



IMAGINE
THE YARRA

DRAFT YARRA STRATEGIC PLAN

PUBLIC CONSULTATION

SUBMISSION COVER SHEET

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Draft Yarra Strategic Plan Review

Introduction

This report addresses some aspects of the 10-year Strategy. As the Inner City Reach focus group was cancelled, I also address aspects of its management. I write on the strength of some investment, including as a Community Vision participant, as an attendee of several subsequent forums, most recently at the Upper Rural Reach focus group held in Warburton and having been interviewed by Olivia Tattam of Melbourne Water. I have also read the Strategy from cover to cover.

My concerns are informed by my waterway rehabilitation experience including on-Birrarung, over 30 years' experience in waterway rehabilitation management, evaluation and planning (including strategic waterway planning). Critically I have some understanding of what it is possible in waterway rehabilitation.

This was written over different periods and pieced together, it is not terribly analytical, so just like reading the Strategy it will require persistence.

COVID19

It is with some irony to realize that the progress of the 1929 Plan, the last great, game changing, urban waterway open space planning initiative, was similarly beset by over whelming global circumstances beyond anyone's control. It is hoped that similar Birrarung based government initiatives spurred by relief work for those waylaid by the great depression of the 1930's will once again be used to accelerate the development of a river for our time.

The Disruptor

If the Wurundjeri in parliament wasn't enough of to signal the end of business as usual regarding the Birrarung, then this Strategy should be. The Strategy development process, however, as documented, has been undertaken by those responsible for the perpetuation of business as usual. How can a committee of 18 made up of those whose business it is to perpetuate 'business as usual' possibly formulate a new beginning?

Through the remarkable convergence of recognition and acceptance, a maturity of experience, knowledge and skills, coupled with leadership of will and vision we have this once in a lifetime opportunity to disrupt the status quo. If we are bold, (and only if we are bold), we can put in place a strategy to enable the creation of a river for this century.

We can put the management of the river on a path that uses elements of the past to form a foundation for the future. A Strategy that is true to reimagining the river as the principle landscape asset of an otherwise topographically muted city. A Strategy that places the Birrarung as the embodiment of our cultural connectedness; that brings the new people of our society to the oldest peoples of the world. That uses the riches of the aquatic and terrestrial to build a landscape supportive of indigenous wildlife in a way that can be appreciated and celebrated.

Our Time, this time

We are blind to the future. Proof positive. Within the month of March 2020 our world has changed globally. Never has there been such a time to celebrate the local, to celebrate its minutiae.



The Document

This is a large document, for a strategy and in my view needs some tightening. The audience as for whom this is written is unclear, if it is for the uninformed the length means that the message as to what the Strategy will do differently gets lost in the detail, if for the informed then it will act as a snapshot in time as time and events roll on.

I am appreciative of the enormous amount of work. I more than many am aware of the struggle that it is to negotiate a path with so many involved. As a first 10-year Strategy document to give life to the Community Vision I am not convinced in its current form that is entirely successful.

One area that needs to be addressed is Investment Highlights (P24 & 25). These are pre-strategy decisions provided with no context, some are one off, some not. This is one section that does not add greatly to the readers understanding of where the Strategy is to take us.

If it was stated clearly that these are the types of action and scale of investment that are occurring now and in this Strategy it is proposed to invest to add value do these actions, by introducing certain mechanisms then it would have some relevance. As it is, it confuses and detracts and leads to no clear purpose for the Strategy.

More cynically it may reflect that when you have nothing new to say you give prominence to what you are already doing. Putting this, so early in the document perhaps reflects the preoccupations of those that have developed the plan. Pages 24, 25, 26 and 27 detracts from the only readily discernible, truly new initiative, of the Birrarung Rangers. Call it Existing Investments or even existing funding conditions, such details are better placed as an appendix.

Knowledge Holes

The Yarra River Action Plan has the development of the Vision and Strategy as midway actions (13 and 14) in 30 Actions. This reflects the enormous amount of work that preceded, and the enormous amount of work required after the Strategy development.

A Strategy charts a way forward. Of course, the very act of focusing on the subject area of the Strategy reveals deficiencies of knowledge. This Strategy development process, with 18 different organizations involved is no exception. Identifying and addressing the knowledge holes appears to be a neglect of this Strategy particularly with the findings of the benchmark document of the Strategy - The State of the Yarra and its Parklands, concludes that our monitoring base for most criteria is poor.

