



Victorian National Parks Association

Submission to Growth Areas Authority, Growth Corridors Plan, Draft Conservation Strategy and Sub Regional Species Strategies

December 2011

This submission includes comments on both the Draft Corridor Plans, Conservation Strategy and the Sub-regional Species Strategies.

- 1.0 Strategic and Process Issues
- 2.0 Southern Brown Bandicoots Sub Regional Species Strategy
- 3.0 Growling Grass Frog Sub Regional Strategy
- 4.0 Golden Sun Moth Sub Regional Species Strategy
- 5.0 Other Issues

1.0 Strategic and Process Issues

General Points:

- Conserving threatened species and natural areas is good for people as well as the environment.
- The proposed strategic assessment and growth corridor plans will essentially lock in proposed growth plans, without a further ecological assessment, for decades. This is a sweetheart deal for property developers.
- Many of the proposed reserve areas in the urban growth areas have multiple uses and benefits such as waterway management and recreation as well as conservation.
- The Melbourne area has a large number of threatened species, which need to be planned for as well as people.
- It is critical we get the planning right now.
- The Federal Government needs to ensure that regular (every 3- 5 years) reviews, evaluation and monitoring arrangements are put in place before the plans are approved.
- The Federal Government should appoint an independent monitor as soon as possible and undertake an independent peer review of the ecological assessments undertaken to inform the growth plans.
- There should be a vision to make key conservation areas, such as along Merri Creek, part of a formal government owned and managed urban park and conservation network.
- Conservation laws at a state level have not been considered, for example the Flora and Fauna Guarantee Act.

Background and Discussion

We understand that the decisions made now as part of this process will remain in force for up to 60 years—or three generations—depending on the rates of development. Also, some of the species and impacted communities are among the most endangered and threatened in Australia. Hence we believe it is critical to get the very complex planning processes right if we are to protect threatened species and communities in urban growth areas.

Our understanding at this stage leads us to question the integrity of elements of the process surrounding the Assessment as they stand, and we have very grave concerns regarding the future survival of species and communities listed as 'matters of national environmental significance' (MNES) impacted on by the proposed growth areas.

We are currently working our way through the detail, but we have some important initial strategic or process concerns with the following issues:

1. Approval timing and sequencing;
2. The impact of parallel decision making processes;
3. Further investigation areas – incomplete;
4. A lack of a monitoring and evaluation framework.

1) Approval timing and sequencing

The Program Report, which governs the implementation of the Program, explains in section 6 that it is the Victorian Government's role to work with relevant stakeholders, including community representatives, to effectively deliver the Program.¹

There are a number of issues that have clouded the process to date which we believe have not been adequately addressed or resolved in the recent batch of documents. In addition to this, we find the current submissions process is inadequate to facilitate meaningful response from key stakeholders, as envisaged by the Program Report. Our particular concerns are due to short timelines coupled with a large number of complex and highly technical documents. This is exacerbated by the tardiness of the state government departments and authorities in providing relevant data.

Environmental experts, community groups and the public have only had two opportunities to provide comment on the Strategic Assessment process. The first was in June of 2009 (for a period of only one month). Now, after two and a half years, we are in the midst of a six week consultation period in which we are asked to consider eight key reports (four growth area corridor plans, one biodiversity conservation strategy covering the four growth areas, and three sub-regional species strategies). Then there are the supporting technical documents and associated reports including the time stamping project document and supporting dataset; six consultant reports on high-value sites in the growth areas; five reports on the growling grass frog: two for the southern brown bandicoot; three for the golden sun moth and many other documents from the Growth Areas Authority.

In addition to this, the Growth Areas Authority has released seven draft precinct structure plans that are located within the new growth areas, and it is implementing sub-regional species strategies, even though these have not been finalised or approved. Our understanding is that they will not go to panel hearings, and comments are due by the 23rd December.

The sequencing for the preparation and approval of documents for the Program is set out at section 5 of the Program Report. Section 5.2 requires that Sub-Regional Strategies be prepared and approved before the finalisation of Biodiversity Conservation Strategies for each of the expanded growth areas. Each Biodiversity Conservation Strategy must be approved prior to the finalisation of the Growth Area Plans.²

This project sequencing undermines the integrity of the whole process. Essentially it appears as though the State Government is circumventing the Strategic Assessment process, offering lip service to community consultation, bombarding the community and key stakeholders with documents, data and multiple processes to consider with only a limited timeframe, when they have clearly been under development for some months if not years.

