under the North East Link Project and its successors.

### 12.4 *Biodiversity values and habitat connectivity*

The nomination of habitat corridors and biodiversity values to be protected under the YSP is required under the Act. In our submission, the nomination and protection of habitat corridors and biodiversity values in the YSP area is one of the key tasks and imperatives of the Plan and the LUPF.

Elsewhere in these submissions we have proposed the need for extended and/or elaborated planning measures needed to achieve the protection and rehabilitation of habitat corridors and biodiversity values. We have also made submissions on 'areas of protection' and how this device coincides with planning measures and extends on planning actions (for example, through watering, land management or new forms of legal security of corridors or values).

The Draft YSP sets out various habitat corridors, including along the river corridor floodplains,<sup>27</sup> along Watsons Creek, and at the Gardiners Creek confluence. The nomination of Watsons Creek as a habitat corridor along a tributary is notable. It is the only example of such a nomination of a tributary as a habitat corridor. It also proposes this action for a corridor to which action is already applied. Essentially, this example represents a case of business as usual. In order to be a collaborative opportunity, beyond business as usual, the opportunity for the biodiversity corridor will need to identify how the River to Ranges project (which finishes in 2020) and the Sugarloaf link project (which finishes in 2021) can be extended, funded and refined to deliver over the 10 year period of the plan. This could then be used to as a model to develop similar programs for other tributaries, within the plan as part of the three-year rolling implementation plans. We support the protective and restorative actions along Watsons Creek. But this example exposes, in a rather glaring manner, the absence of comparable consideration of other tributaries of the Yarra River/Birrarung. In our submission, a program of work should be undertaken by each municipality, supported as appropriate by government agencies, to assess, design and implement actions capable of protecting and improving tributaries as habitat corridors, together with the biodiversity, social and cultural values

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<sup>27</sup> Draft YSP, p 36: 'Strengthen terrestrial and aquatic habitat corridors between the Yarra River and the catchment to support biodiversity. Priority areas include: a. Healesville to Warrandyte; b. Healesville to Millgrove...'

associated with them. This should occur in the context of an extended YSP Area, as we have submitted elsewhere. It should occur in the context of enhanced stormwater programs, as we have submitted elsewhere.

Similarly, the nomination of the Gardiners Creek confluence seems useful but anomalous.<sup>28</sup> Why not nominate other confluences? Many others also have ecological, social and cultural values. Particularly regard should be had, within works programs for Yarra River/Birrarung tributaries, to the values associated with confluences. Again, the Gardiners Creek project appears to represent a business as usual approach rather than the transformative approach needed of the YSP and LUPF.

### 12.5 *Urban forests*

The LUPF is required to define open space and urban forest networks.<sup>29</sup> Other than reference to urban forest policy documents and ‘expanding the urban forest through adjoining street networks’,<sup>30</sup> the Draft YSP provides no specific response to these requirements. This omission is an acutely important one in light of the ongoing, cumulative losses in urban tree canopy (used as a proxy for urban forest extent),<sup>31</sup> a phenomenon now exacerbated and accelerated by the impacts of large infrastructure projects, such as North East Link.

In our submission, the YSP needs to set out a specific response to the development of urban forest networks in the YSP Area, in a manner that is sympathetic to the intentions of the Act and the performance objectives. Other ecological restoration measures identified in these submissions are relevant to such a response, including habitat corridors. Urban forest considerations however do present distinctive and nimble opportunities in progressing ecological outcomes within a strategic planning framework. In particular, urban forest measures, such as suburban greening, roadside revegetation, rehabilitation of drainage lines or re-wilding of parklands, can coincide with ordinary urban land uses. The YSP (including the LUPF) should include an appropriately detailed response to contemporary urban forest strategies and frameworks.<sup>32</sup>

### 12.6 *Target-setting for biodiversity*

We agree strongly with the need for target-setting within the YSP and it is appropriate that targets are prepared as a particularised device for performance management. In general, the very high-level proposals on target-setting in the YSP are of some, limited value. To be meaningful however SMART metrics need to be applied to target-setting.

In respect of biodiversity, targets cannot be limited to a measure of hectares. This appears to be a remarkably cursory proposal. Biodiversity planning and management commonly employs more

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<sup>28</sup> Gardiners Creek is included with a bracketed note ‘celebrating significant places’. This action would be better included in Performance Objective 2. Gardiners Creek has low water quality, biodiversity values in this area and it is partially barrel-drained.