Setting a 50-year Vision developed by community members first means it is not informed by expertise but expresses the will of the selected people at that time. It is the role of the 10-year Strategy to give the substance to the Vision statement. Part of that is to identify and address the knowledge holes to provide an informed foundation for the realization of the 50-year Vision.

Biodiversity data relating to the Yarra is a case in point. Management strategies for the Yarra is another. Councils and others have done no end of good work and have a wealth of documented and undocumented experience. The accrual of disparate knowledge across the catchment is a wealth to be built on.

As a first step Objective 1 (Page 50) should borrow the sentiment of the first two paragraphs of Objective 2 (Page 52) and be adapted to biodiversity. "The rivers **biodiversity** are documented in numerous sources....., and paragraph two **A nominated authority (s) will undertake biodiversity and river process mapping to identify significant sites/landscapes/reaches...**



The River

We are developing a Strategy for a very different river from that at settlement. In developing this strategy, we are under no illusion as to the magnitude of change that the river, particularly the lower Birrarung, but also its catchment has sustained. We are planning to produce the best river for our time.

The Development, Degradation and Rehabilitation Process

Our society, since settlement has celebrated the deliberate, incremental march of development. With the alienation of the natural environment a consequential by-product. In the urban, the built, is king. Only the threat of flooding has kept built development away from the Birrarung.

The urban mirrors the process that we have followed on the upper, middle and lower agricultural reaches. where, until recent times, all was subservient to the cow or other domestic grazers— where grass is king. If it shades it, cut it down, if it eats it, get rid of it. The plough, the cow were farm royalty. Production was king. We promoted and subsidized open slaver agriculture. Our waterways belonged to agriculture.

In the Birrarung catchment, nationally and globally, for the period of my working life, we have been incrementally redressing the over-reach. Led by grassroots community efforts, governments and their agencies have been drawn into the long incremental rehabilitation of our urban and rural waterways.

Privatization of profits and socialisation of losses as far as our waterways are concerned is no longer the status quo. By increments, farmers have been willingly giving up production derived from a small percentage of their water frontage lands. A not insignificant action, as that small percentage is often their best watered, nutritionally richest land. They do it for the public good.

We have been happy for those who use the water frontage land to earn an income to forego their income for the public benefit. Farmer give up your personal profit now! People unknown and possibly unborn want the benefit from what you have! Do public good on your privately managed land now! Forget what was, this is now! Real and immediate personal cost for the potential of enduring long-term, amortised, society-wide benefit.

A benefit that is not automatic. A benefit that is not assured. Excluding production from the small percentage of the agricultural landscape along rivers and waterways only allows the potential for a future potential. A potential benefit will only be realised and accrued provided all involved participate. Provided that both the landholder and society continue to agree to participate. The agreement must be decades long.

We are engaged in a process of targeted ecological rehabilitation. Whereby we are moving the ecology of the water/land interface and its associated lands from one state to another. Just as it was in the settlement process, we apply the instruments of societal management to favour one set of circumstances over another to achieve lasting societal benefit. Along the river society previously valued agriculture exclusively now it has other values embodied in indigenous vegetation.

If we have learnt nothing else through the years of active rehabilitation, it's that there is no substitute for consistency and persistence applied over time in ecological rehabilitation.

How does society agree? Through a plan. This 50-year vision, starting with this 10-year strategy is societies means of agreement for the Birrarung. Funding the Strategy is societies agreement.



Incremental Degradation and Rehabilitation

Inadvertent, unrelated, individually well meaning, in and of themselves, completely justifiable management actions over time have unconsciously, cumulatively degraded the river. Just as such a process was the normative mean of the past, it can be supplanted, by a deliberative, river-conscious rehabilitation process. This is the essence of the 50-year Vision and the underpinning of the 10-year Strategy.

Time

A 50-year Vision and this 10-year Strategy will require consistent and persistent effort to pull it off. If the strategy fails to articulate that 50 years is the period of implementation, then it has limited chance of success. Recognition of ecological timeframes is key. Persistence and commitment to ongoing management is non-negotiable.