¹ Delivering Melbourne's Newest Sustainable Communities, Program Report, December 2009, p. 43.

² Delivering Melbourne's Newest Sustainable Communities, Program Report, December 2009, p. 26-28.

Furthermore, the logic behind key decisions that are outlined within the Biodiversity Conservation Strategy (BCS) is not clear. This includes the intention to not undertake any further individual species surveys. The BCS does not provide us with detail around the methodology used or the extent of species surveys that were undertaken to inform this decision. Therefore we cannot derive any level of confidence in this process. There are many other examples of 'muddy logic', throughout this and the sub-regional species strategies. This has made the process of commenting on the documents particularly difficult and slow, as we have had to cross check documents, and backtrack and delve into detailed datasets and technical reports in order to understand the full story.

This level of detailed analysis by the community and experts should not be necessary, as the logic of the process should be clearly explained and presented in a standard, easy to understand report format. In contrast to this, we are finding that we are dealing with either a sloppy or rushed process which does not appear to meet objectives of the EPBC Act (1999). Furthermore, the entire set of data was not available to us at the beginning of the submission process (we received some data from the DSE two weeks into the submission period and are still waiting for DVDs with more information). Indeed we are still waiting for key baseline data from the GAA, weeks into the formal consultation process.

The Program Report requires the appointment of an 'independent monitor' to assess compliance with the Program and Assessment process.³ We ask that the Commonwealth confirm the appointment of this independent monitor to review, in particular, the DSE's process of data collection, the use of data for decision-making and the logic of the decisions.

- This would include consideration of the data, methodology and logic behind the 'Timestamping project', and the DSE's explanations as to why they believe all MNES have been adequately protected, and why there is no need for any further survey in the future.

2) The Impact of parallel decision making processes

As you may be aware, the Baillieu State Government has implemented its pre-election promise of inviting applications for the reconsideration of areas of land adjacent to the expanded growth areas for development. They have called this the 'logical inclusions review', which allows individual land holders outside of current boundaries to make applications for inclusion in growth areas. A further 'anomalies' process is being run which seeks similar nominations from local government.

These processes are not being considered as part of the Strategic Assessment and are not considered 'matters of national environmental significance'. In many cases this reconsideration of boundaries would completely counteract key elements of the Strategic Assessment Program commitments. An example of this is where a huge number of submissions have been made over large areas of the proposed Western Grasslands Reserve, which are listed under the 'Program' as providing the bulk of the offset requirements for clearing of grassland areas elsewhere. There are also other areas that have been provided with a 'preliminary approval' by the Growth Areas Authority through their Preliminary Assessment Report for the Logical Inclusions Review that are likely to include MNES. For example, Wyndham Area 1, close to Point Cook, includes a large area mapped as Plains Grassy Wetland and part of an area mapped as Plains Sedgy Wetland Ecological Vegetation Community, both of which are a vegetation types that are representative of the nominated community *Seasonal Herbaceous Wetlands (Freshwater) of the Temperate Lowland Plains* according to the draft description for the ecological community.

It is difficult to assess the final impact of the whole program when additional areas are still being added and may need assessment at a later date. It would seem sensible to extend the existing strategic assessment process, until the state has made a decision on which

³ Delivering Melbourne's Newest Sustainable Communities, Program Report, December 2009, p.72.

elements of the 'logical inclusions ' and 'anomalies' will be incorporated into the urban growth areas.

3) Further investigation areas – incomplete

Under the Program Report, a complete dataset of native vegetation for the Program Area was to be finalised by 2010.⁴ The Program Report also requires the Victorian Government to collect relevant species and vegetation data to inform sub-regional conservation planning and the Precinct Structure Plans.⁵

However, the Biodiversity Conservation Strategy has not been able to confirm all of the areas that it proposes for conservation as surveys have not been completed on some sites. They are due for completion in Jan 2012, and a series of prescriptions or decision criteria are proposed to assist the Victorian Minister for Environment and Climate Change in deciding their fate. There are more than 16 sites that are identified as 'potential conservation areas' but these cannot be confirmed until all site surveys are complete.