<sup>29</sup> *Yarra River Protection (Wilip-gin Birrarung murrn) Act 2017* (Vic), subs 21(k)

<sup>30</sup> Draft YSP, p 60

<sup>31</sup> The Nature Conservancy and Resilient Melbourne *Living Melbourne: Our Metropolitan Urban Forest* (2019), [https://resilientmelbourne.com.au/wp-content/uploads/2019/09/LivingMelbourne\\_Strategy\\_online3.pdf](https://resilientmelbourne.com.au/wp-content/uploads/2019/09/LivingMelbourne_Strategy_online3.pdf)

<sup>32</sup> *Ibid*, 45-68

robust and established measures. We submit that biodiversity and habitat targets must be included in the YSP including, but not necessarily limited to:

- Vegetation Quality Assessment Method, Index of Wetland Condition, Index of Stream Condition, and/or environmental DNA of aquatic fauna;
- The number and estimated population sizes of threatened species populations, or a representative sample of those populations;
- Other metrics of ecological *condition* of habitat corridors as may be appropriate.

#### 12.7 *Recommendations*

*In our submission, the measures and changes set out in this subsection should be adopted into the YSP and LUPF.*

*Reference to conditionality of actions in the YSP on funding needs to be removed.*

*Drafting of YSP in aspirational terms (for example as 'opportunities') needs to be replaced by SMART drafting and design techniques as discussed elsewhere in these submissions.*

### **13. Urban stormwater management and agricultural runoff**

#### 13.1 *The stormwater problem is fundamental*

Stormwater management is a key determinant of urban stream condition and health. It is the main source of urban stream degradation and, alongside climate change, the foremost factor in the fate of urban streams going forward. The Yarra River/Birrarung is heavily impacted and influenced by stormwater runoff through the urban and peri-urban area downstream, especially via the condition of flows into tributaries and hence the main channel of the Yarra River/Birrarung from around Brushy Creek through to the CBD.

Stormwater management is affected by both land-use planning and water management schemes. It inherently crosses these fragmented regulatory and policy domains. For example, urban stormwater is a stream health issue, through contribution via connected conventional (conveyance) drainage systems, and a potential water resource issue to the extent it provides resource use opportunities.

The aspirations and objectives of the YSP are at too high a level to enable consideration of their likely effect or utility.

There is a disconnect between a) the objective to improve the water quality of the river to achieve greater biodiversity (P15), b) the identification of stormwater runoff as a primary threat to water quality and the call for stronger management of stormwater (P14), and c) the restricted boundaries of the plan to within 1 km of the main stem.

The plan defers all meaningful action on stormwater management to other processes, such as MW's healthy water strategy (P29).

The plan does set itself an objective of implementing the Stormwater MAC recommendations (P58) and of strengthening stormwater management controls and strategies (P48), but does not make it clear if this objective applies to just within the plan boundary, or to the broader catchment, where the bulk of the problem lies.

Throughout there seems to be a lack of appreciation of the scale or even the nature of the stormwater problem. There is a focus on litter and pollution, but not the well-known interacting impacts of increased flashiness of flow and the complex cocktail of associated pollution. Stormwater remains an abstract concern throughout. There is an absence of identification of the specific inflows into the river that cause progressive degradation of the river's water quality and biodiversity as it flows downstream.<sup>33</sup>see Appendix 2. Effective management of stormwater for the protection of the Yarra requires implementation of strong stormwater management controls in the catchments of all of these tributaries (as well as management controls within the plan boundaries).

### *13.2 2018 stormwater planning controls*

In 2018, planning scheme amendments were introduced to update stormwater controls. As well as having the effect of expanding developments to which stormwater controls apply objectives for stormwater management were strengthened, such as to maximise retention and re-use and contribute to habitat and urban cooling.

### *13.3 2018 SEPP Waters changes*

Also in 2018, a revised State Environment Protection Policy (Waters) ('SEPP Waters') was adopted as part of the regulatory machinery under the Environment Protection Act 1970. The drafting of SEPP Waters has occurred in anticipation of introduction of 2018 amendments to the EP Act including operation of the 'general environmental duty'. Planning and responsible authorities have obligations in relation to implementation of SEPP Waters, including stormwater management and agricultural runoff. None of these obligations are considered under the Draft YSP and LUFFP.