This is not rocket science; the norms of rocket science as Elon Musk has shown can be turned on its head; the norms of ecology cannot; but as Elon has shown, with applied application of resources, with talent and an innovation mindset the unimaginable, the improbable and the seemingly impossible can be achieved.

Ecological timeframes don't mean do a little each year, for 49 years, it means apply the 'learning by doing' developed over the last 30 plus years by dedicated practitioners and go early, go hard, go bold. Set the foundational conditions in place that will allow the ecology to develop and manage it over time.

Our society accepts that when your need is for a freeway now; you don't satisfy societies need for a freeway now by building a track and adding to it for 50 years. You put the capital upfront, build the freeway, reap the societal benefits incrementally, and manage it overtime.

A river is not a freeway, a river is an always and ongoing, with respected needs, with respected values, deeply enmeshed into the fabric of society. To lift the Birrarung from the backtrack to the freeway status the same sort of capital injection mindset applies.

Rehabilitation timeframes are not explicit in The Strategy.

Coordination

Despite the repeated use of the word there is no mechanism in this Strategy that articulates how coordination is to be improved. With 18 authorities interconnected by the same flows one would suspect there may be a little room for improvement beyond the status quo. There is no identifiable role responsible for coordination. Writing a Strategy is no guarantee.

However, we have a home-grown solution. In a world first, in the early 1980's, the local governments of Melbourne's northern suburbs pulled together to manage the rehabilitation of the Birrarung's northern tributaries. If proof of success is longevity, then enduring for 40 years would make the management model a success. If world leading, ongoing waterway based urban corridor rehabilitation and management is a measure of success, then their record of management may be considered a success. If an understanding of the criticality of ongoing decades long funding is needed, then go no further than the municipalities.

Fortunately, the simple proven model in which several Birrarung municipalities and many agencies have participated over the forty years is an available, off the shelf, fully adaptable model that can be applied to the rehabilitation management of the Birrarung. A Strategy of management over time is at the core of the 10-year Birrarung Strategic Plan. Time (in decades) and a dedicated rehabilitation



management capacity are at the core of a realized 50-year Vision. The key concept is a stably resourced, river-centric, on ground capacity dedicated to rehabilitation management, coupled with a dedicated co-ordinator.

The value of the coordinator is 'the finger on the pulse' of the community. The coordinator has the overview that can recognise the potential in the ever-occurring developments, big or small, private or public, that pooled or pulled together, can produce unrecognised synergies for the river. The coordinator coordinates. The coordinator is the river's champion.

The success is that the coordinator is local and embedded in the community. Population brings complexity. The demands and roles will change and increase from the upper to the lower reaches. At 245 kilometres the Birrarung demands a local coordinator at the river-based towns, I suggest one at Warburton, Yarra Glen, Warrandyte, Ivanhoe and Burnley – these will be the Yarra Rangers.

The Private Sector

The 10-year Strategy reads as though the private sector has no role to play in the realizing of the 50-year Vision. Certainly, I could see no articulation of a mechanism of how they would be proactively engaged. It is not as though all are opposed to river protection, after all many pay substantially to be in its proximity and wish for nothing more than for their investment to remain secure, if not appreciate through improved conditions.

It's as if the only thing to do with the non-government world is to corral them with regulation and encourage them to volunteer. Once again, the Coordinator has an obvious, pro-active role to play.

Jurisdiction

For all who work on the ground, landholders in the private land dominated reaches, the issue of on ground jurisdiction between the big three Melbourne Water, DWELP and Council (and at times Parks Victoria) come into play. It is not explicitly addressed. There is no streamlining of process evident.

There is plenty of sentiment relating to controls and prevention. There is virtually nothing about pro-active ways of making it easier for the landholder to do the right thing.

Given the known dynamics of private land transfer, based on sale statistics there is no mechanism discernible in this Strategy to bring the new landholder (or old) into the fold, to help navigate the intent of the Vision or the Strategy and help them build on it rather than detract from it. It is far more productive for all to invest in enabling the right thing to be done at the outset rather than prosecuting when the wrong thing is done.

This 10-year Strategy is the opportunity to do so (and early in the process) not to do so is negligent.