These 'potential conservation areas' include all of the proposed buffer areas to be included as Category 1 Growling Grass-frog habitat. The draft Biodiversity Conservation Strategy states that:

*All the Growling Grass Frog Category 1 areas (habitat corridors) have been identified in this Strategy as **Potential Conservation Areas**...[emphasis added]*

*Although the general location and basic parameters of the corridors are known further work will be undertaken to refine the Growling Grass Frog Category 1 areas following consideration of submissions and a **review of relevant sites**⁶ [emphasis added]*

For the Growling Grass Frog habitat corridors in each of the growth areas, the draft Biodiversity Conservation Strategy states as further actions⁷:

- *Finalise boundaries of Growling Grass Frog habitat corridors prior to finalisation of this Strategy (investigation process set out in Sub-regional Species Strategy for Growling Grass Frog)*
- *DSE to determine appropriate habitat corridor **reductions** in what locations, in consultation with DPCD and GAA. [emphasis added]*
- *If habitat corridor widths are required to be reduced, DSE to advise DPCD and GAA on the boundaries of the **reductions in accordance with the decision criteria**. [emphasis added]*

The decision criteria include ecological/biodiversity parameters and non-biodiversity planning objectives. It is not clear what the proposed corridor widths are for what will become some of the most important remaining habitat and corridors within the Growth Areas, nor what the non-biodiversity planning criteria are.

It is the environment groups' understanding that DSE has commissioned consultants to undertake the review of relevant sites and boundaries for the proposed Growling Grass Frog habitat over the next few months.

The Program Report states that the purpose of the Biodiversity Strategy is to 'define how the protected areas designated within the growth areas will be managed'.⁸ The incomplete nature of the document provided means that stakeholders are unable to meaningfully provide feedback on whether this purpose is being achieved.

⁴ Delivering Melbourne's Newest Sustainable Communities, Program Report, December 2009, p.16.

⁵ Delivering Melbourne's Newest Sustainable Communities, Program Report, December 2009, p. 83.

⁶ Biodiversity Conservation Strategy p.20

⁷ Western Growth Area p.77, Northern Growth Area p.100

⁸ Delivering Melbourne's Newest Sustainable Communities, Program Report, December 2009, p. 34.

It is not clear why the document could not have been delayed and the process completed in an orderly way so that everyone can be clear on what they are being asked to consider.

It is critical, in our view, that environment and community groups have the opportunity to review the sites and any proposed reductions in habitat, as well as the application of the selection criteria, before the biodiversity conservation strategy is finalised and/or approved by the Commonwealth.

4) Lack of monitoring and evaluation framework

The Program determines that a substantial monitoring and evaluation framework will accompany the implementation of the prescriptions for development of the growth areas. The Program Report states:

“An adaptive management framework will be developed to support the monitoring process established in the Program. The framework will set out the methodology for the systematic improvement of practices. The framework will be submitted to the Commonwealth Minister for the Environment, Heritage and the Arts for approval.”⁹

It also states that the majority of activities associated with establishing the monitoring and evaluation framework would have been developed ‘by 2011’.¹⁰ However, this is not the case and it has not been provided within the Draft Biodiversity Conservation Strategies.

The draft Biodiversity Conservation Strategy simply states *“The monitoring requirements of this Strategy will be set out in the Monitoring and Reporting Framework, which will be developed as a commitment of the Program Report. However, at a minimum these requirements will comprise the compilation and annual reporting of relevant data in relation to matters discussed in the Strategy. This reporting will be made available on DSE’s website (www.dse.vic.gov.au)”*.

According to the Program Report, the annual data will be used to report against the conservation outcomes and commitments in the Program Report at a precinct and whole of growth area level. It will also be used to report against progress towards targets set out in the Program Report and the Sub-regional Species Strategies.