### *13.4 Healthy Waterways Strategy 2018*

The HWS identifies the key source of the stormwater problem as the extent of impervious surfaces directly connected to waterways influencing infiltration and hence base flows in streams. It is not solely a water quality issue but an issue of flow dynamics. This has recently been emphasised in planning panel findings.<sup>34</sup>

The target trajectory for stormwater management in the Yarra River catchment under the HWS Co-Designed Catchment Strategy is for a 'high' outcome, from the current 'moderate' state and anticipated 'low' trajectory.<sup>35</sup> Achieving such a turn-around in trajectory over the course of 10-years is to be applauded and this outcome will need to be mirrored in the YSP. According to the HWS Co-

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<sup>33</sup> Walsh, C.J., Waller, K.A., Gehling, J. & Mac Nally, R. (2007) Riverine invertebrate assemblages are degraded more by catchment urbanization than by riparian deforestation. *Freshwater Biol.*, **52**, 574–587.

<sup>34</sup> *Yarra Ranges C176yan (PSA)* [2020] PPV 13, 50-51

<sup>35</sup> *MW Health Waterways Strategy: Yarra Co-Designed Catchment Program* (2018), p 26

Designed Catchment Strategy, stormwater outcomes are to be measured in terms of directly connected impervious surfaces, or in other words conventional urban drainage systems. Targets are set under each specific sub-catchment for stormwater targets. In general, for urbanised sub-catchments the target is for DCI surfaces not to expand, or, where they do expand, other measure are taken to harvest stormwater.

The identified focus of the Healthy Waterway strategy on stormwater retention in the townships of the upper and middle Yarra was to protect the best quality sections of the Yarra. These actions will not arrest the decline of the Yarra below Olinda Creek without much stricter stormwater control management in the catchments of the downstream tributaries, which are the primary conduits of the stormwater threat to the river. The bulk of the action required to mitigate these threats fall beyond the 1-km wide corridor of the Yarra River/Birrarung. If secondary mechanisms (outside of the scope of the YSP) are to be relied on for this mitigation, these should be named.

### *13.5 Agricultural runoff*

Agricultural runoff is not really dealt with in the Draft YSP (including the LUFFP) at all. The problem of agricultural runoff is especially prominent in the rural areas within the YSP Area, where the use of nutrients and chemicals, has significant adverse impacts on floodplain biodiversity. Unrestrained agricultural uses will constrain opportunities for floodplain protection and restoration.

Both urban stormwater and agricultural runoff are key problems for the health of the river corridor that concern and can be managed via effective land-use planning controls. This is evident not only in the use of the planning system to manage stormwater already but in interactions between environmental protection law and the planning system.

### *13.6 Recommendations*

The Plan is intended to enable the healthy and living river. Key threats to this ambition, in the form of stormwater and agricultural runoff, cannot be managed by way of the Plan in its current form. The HWS does provide an important complement in stormwater management, insofar as it establishes targets and directs works and investment. It does not however facilitate outcomes through land use planning. SEPPS Waters provides an important policy and regulatory framework already intersecting with the planning system, but unevenly. The YSP and LUFFP provides the opportunity to better integrate these various measures in the land-use, water management and environmental protection contexts.

*In our submission, there are a number of policy and regulatory measures that can be incorporated into the YSP (including the LUFFP) in order to signal a response to stormwater management more proportionate to the problem:*

- *Extend the YSP area to include tributaries and directly-connected drainage schemes within the adjacent municipalities: see below*
- *Use planning schemes to strengthen controls in those drainage systems/schemes, including but not limited to development standards requiring staged increases in quantifiable*

*perviousness and/or infiltration on developable land and extension of stormwater controls to additional impervious surfaces such as roads.*

- *Integrate the substance of measures set out at clauses 34 and 39 of SEPP Waters into the YSP, including the LUIFP, having regard to the circumstances of the YSP Area. For example, subsidiary localised plans (eg 'precinct', 'nodal' or tributary plans) should be designed with management of stormwater and/or agricultural runoff in mind.<sup>36</sup>*
- *Set quantitative targets for reduction of impervious surfaces and/or increases in infiltration of stormwater across the YSP area under Performance Objective 1: A healthy river and lands.*