Resilience

As is appropriate for a strategy, the threats are articulated. But what to do about them is not. There pervades, throughout the document, a sense, that the Yarra is in such a condition that all it needs is protection. The State of the Yarra and its Parklands report, concludes, for most indicators that it is in poor condition as judged from the monitoring data available which is also ranked as poor.

Perhaps it reflects the dominant backgrounds of the representatives of the 18 agencies who developed the Strategy, because it seems, that the emphasis is on protection through planning alone. Which is not to denigrate planning's essential underpinning, but it is not all that there is to a Strategy and this Strategy in particular. A river protected in the planning sense still must be rehabilitated in the physical sense to be able to meet and make good the Community Vision.



The Yarra is degraded. Proof is in the decades and millions that have been spent on ongoing rehabilitation. Resilience must be built for a degraded river, under threat of climate change and population growth. Resilience is mentioned. Resilience is not clearly articulated nor are the concrete means of achieving it articulated.

In fact, the lack of appreciation for the meaning of resilience within the Strategy is no better illustrated than in Figure 3 on Page 50. If a picture paints a thousand words, this is it. This is almost indistinguishable from the current status quo. The choice made to depict the future in this way with this representative image says much about the Strategy's development. Since when does a single line of riverbank trees along about 80% of the river suggest a resilient river? This is one tree width away from the lowest common denominator.

The Vision and subsequent work have articulated the river cocooned within an envelope of indigenous vegetation wide enough to allow the physical processes of the river and biodiversity to evolve as the effects of climate change become manifest. The vegetation of the river corridor will be designed to accommodate the greater frequency of extreme events (flood, drought and presumably fire). To do so it must be of an ecologically appropriate width. None of this is in the Strategy with any clarity.

Why is it critical? A simplified scenario is used to help clarify. Change of land use bounding fences must be sited and aligned to minimize damage from floods. Stock exclusion, with weed management is essential to ensure the health and reproductive capacity of stream bounding shrubs and other plant forms to produce seed in abundance. The seed is essential to inoculate the river. The water transports the seed downstream to colonize the seed beds of the exposed river margins and bars. Vast volumes are required to compete with the seed of weed species. The Strategy states that rainfall has reduced by 50% since 2012, and the trend will continue. Resilience is adaptability. Resilience in the face of climate change is built by creating the conditions for the right plant to grow in the right place at the right time.

Floodplains

The known activities of deliberate incremental degradation that have and are occurring on an almost daily basis is not addressed with vigor in this document. The disruptions to floodplains, often relics of past land uses remain, they include levee banks, the incremental filling of off-stream billabongs and floodplains and the inappropriate siting of rural residential properties. These are just obvious examples of the most visibly disruptive. In the face of more predicted extreme events and in a 10-year Strategy where biodiversity rehabilitation is to the fore these are not and should be addressed.

It is not only the loss associated with the execution of the action, it is also the loss of opportunities that come with fragmentation of landscapes and the incremental and insidious loss that is associated with the change in land use such as the domestication of the river that comes overtime with riverside garden development. Or the loss that is only revealed in a flood event when floodplains are no longer engaged, or flows are diverted, and billabongs are no longer filled. All of which removes, yet another layer of biodiversity potential through habitat simplification, that has been occurring since the inception of floodplain agriculture.

The Inner City Reach

The following briefly touches on pertinent issues to the lower Birrarung reach within the scope of the 10-year Strategy.



Scraps

We are developing a 50-year Vision for a present-day river. This river is a river of scraps. The open land along the river are the scraps left over after everyone, for 200 years, has taken what they wanted, or as much as they could get away with and water quantity and quality are diminished.

The river channel is homogenised, regularised and simplified. The remaining open space corridor has been cut and filled, drained and flattened, simplified and homogenised. Whereas, our vision, at its essential core, is for a rich and varied river that meets the expectations of today.

We cannot meet the 50-year Vision if we restrict ourselves to tinkering with the bones of what once was the principle landscape asset of a landscape described by Tim Flannery as the 'Kakadu of the South'.

Channelization

The lower Birrarung in the 1930's depression era job creation works was channelized. Much of it was done at the same time as Birrarung Boulevards were built.

Bank channelization involved changing the variably sloped low-angled banks to a steeper uniform slope of about 30% and the placement of several rows of blue-stone blocks at the waterline. Riverbanks regularised and homogenised to a standard drawing. Even plant species that regrew and did not conform with the standard drawing of the day were removed right up until the 1980's.