This Strategy sets the direction and requirements for conservation within the growth areas for potentially 60 years. However, the Strategy may be reviewed during this time (not before five years) if reporting indicates an adjustment to direction is required to meet the conservation outcomes. Such a review would be undertaken in consultation with the Commonwealth Government”.¹¹

This is a very large gap in the process for accountability and we are not satisfied that we will have an opportunity to comment on the monitoring and evaluation framework in the future. This framework in our view will be critical in ensuring that the high level strategic plans outlined in draft sub-regional species strategies, and the draft biodiversity conservation strategy, will be properly implemented in the future.

Some of the elements of the monitoring and evaluation framework should include:

- Initial baseline data collection that should have been used to inform decisions regarding the reserve network design.
- An independent party appointed, consistent with the approved Reporting and Monitoring Framework, covering all projects under the program.
- Development of a standard monitoring protocol for detecting changes in vegetation quality and extent, species populations, water quality and heritage sites (where relevant)

⁹ Delivering Melbourne’s Newest Sustainable Communities, Program Report, December 2009, pp.82-3.

¹⁰ Delivering Melbourne’s Newest Sustainable Communities, Program Report, December 2009, pp.83-4.

¹¹ Biodiversity Conservation Strategy p. 114.

arising from site-based interventions. This should be provided to the DEWHA for approval in 2011.

- A dynamic reserve management planning approach incorporating a spatial decision-support system to inform ongoing management within reserved (and relevant off-reserve) areas.
- Detailed protocols for design and ecological management (including how prescriptions will be applied) of infrastructure such as roads, sewers, power lines etc. All of these will inevitably be proposed in the future.
- Funding for a community monitoring network

On the basis of our initial list of general strategic issues we have produced a series of recommendations that we believe the Commonwealth and State Government should enact that would go some way to addressing our concerns and improving the delivery of the Melbourne Strategic Assessment. We recommend the following:

1) Ensure independent monitoring of the implementation of the 'Program'.

- Appoint a suitably qualified Commonwealth officer, based in Melbourne, to act as a "strategic assessment monitor" for the Commonwealth, as stipulated by the Program Report.
- Provide funds for a community based urban grassland & threatened species monitoring network to monitor implementation and provide feedback to the Commonwealth.

2) Extend or provide for an additional consultation period

Key factors that should necessitate the extension of the consultation period, are:

- The BCS requires completion. It is currently missing detail around the final list of sites for conservation due to incomplete surveys.
- Provision of the missing monitoring and evaluation framework.
- Requirement for time to consider the results of an independent peer review of the DSE's data collection, and logic around the use of data for decision-making.

This could be achieved either:

- By making the review document/s with proposed changes publicly available, with a suitable period for public comment; or
- By incorporating these changes into a 2nd draft of the Biodiversity Conservation Strategy available for public review and comment before the final version is forwarded to the Commonwealth.

3) Extend the Strategic Assessment process to any land determined to be in the growth areas as part of the 'logical inclusions review' or the local government 'anomalies' process.

2.0 Southern Brown Bandicoots Sub –Regional Species Strategy

General points:

- Two biolink corridors are proposed, these corridors will take up approximately 2% - 3% of land proposed for urban development and are a bare minimum for Bandicoot conservation.
- The property development industry is getting a very good deal. The restoration and improvements to our ecological infrastructure is a once in a lifetime opportunity to provide a much improved environment for all.
- Environment groups support the two proposed bandicoot corridors, they should however be 200 meter wide at all point, not reduced in size in urban areas as these will act as 'choke points'

- Many of the background technical documents (Practical Ecology 2011 a) identified a western link from the Royal Botanic Gardens at Cranbourne to the Pines Flora and Fauna Reserve and Langwarrin Flora and Fauna Reserve, this link is now missing. A East West habitat link should be re-instated and developed.
- A third options for a link down the power line was also investigated, but was rejected. It should not be used as a replacement for the south-east alignment, but rather an additional back up link, if other corridors are damaged by fire or the like. Tensions between competing management objectives e.,g Transmission line, will however need to be resolved.

Background & Discussion

In the 19th century bandicoots were described as being one of the ‘very commonest’ mammals in south-east Australia. But recent records, including survey work in East Gippsland, the south-west, around Wonthaggi and Wilsons Promontory and south-east of Melbourne suggest that their numbers are now low in many parts of Victoria.