#### **14. Further declaration of YSP area in order to apply YSP to key tributaries of Yarra River within adjacent municipalities**

The river health outcomes of the main channel of the Yarra River/Birrarung depends significantly on the ecological condition of the principal tributaries of the river. From the confluence with Brushy Creek to the CBD the ecological health and condition of the river degrades precipitously, as the river enters the urban area. The ecological and hydrological conditions of tributaries is a key factor in this shift in river health. These conditions are linked to stormwater management (including DCI in established and urbanising areas), development in proximity to waterways and historic removal of riparian vegetation along tributary corridors.

Under the scheme of the Act there is not scope for the strategic planning regime intended to be established under the YSP to extend geographically to all the Yarra River's tributaries, or even the extent of those tributaries within the urban area. The Draft YSP applies currently to land within the YSP Area. By operation of s 19 of the Act the extent of that Area is up to 1 km from the river bank. There is scope for the YSP to apply to land comprising Yarra River/Birrarung tributaries (as well as other land) within the boundaries of the municipalities adjacent to the river, where the Minister gazettes a declaration to that end.<sup>37</sup> The YSP would apply only to land so specified within the YSP Area.<sup>38</sup> In our submission, the Minister should make such a declaration, in order to bring the key tributaries of the Yarra River into the scheme of the YSP.

In doing so the YSP could extend protective measures, such as planning controls or policies, to tributary lands in order to enable improved outcomes for the main Yarra River/Birrarung corridor. The YSP could also enable improvement and restoration of outcomes along tributary lands in order to contribute to river health outcomes in the Yarra River/Birrarung, such as improvement to tributary lands as habitat corridors and to stormwater outcomes via design of drainage services schemes. In one instance – on the Watsons Creek corridor – the former outcome is proposed under the Draft YSP. In our submission that type of program and project should be extended to other tributary lands.

##### *14.1 Recommendation*

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<sup>36</sup> See also the obligation to prepare stormwater 'or equivalent' plans under SEPP Waters, subcl 34(4).

<sup>37</sup> *Yarra River Protection (wilip-gin Birrarung murrn) Act 2017* (Vic), s 15

<sup>38</sup> *Yarra River Protection (wilip-gin Birrarung murrn) Act 2017* (Vic), subs 19(1)-(2)

*The extent of the YSP Area should be amended, by appropriate declaration, in accordance with the submission set out, in order to bring all of the adjacent municipal areas within the scope of the YSP Area.*

## **15. Governance**

The Yarra River/Birrarung Act sets out an elaborate governance framework for the river corridor. The main institutional features of this ‘modern governance’ include:

- The responsible public entities, which collectively act as planning and implementation authorities for the river corridor
- The ‘lead agency’, whose key task is preparation of the YSP
- The Birrarung Council, which has an advisory and oversight role
- The Sustainability Commissioner, which has a form of auditing role.
- The Planning Minister.

*A de facto* design role has been assumed by the Yarra Collaboration Committee (‘YCC’), as an inter-agency body of all endorsing entities. Various roles for the YCC have been signalled in governance of the river corridor in the Draft YSP.

Reference to ‘modern governance’ in the Draft YSP appears to emphasise the role of the YCC as a planning and implementation body going forward.

The Draft YSP refers to the document as having been prepared by the YCC. That fact in itself is highly problematic and raises the question as whether the Draft YSP has been prepared in accordance with the Act, specifically subsection 18(1) and 21(1). The status of this document is thrown into some doubt as a consequence.

Governance of the Yarra River/Birrarung corridor is a challenging issue. It has been challenging throughout this process. In our view the situation has not been made easier or clearer by the opaque manner in which the YCC has functioned and taken Plan preparation functions upon itself. There has been little or no public participation in production of the Draft YSP. That is a stark contrast both to preparation of the Community Vision and the complementary Healthy Waterways Strategy.

Even on a generous reading it is difficult to see where, in the process of preparation of the Draft YSP, the conduct of the Lead Agency and, indeed, the YCC has been ‘open and collaborative’ or demonstrated or exemplified ‘best practice’ public participation.<sup>39</sup> Public participation in governance to date, including in YSP preparation, has been limited to this ‘notice and comment’ procedure and, we expect, participation through the panel process.