The alteration of the bank to a more uniform geometry vastly diminishes the width of the bank that is inundated. Rocking with blue stone pitchers also vastly reduces the opportunities for the establishment and growth of plants of the water's edge. The significance of this to biodiversity is immense, as it is the land - water interface that provides a particularly rich environment for both terrestrial and aquatic species.

Remember, in the 1930's water quality may not have been as good as it is today so drainage to get rid of the water as soon as possible was the practice. In fact, urban water quality still wasn't that great in the 1970's (before many suburbs were sewered). For example, Darebin Ck, a Birrarung tributary of the northern suburbs, was reportedly channelized to speed the flow of water at that time because its original pools had become noxious, feed by the nutrients in the seepage from septic tanks that worked poorly in the dominant basaltic soil type. Or, even more recently in 1979, when swimming in the Birrarung at Burnley when I experienced first-hand, pollution of a different kind, in the form of a dumped dead greyhound floating towards me.

Increasing the zone of frequent inundation by de-channelizing the river is a significant means of improving biodiversity. Regrading banks to produce a flatter gradient allows a greater area of land to be frequently inundated, thereby creating the conditions to allow the diverse water dependent indigenous vegetation to grow and in so doing providing habitat particularly for macroinvertebrate and juvenile aquatic species. A vastly less steep slope also safer for water access.

Birrarung Roads, Boulevards and Freeways

Much of the lower Birrarung River is bounded, constrained and been altered by roads, boulevards and freeways. The roads which were added to the corridor by increments for different reasons completely disassociated from the biodiversity and functioning of the river include the Boulevards of the 1930's and the freeways of the 1960-70's. These constrain the biodiversity potential of the river. The roads fragment the remaining open space. Roads have altered the hydrology of the river and surrounding landscapes. Fragmentation diminishes the value of the remaining landscape.



The very course of the river has been much altered. For example, through Burnley it was altered for south eastern freeway. A huge loop of the Birrarung River behind the Burnley Horticultural College was removed for the freeway. A massive remnant Red Gum still stands hundreds of metres from the current course.

A truly visionary strategy would include the swapping of the above ground freeway for a tunnel; reinstatement of the original river course with its rich biodiversity designed in such a way as to accommodate the needs for the safe and aesthetically appealing largescale visitation perhaps even retaining the elevated freeway for pedestrian and other access emulating New York's Highline .

This is a 50-year Birrarung Strategy. This strategy must be informed by today's values, with today's constraints and pressures mindful of the rapidly evolving technology of our day. Roads added to the open space Birrarung corridor incrementally can be removed incrementally. We no longer have the water quality of the past, we value urban wildlife differently to past times, we have tunnelling technology not available when the South eastern freeway was built, and we have new and emerging modes of transport. Perhaps a 10-year Strategy should consider that the overarching dominance of the private car may have peaked and be diminishing.

The land area of the open space corridor of the Birrarung is more-or-less finite. A strategy that accepts the immutable status quo of current roads ignores the alternative uses of the finite land they occupy. Further it ignores the associated works and their effects on a host of diverse aspect including but not limited to drainage and soil changes, riverbank shaping and regularisation, wildlife habitat and movement, pedestrian and any other form of locomotion other than cars.

Road, boulevard and freeway removal will complement and allow de-channelization. A high percentage of the Birrarung River open space corridor is occupied by roads and it increases with proximity to the CBD. Roads have a single use.

Any land on the lower Birrarung is highly valued. Any land unit of high value surely must be made to fulfill more than one use. Any land unit must be accessible to a range of users for a range of purposes. Surely looking forward 50 years, is this the best we can do?

Roads are the exclusive preserve of and accessible only to those in motorised transport. Therefore, a significant proportion of the Birrarung River corridor is preserved for users and uses with absolutely no relevance to the Birrarung River upon which it stands. Roads are river theft. Roads marginalise people.

Roads were built to bring people to, from and across the CBD. Now that there is a sizable inner-city residential population these River roads directly define and inhibit the river experience of inner-city residents. The river is their primary open space linear resource.