There have been local extinctions at many previously occupied sites, leaving the species with a substantially reduced range. Small populations southeast of Melbourne are under increasing pressure from a range of threats closely associated with urbanisation.

The Southern Brown Bandicoot is listed as ‘endangered’ under the Commonwealth Environment Protection and Biodiversity Conservation (EPBC) Act 1999. In Victoria, Southern Brown Bandicoots are listed as ‘threatened’ under the Flora and Fauna Guarantee Act.

Southern Brown Bandicoot is known to occur within the Royal Botanic Gardens Cranbourne and elsewhere in the south-eastern growth area. It also occurs at several sites to the south and east of the expanded 2010 Urban Growth Boundary, an could be re-established at the Pines Flora and Fauna Reserve to the west of the growth area.

Published and unpublished reports for this region southeast of Melbourne to Wilsons Promontory establish that:

- There is only one population within the Urban Growth Boundary; it is thriving at the Royal Botanic Gardens Cranbourne.
- There is a persistent but low density population across Koo Wee Rup.
- The species is almost absent from all high quality nature conservation reserves (NCRs).

According to the Bandicoot recovery program at Western Port Biosphere Reserve, the most recent reports (after the rain of the last 18 months) indicate:

- An increase in numbers of bandicoots across Koo Wee Rup including new sites (or occupying old sites)
- New records at two of the NCRs, Quail Island and one in West Gippsland.
- Where there is good management there can be thriving populations. Elsewhere with good wildlife connectivity, for example the flood mitigation channels of Koo wee Rup, there are bandicoots in low numbers. Otherwise the species is generally now absent even in high quality and moderate sized (~400 ha) reserves primarily as a result of predation by foxes.

There is good evidence to suggest that where there is wildlife connectivity and ground cover bandicoots can survive. Survival is aided by programs that seek to reduce predation and where effectively undertaken this can result in a thriving population especially in good native vegetation habitat – at least in the short term. In the long term, habitat connectivity is essential to maintain genetic diversity and populations resistant to wildfire, disease and climate change.

We agree with the Sub-regional Strategy:

“ it is important that Southern Brown Bandicoot populations and habitat are protected and managed on a landscape level.” Page 12.

The proposed habitat network has three main components:

1. the retention, securing, and enhancement of existing habitat
2. the creation of additional habitat patches for the species
3. the provision of corridors linking populations and habitat patches

The Sub Regional Species Strategy proposes two corridors:

Biolink 1) The creation of a north-south corridor extending south from the Royal Botanic Gardens Cranbourne through a small area of the proposed Botanic Ridge precinct the more or less due south to Quail Island (Westernport) through generally large rural properties. This will require creation of a secure habitat node to the south of the expanded 2010 Urban Growth Boundary. 50 to 80m wide. South of the Urban Growth Boundary a Continuous Habitat Corridor is proposed (160 to 200m wide).

Biolink 2) The creation of an east-west corridor extending east from the Royal Botanic Gardens Cranbourne to Devon Meadows, then continuing to the South Gippsland Railway Line intersection with Manks Road. This will require securing and enhancing an additional approximately 50 hectares of land to create a habitat node at Devon Meadows within the expanded 2010 Urban Growth Boundary, and potentially utilising a portion of the proposed Melbourne Water retarding basin to also create a habitat node. (see map attached)