Public participation has increased upon release of Draft YSP. The Lead Agency has actively sought community comment on the Draft YSP utilizing a wide variety of tools. The engagement has been hampered by the constraints of operating in a Covid 19 environment, by the delayed release of the

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<sup>39</sup> *Yarra River Protection (Wilip-gin Birrarung murrong) Act 2017* (Vic), subs 18(2)(a), (d)

Draft YSP, and the uncertainty around the submission date. Arguably, the YCC was structurally ill-equipped to take on the task of community consultation during the creation of the draft, in accordance with the high standards for public participation required under the Act. Nevertheless, that body took responsibility for preparing the Draft YSP.

A form of citizen jury method was used in preparation of the 'long-term community vision. Available public participation techniques and methods are wider and more compendious than these techniques (which are the minimum required under the Act).

In our submission, collaborative governance in matters of clear public interest, such as the fate of the Yarra River/Birrarung, requires, as a starting point, direct engagement with relevant organised community and nongovernmental interests.

We question whether the YCC needs to function at all in the manner in which it has and according to its current composition. We appreciate the need for endorsing municipalities and agencies to participate in Plan preparation and, subsequently, implementation. Those facts go without saying. That process of involvement however is surely proportionate to the degree and nature of interest each 'responsible public entity' has in the fate of the river corridor. This matter of degree perhaps attaches also to specific matters in the Plan on which their endorsement is sought or relevant. Additionally, there is nothing revealing in this document or elsewhere that expresses how each entity aligns its own interests (including exercise of functions and powers) with the objects of the Act, if not the Yarra protection principles.

In our submission there is a case to be made for the YCC to be disbanded. In that event Melbourne Water remains the Lead Agency. It should be incumbent upon Melbourne Water to establish a procedure or constitute a body through which responsible public entities inform it of their views and ideas. That model should extend to participation, via its Chair or another nominee, to the Birrarung Council. If there is an alternative consultative body it should function under Melbourne Water's clear direction and guidance.

#### *15.1 Recommendation*

*Reinvigorate Melbourne Water's leadership of the YSP. As expediently as practicable, identify and deploy public participation measures that can be used to revise the Draft YSP (given the COVID-19 crisis). Revise protocols and arrangements for the engagement of responsible public entities in YSP preparation and require each responsible public entity to set out in a public document their policy rationale for involvement in the process, their anticipated contribution to implementation of the Act and alignment with its objects and purposes, and the relevance of their powers and functions to that contribution.*

**Appendix 1: Certain technical documents referred to but not appended to the Draft YSP or otherwise available**

Project, business or investment plans for any program or works identified under 'Investment Highlights' (pp 16-17)

Wurundjeri Woiwurrung Birrarung water policy *Nhambu narrun ba ngargunin twam Birrarung* (p 24)

Wurundjeri Woi Wurrung CHAC flora and fauna assessments (p 45, 50)

Proposals for Westerfolds recreational and paddle sports hub (p 57)

Nillumbik Shire Council Eltham Lower Park Masterplan Review (p 57)

Nillumbik Shire Council Sugarloaf Link Project (p 53)

Stonnington CC Yarra River Biodiversity Linkages Project (p 62)

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## **Appendix 2: List of primary conduits of urban stormwater runoff that threaten the ecological health of the Yarra River<sup>40</sup>**

**Olinda Creek**, draining the infilling urban areas of Lilydale, Mt Evelyn, Montrose

**Cherry Hill Drain**, draining Chirnside Park

**Chirnside Park Drain**, draining Chirnside Park

**Brushy Creek**, draining the rapidly infilling areas of Wonga Park, Croydon, Mooroolbark

*(The Yarra downstream of Brushy Creek remains in moderate condition, but has declined in the last 20 years of urban growth, based on Melbourne Water's macroinvertebrate records)*

**Jumping Creek**, draining Warranwood

**Andersons Creek**, draining Ringwood North

**Mullum Mullum Creek**, draining Doncaster East, Mitcham, Ringwood, Ringwood East, Ringwood North

**Diamond Creek**, draining the infilling suburbs Lower Plenty, Montmorency, Eltham, Briar Hill, Diamond Creek and Hurstbridge