Many roads were built for a different time. The advent of modern tunnelling technology has expanded our transportation carriageway options. Aerial roadways like river channelization were good decisions relevant to their times. Relics of a bygone era must not define the limits of our 10-year Strategy. What defines the Birrarung River and Gardiners Ck experience more than the Monash Freeway? The answer is nothing.

The Melbourne Royal Botanic Gardens is recognised as one of the great botanic gardens of the world. At its heart is a lake system. At its core is a Birrarung billabong. But where is the Birrarung? Completely separated. A billabong and a river are one. Geographically, topographically, ecologically a billabong and a Birrarung are one. This is like separating the Sydney Botanic Gardens from Sydney Harbour. Potential foregone.



With all the changes that the lower Birrarung has suffered this is one that is perhaps the most accessible to reunion. The river hugging Alexander Ave separates one of the premier gardens of the nation, of the world, from its natural companion. Alexander Ave is a recent advent. Pedestrians, cyclists, landscape and visual access to the Botanic Gardens and wildlife potential are all short-changed by the right of vehicles to access Alexander Avenue. It wasn't always such and it does not have to be in the future. What sort of priorities are these? What sort of 50-year plan is it that thinks this reflects the value system of our time.

And what an unassailably powerful message this sends to the world. The still waters of the billabong and the running waters of the Birrarung River are one. This is the actuality that we as a population are expecting the agricultural owners of the upper reaches to accept. We are expecting them to bear the cost and management burden of reuniting the still waters with the Birrarung. A river, is not just a watercourse.

In the past the river was altered for the roads now it is time to consider the alteration of the roads for the river. As a major alien and alienating land use a comprehensive review of river roads, boulevards and freeways as to their relevance, potential alternatives and timeframes for removal should be a foundational investigation undertaken in the 10-year Strategy to make the inner city reach fit for the realization of the 50-year Vision.

From Ball Sports to Bush Kindergartens.

It has been just a few short decades from when every scrap of open space was filled and flattened and the ball was king, to the advent of the kindergarten experience where the provision of opportunities to walk on uneven ground is recognised as a pivotal developmental necessity. This example is reflective of the changing needs of the urban community.

The societal demands on the open space of the lower Birrarung have and will continue to change. Just as the demographics of inner Melbourne has changed and industry has given way to housing in Alphington the potential to provide for the experience of all must be reflected in the 10-year Strategy.

Resnagging and Re-barring

Desnagging is the removal of wood, large branches and trunks, from a waterway. The effort on the Birrarung was intense and extensive. Pieces numbering in the hundreds of thousands were removed from the lower Birrarung.

Instream wood is a foundation of Australian river ecology and the Birrarung is no different. Of recent times desnagging has been replaced by resnagging. Resnagging in strategic planned manner is a frequent means of rehabilitating instream habitat. Placement is mindful of waterway users such as boating, and swimming and pieces are frequently secured to prevent movement. This is an example of the little known but significant potential management change that may be required to improve biodiversity.

Rock bar removals from the Birrarung has allowed saline waters to penetrate much further up the lower Birrarung. Navigation access was the operative concern. Examining the merits or otherwise of restricting the penetration of saline tidal flows would be a foundational prerequisite to improved ecology.

Instream investigations of this type are required prerequisite works of the 10-year Strategy as a foundation for realizing the 50-year Vision.



Urban Wildlife Conservation

The bushfires and droughts of our time put a different perspective on relatively tiny areas of remnant or rehabilitated vegetation of our urban areas. Far from being a wildlife conservation nonentity, urban areas and particularly urban waterways, are now recognised for their potential for sustaining wildlife potential.

There is no suggestion that the urban setting can accommodate the full suite of indigenous species. However, there is every proof that an urban setting can support many species of birds, marsupials, reptiles and amphibian. Look to the white browed scrub wren population of the Royal Botanic Gardens for proof of small bird urban resilience or the Powerful Owl – Australia’s largest owl, for urban adaptability. As for avian visitors I’m yet to better my count anywhere of seventy plus Yellow Tailed Black Cockatoos in the Fitzroy Gardens. For colour and movement, you can’t beat birds – Lorikeets in Swanston St, Crested Shrike tits at Burnley. Create the habitat and they will come.

New York’s Central Park is one of the premier bird-watching locations in North America courtesy of its location on the Hudson River flyway, a major migration route. There is every reason to believe, and every reason for it to be so that a rejuvenated Birrarung could not hold a similar accolade, at least in urban terms.