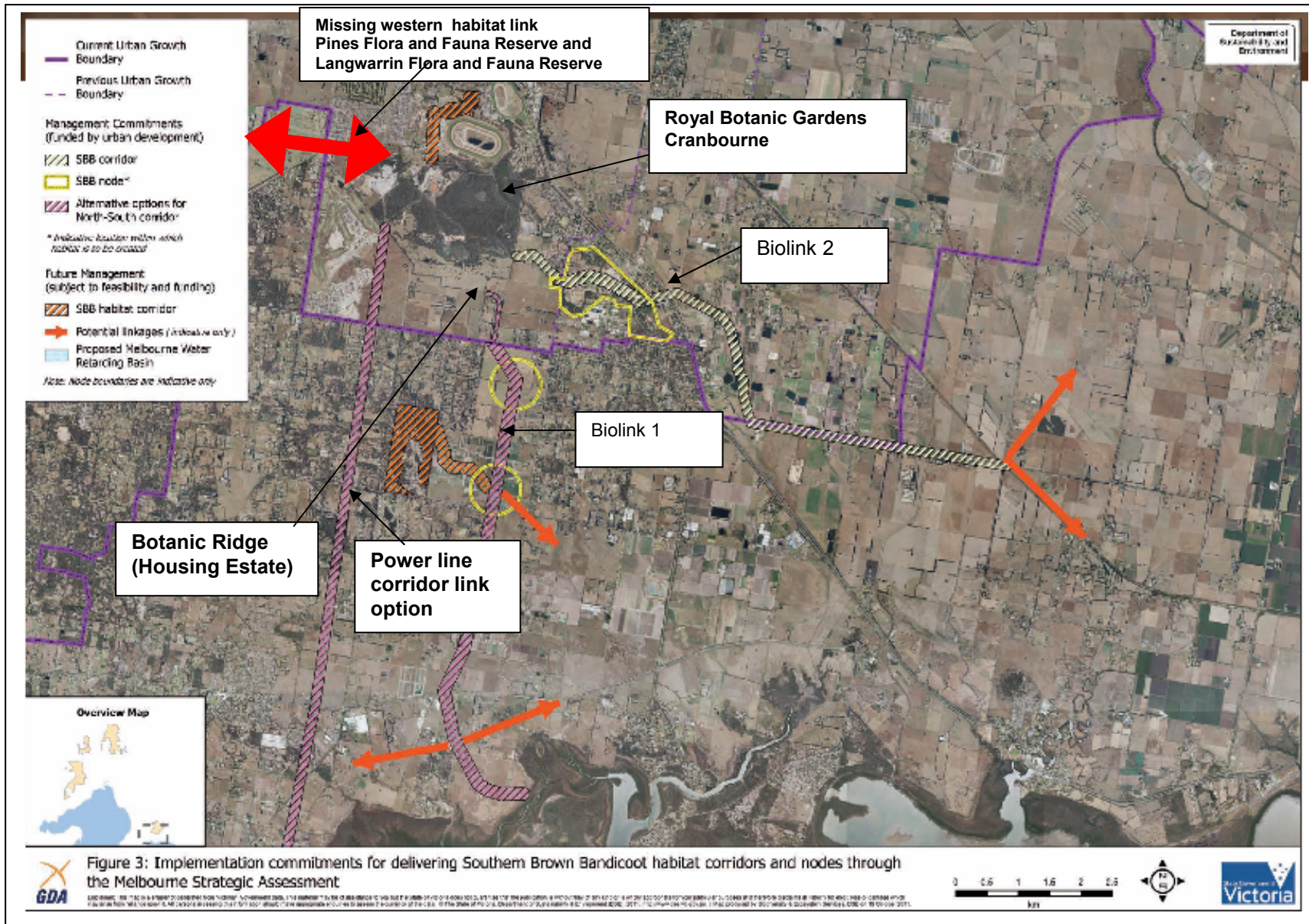
These two biolinks are welcome, however there appears to be no justification for the reduction in size for biolink 1, within Botanic Ridge. The so called ‘Short Dispersal Corridor’, reduced to 50 -80 meters will potentially act as choke point restricting bandicoot movement. These corridors should be expanded, to match the minimum size for a continuous habitat corridor of 200 meters.

Biolink 3) A third options for a link down the power line was also investigated, but was rejected due to impacting on larger number of private land holders and difficult to reconcile competing management objectives along the power line e.g. mowing by power transmission companies. This potential south west alignment using the existing electricity transmission line could be upgraded to supplement the south east corridor. It should not be used as a replacement for the south-east alignment, but rather an additional back up link, if other corridors are damaged by fire or the like. Tensions between competing management objectives will however need to be resolved.

The corridors within the UGB, such as Biolink 1 & 2 will only be successful if part of broader regional plan. The allocation of the wildlife connection in the PSP will need to be followed through so that the wildlife connectivity (corridor) is competed to the coastal reserves to the south. Appropriate planning controls such as ESO and or incorporating the Sub-regional species strategy into the planning scheme, should be considered as interim measures to facilitate the development of the regional connectivity.