*The Yarra downstream of Diamond is now in poor condition, and has declined from moderate condition in the last 20 years, based on Melbourne Water's macroinvertebrate records).*

**Porter Street Drain**, draining Templestowe

**Ruffey Creek**, draining Doncaster

**Templestowe West Drain**, draining Templestowe Lower

**Plenty River**, draining the established suburbs of Lower Plenty, Montmorency, Greensborough, Briar Hill, Mill Park, *and the rapidly expanding suburbs of South Morang, Mernda and Doreen*

**Bulleen North Drain**, draining Bulleen and Templestowe Lower

**Banyule Creek**, draining Rosanna, McLeod and Yallambie

**Salt Creek**, draining Rosanna, McLeod and Heidelberg Heights

**Banksia St Drain**, draining Eaglemont

**Koonung Creek**, draining Balwyn North, Mont Albert North, Doncaster, Box Hill North, Blackburn North, Donvale

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<sup>40</sup> Their catchments can be visualised at <https://tools.thewerg.unimelb.edu.au/mwstr/>

**Aquila St Main Drain**, draining Balwyn North

**Glass Creek**, draining Kew East, Deepdene and Balwyn

**Irvine Rd Drain**, draining Ivanhoe East

**Locksley Rd Main Drain**, draining Ivanhoe

**Darebin Creek**, draining the established suburbs of Heidelberg West, Heidelberg Heights, Bellfield, Fairfield, Preston, Kingsbury, Bundoora, Reservoir, Mill Park, Thomastown, *and the rapidly expanding suburbs of Epping and South Morang*

**Kew Main Drain**, draining Kew and Kew East

**Kew Mental Hospital Drain**, draining Kew

**Fairfield Main Drain**, draining Alphington, Fairfield, Northcote and Thornbury

**Merri Creek**, draining the established suburbs of Fitzroy, Fitzroy North, Northcote, Brunswick East, Thornbury, Coburg, Reservoir, Fawkner, Somerton, Roxburgh Park, and Craigieburn. The entire Merri Creek catchment to the Great Dividing Range is planned for urban development along the northern growth corridor, to Wallan.

*Merri Creek is the last tributary input before the head of the estuary at the riffle upstream of the Johnson Street Bridge, Abbotsford. In this last 500 m of river flow, the Yarra has degraded to a point equivalent to the poor state typified by the degraded urban streams listed above. (as assessed by Melbourne Water's macroinvertebrate record).*

**Harper St Main Drain**, draining Abbotsford and Collingwood

**Hawthorn Main Drain**, draining Kew, Hawthorn, Hawthorn East and Camberwell

**Gardiners Creek**, draining Kooyong, Glen Iris, Ashburton, Malvern, Malvern East, Murrumbeena, Oakleigh East, Chadstone, Mount Waverley, Glen Waverley, Burwood, Burwood East, Blackburn South, Forest Hill, Camberwell, Surrey Hills

**Canberra Rd Main Drain**, draining Toorak

**Richmond Quarry Main Drain**, draining Richmond

**Prahran Main Drain**, draining South Yarra, Prahran, Armadale

**Elizabeth St Drain**, draining the CBD, Parkville, Carlton

**Hanna St Main Drain**, draining Southbank, South Melbourne, South Yarra

**Moonee Ponds Creek**, draining North Melbourne, Flemington, Moonee Ponds, Brunswick West, Brunswick, Essendon, Pascoe Vale South, Glenroy, Oak Park, Westmeadows, Gladstone Park, Dallas, Meadow Heights, Tullarmarine, Greenvale and Yuroke.

### **Appendix 3: DMF applied to planning and design of Chandler Highway Bridge**

An example of the application of the Yarra Act principles, seen retrospectively, could be the Chandler Highway Bridge. The Bridge creates a significant barrier to upstream and downstream migration of birds, mammals, reptiles and insects. There is a wide, deeply-shaded dry and exposed band of ground under the bridge. Light is sharply reduced under the bridge and rain does not reach the wide area the bridge shades. There is acceptable native vegetation immediately downstream of the bridge and currently degraded but protective vegetation upstream of the bridge at the Alphington Mill Site.