Public land along urban waterways have the advantage of stable ownership and use, funded management potential and a relatively benign adjoining land use compared to rural lands. Of course, they share with rural lands the problems of exotic predation, cat and rat, fox and dog. Strangely enough both urban and rural waterway lands share similar issues with ecological fragmentation, simplification and ecologically unsustainable size. A small, exotic invaded, indigenous species deficient fragment of remnant vegetation on an urban waterway has many of the same limitations for wildlife of a similar rural remnant. Just swap the dominant biologically reduced adjoining land use of pasture for the biologically reduced urban concrete, tar and garden setting. People are the wildcard in both settings and fire an issue for both.

There is also every evidence that we can walk and chew gum at the same time. That is, that we can manage for more than one objective. We can manage for wildlife habitat and for the wellbeing including the aesthetic pleasure of people. Not that every land unit can be managed for the same thing at the same time. It goes without saying, because we do it every day, that we manage differently for active sport, say bike riding and wildlife conservation. But it doesn’t mean that the two are not always mutually exclusive values.

The Confluence

The confluence is a special place. To sit at the point where the creek or drainage line ends and becomes the river is to intuit a place of significance. The meeting of waters in our modern times has received no reverence. The minor ones we barrel drain and stick a tip and later footy oval on, or if as in the Merri and Gardiner Ck’s case we stick a freeway or in the Darebin Ck’s case a shared pathway bridge near over the top. Our river edge side roads and boulevards have denied generations the existence of many a confluence. There’s no chance for quiet contemplation in our brutalised utilitarian treatments of the confluence.

The merging of a secondary drainage into the primary represents opportunity to reach back and pull back to reinstate and celebrate the near natural. It can be done, and it comes with benefits. Who knows what simple pleasure, the small of scale can bring? This very day, an acclaimed local natural history artist, walking past the miserable, ephemeral, manmade drain of a creek in regional Victoria



that I have lived and worked on as a volunteer for the last decade remarked on its resemblance 'to a Monet painting'. She may just have meant, I think, a mere passing resemblance (in the right light).

Curation

You know when landscape management has been reduced to 'mow, blow and go' that you are approaching the state of the lowest denominator in urban open space management. A scenario usually championed as an economic necessity, but, with relatively high recurrent expenditure and low capital inputs.

Landscapes homogenised for mechanised management (mowing), demand a different skill set to that required for the management of a deliberately heterogeneous landscape. Much of our open space, the Birrarung frontage parklands included, are of a simplified nature. A change in complexity will see a reversal to the status quo, requiring higher capital investment but arguably lower recurrent expenditure. The business as usual approach will change and achieve nothing towards realizing the 50-year Vision.

A rich, bio-diverse Birrarung landscape will be curated overtime, based on a strategy that sets the conditions that will allow indigenous plants and animals to establish, colonise and thrive while at the same time allowing people to enjoy the landscape.

A curated, urban, biologically diverse, river landscape using indigenous plant species as its foundation is no less a constructed experience for the people who interact with it as is the Royal Botanic Gardens. Species are selected, topography is shaped, consideration of user safety and amenity and views are framed in the same way. A river landscape is no poor cousin of the formal landscape genre. The design consideration and expense will be on par.

Just as putting time (in decades) into the development of a garden landscape is accepted the rehabilitation equation for the river corridor requires similar.

The skilled gardener's role in managing heritage gardens is not unlike that of the skilled bushland managers role. In both, time and skill are required to curate a landscape. On that is managed for heterogeneity over homogeneity, complexity over simplicity and uniformity. The 10-year Strategy must have recognition of the critical role of skilled practitioners in establishing and curating a rich, bio-diverse landscape.



Performance Objective 1, Action - Rehabilitation of River Vegetation

Improved Biodiversity and resilience are addressed.

Two centuries of consistent river access from cattle has diminished the indigenous species of the Birrarung. Free ranging hard hooved herd animals on rivers exact a heavy toll. Grazing, browsing and movement pressure on the banks and river margins has had a cumulative, detrimental impact. The result has been removal of the indigenous shrub layer as a significant component of riverside flora for many kilometres of the Birrarung.