The social principles of the site have been acknowledged in improved transportation from the construction of the bridge. The cultural principle of the Act have been implemented by the preservation of the historic bridge and its conversion into a recreational walking path. Walking paths have also been established under the bridge.

The bridge design now has not ensured that the biodiversity and ecological integrity of the river is maintained or improved. The design of the bridge has caused a decline in the ecological integrity of the river. It has fragmented the river corridor and reduced habitat. It has created a decline in the functioning of the river as migratory corridor.

#### *1. Design prioritising environmental considerations*

A design of the bridge that better respected the framework of the Act could have been planned and design in the following way:

- Open lattice structure, in part of whole, to bridge and side barriers:
- Ensure that light penetrates under the bridge to allow vegetation to reduce the width of the shaded band under the bridge. This may be done by creating open structures such as grids or grills that allow light to penetrate through the bridge and its side barriers. It may also involve the use of reflectors to direct light under the bridge. This would also enhance the human experience of being under the bridge incidentally. The area beneath the bridge would be landscaped to allow maximum vegetation penetration. This would also have been done at ground level for creeping insects and reptiles. This would in effect be a sheltered 'walking path' parallel to the walking track for people but protected by vegetation and sculptural elements. With careful consideration these features could be integrated with the stormwater management system.
  - The open lattice structure supplemented by a rainwater gathering system would direct water to where vegetation needed it to survive under the bridge
- Where this solution was not effective then structural elements (which could also be sculptural) would be included to mimic the protective safety of tree canopy immediately

under the bridge and of undergrowth adjacent to river. With careful consideration these features could be integrated with the stormwater management system to create self-cleansing wetlands under the bridge, which would aid amphibian migration. These structures could even provide protective roosting and nesting sites, mimicking the work of the large ancient river red gums that have long since been cut down.

2. *An overall outcome reflecting 'net environmental gain' for Yarra River land.*

The net gain for the environment principle would then be applied to the bridge project (and still could be applied) by the purchase of downstream land where private land currently extends all the way to the river's edge. This land is generally in good condition and its condition could be improved and brought as far under the bridge as possible. This would create launching pads for species seeking to move upstream (or resting places when they come downstream) to cross the more difficult dry, exposed and deeply shaded parts of the area shaded by the bridge, though assisted by the structures created in the first part of the bridge design above. This would also have the benefit of giving people secure access to a walking track along the river.

## Appendix 4: Content of GC48 planning controls

Control	SLO	DDO
<b>Title</b>	Yarra (Birrarrung) River Corridor Environs	Yarra (Birrarrung) River Corridor Protection
<b>Application</b>	Public and private land within the wider landscape setting of the Yarra River	Private land immediately adjacent to and highly visible from the Yarra River
<b>Categories of objectives</b>	<p>Landscape, environmental and cultural values</p> <p>Protection of waterway and the riparian zone</p> <p>Public open space and access</p> <p>Siting and design of built form</p>	<p>Landscape protection</p> <p>Siting and design</p> <p>Site coverage and permeability</p>
<b>Planning permit triggers</b>	<p>Buildings 6 metres in height or greater</p> <p>Removal, destruction or lopping of vegetation</p> <p>Fences within 30m of the bank or abutting public open space (apart from typical farm fencing)</p> <p>Exemptions apply.</p>	<p>Buildings and works</p> <p>Fences within minimum defined setbacks from the river</p> <p>Swimming pools and tennis courts associated with a dwelling</p> <p>Exemptions apply</p>
<b>Schedule requirements</b>	<p>Application requirements:</p> <ul style="list-style-type: none"> <li>• Written assessment</li> <li>• Survey plan</li> <li>• Site plan</li> <li>• Schedule of materials and finishes</li> <li>• Shadow diagrams</li> <li>• Visual impact assessment</li> <li>• Landscaping plan</li> <li>• Arborist report and details of vegetation removal</li> </ul>	<p>Permit requirements</p> <ul style="list-style-type: none"> <li>• Overshadowing restrictions</li> <li>• Mandatory building heights and setbacks</li> <li>• Site area covered by buildings</li> <li>• Building materials and finishes</li> </ul>

Control	SLO	DDO
<b>Decision guideline categories</b>	Landscape, environmental and cultural values Protection of waterway and the riparian zone Public open space and access Siting and design of built form	N/A