The iconic Australian river landscape of cattle or sheep resting on a grassy riverbank beneath tall gums with a clear view of the water is an agricultural construct. The shrubs, the regenerating trees and the water dependent macrophytes of the stream edge are absent. Over the now centuries there has been a systematic simplification of the river ecology as plants within the physical range of the cow have been chewed and digested or walked on. River frontage seed beds and banks offer no or little resistance to the hoof of a cow weighing half to three quarters of a tonne.

The simplification of riparian vegetation destroyed or greatly diminished the wildlife habitat potential of the Birrarung.

For much of the flat topography of the middle and lower floodplain reaches livestock has had almost universal access until relatively recent times. The cumulative result is a river stripped of indigenous shrubs and their place taken by agricultural and environmental weeds, such as blackberry.

Fortunately, river based, large scale, ecological rehabilitation practice has evolved practical, techniques to arrest the degradation trend and create conditions that encourage indigenous shrubs to reproduce in abundance.

Applied systematically, over time the process of Assisted Regeneration can reestablish the millions of plants required to reestablish the river wide indigenous shrub and macrophyte layers. Assisted Regeneration is a method that is recognized as a form of riparian vegetation rehabilitation whereby resources are targeted to create the conditions for regeneration and establishment of indigenous species.

Assisted Regeneration is an extension of current approaches that specifically targets the regeneration objective and frequently requires a river-based approach with a high level of floristic and plant establishment knowledge. It builds capacity over time frames of years, in the encouragement of in situ seed production. The effects are climatically, and flow dictated which directly influence the development of seed beds and seed dispersal. Necessarily, it requires consistent and persistent capabilities.

The Draft Yarra Strategy is the opportunity to establish the enabling management infrastructure to provide for the consistent and persistent expertise and works necessary to rehabilitate the shrubs and macrophytes of the Birrarung.

Objective 1 Healthy River and Lands

Action – Rehabilitation of river vegetation -Assisted Regeneration, whole of river.

Responsibility - Melbourne Water and Wurundjeri Woi wurrung Cultural Heritage Aboriginal Corporation

Delivery timeframe – Long-term for the full period starting immediately and extending to year 10.



Performance objective target

A healthy river and lands:

- Number of river kilometres systematically assessed, worked and monitored.



Performance Objective 1, Action - The Vegetation Envelope

Improved Biodiversity and resilience are addressed.

Floodplains of the upper, middle and Lower Birrarung have been alienated over the past 200 years. Agriculture dominates most reaches except for the inner city. The quantity and quality of indigenous floodplain vegetation are severely compromised.

The 50-year Community Vision and the challenges of climate change and growing population demand a change from the business as usual. A Birrarung flowing through an envelope of indigenous vegetation is at the core of the biodiverse river. Linear connectivity and increases in width and quality are required. Current vegetation rehabilitation works are limited to the river margins. The recent work at Haining Farm has demonstrated it is well within technical capabilities to begin to transition the floodplain from exotic pasture dominance to a more diverse indigenous dominated community.

There are few areas where the river flows through a wide indigenous vegetation envelope, particularly on private land. To maximize the biodiversity carrying capacity of the river a priority is to be the identification and investigation of the possibility of working with willing floodplain landholders in the rehabilitation of the floodplain to complement the biodiversity strengths of existing remnants.

The aim is to create river-based biodiversity hot spots that extend well out from the river margins out onto the floodplain, down the length of the river. Habitat creation, ecologically significant enough, for species to live permanently within as distinct from the narrow river margin links which are enough to act as corridors and habitat for common farm adapted species. Done correctly, they would encourage others to join in and link areas together.

The alternative of failing to address the current fragmentation and small size of vegetation pockets is to bow to the inevitable. The inevitable with greater climate change pressure is the incremental loss of even common indigenous fauna species.

Objective 1 Healthy River and Lands

Action – Rehabilitation of the river vegetation envelope - all but inner city reaches, in all but areas of built development.

Responsibility - Melbourne Water and Wurundjeri Woi wurrung Cultural Heritage Aboriginal Corporation, DELWP and others

Delivery timeframe – Long-term for the full period starting immediately and extending to year 10.

Performance objective target

A healthy river and lands:

- Number of river kilometres and hectares of floodplain systematically assessed, worked and monitored.