Funding and plans should consider complementing these planning controls, with strategic conservation reserves and or private conservation agreements such as Trust for Nature Covenants and or a bush tender type arrangements for private land holders outside the UGB.

See Attachment: Melbourne’s Urban Expansion –Threatened Species on Our Doorstep Planning for the survival of the Southern Brown Bandicoot in south-east Melbourne, Victorian National Parks Association & Western Port Biosphere Reserve, October 2011.



3.0 Growling Grass Frog Sub Regional Strategy

General Points:

- The Growling Grass Frog is listed as 'Endangered' in Victoria and 'Vulnerable' under national environmental laws.
- Growling Grass Frog is also listed as a threatened taxon under the Victorian *Flora and Fauna Guarantee Act 1988*. A higher level of conservation significance under Victoria law than under national laws. This needs to be considered by Victorian decision makers, such as the Planning Minister, when developing sub-regional species strategies and Conservation Strategies.
- Strangely, Planning Minister, Matthew Guy said on Channel 9 news on 29 November that referring to the growling grass frog “*I don't know if its endangered.. the Federal government and previous labor government seem to think so...*”
<http://video.au.msn.com/watch/video/grass-frog-jeopardises-urban-sprawl/xtax82u>
or <http://www.heraldsun.com.au/news/more-news/frogs-in-a-place-where-they-wont-croak/story-fn7x8me2-1226214560801>).
- Under Victorian definitions “endangered” *A taxon is Endangered when the best available evidence indicates that it meets any of the criteria A to E for Endangered and it is therefore considered to be facing a very high risk of extinction in the wild.*
- Under section 12 of Victorian Planning Provisions, which the Minister for Planning administers, the planning scheme should “*...Assist the conservation of the habitats of threatened and endangered species and communities as identified under the Flora and Fauna Guarantee Act 1988*”.
- Once widespread it is declining in the wild and needs corridors along waterways to survive. The frog occurs in all the proposed growth corridors - West, Sunbury, North and South East.
- Almost 8,000ha of frog habitat is to be removed. In the proposed corridor plans just 11% of Growling Grass Frog habitat (650ha) in the growth zones is to be retained and only 44% of its habitat is to be retained across the whole metro area, including green wedges. This is a very low proportion of habitat.
- Frogs need access to water and populations move over fairly large areas, depending on annual climatic conditions. Protecting zones along waterways and creeks is not only good for frogs, but also helps ensure clean water, act as flood protection and can be used as passive open space for people.
- The draft strategy proposed that waterways have a buffer of up to 200m on each side of waterways (i.e. a habitat corridor of up to 400m wide along waterways). However, there are plans to reduce this in commercial areas. For example, the Biodiversity Conservation Strategy has identified approximately 54 hectares of land to be removed from Growling Grass Frog corridors on the Merri Creek and Werribee River to provide room for proposed town centres at Donnybrook and Tarneit West.
- We have grave concerns about the process and decision-making criteria for proposed reductions in the width of the Category 1 Growling Grass Frog habitat corridors. Of particular concern is the proposed reduction of the GGF corridor on Merri Creek from 200m either side to 50m either side in the vicinity of the proposed Lockerbie/Donnybrook principal town centre. The draft Lockerbie PSP, available through the following link, shows the town centre concept and medium to high density residential and commercial development adjacent to the GGF corridor.

- In the western corridor, the reserves along Skeleton and Dry Creek appear to be about 50 – 100m either side (nowhere near 200m), and should be extended in places to include adjacent grassland sites
- Similarly very narrow GGF reserve along Davis ck which should also be extended to include some small adjacent grasslands.
- Minimum buffer/conservation zones for creeks and waterways of 200 metres each side should be consistently maintained throughout the growth areas, with no exclusions.
- While passive recreation is likely to be compatible with creek corridors, active recreation in form of formal playing fields with associated toilets, car parks, club rooms etc, are more akin to urban development than conservation areas, and should not be considered as part of the land area considered for conservation.
- Four hundred artificial frog ponds are proposed to be developed as part of the draft strategy, clear design criteria are required to ensure that these ponds are developed to best practice standard.
- A small number of lateral links to other water bodies are also identified but without any detailed plans. Off stream dams and ponds can provide significant habitat for growling grass frog. For example the Whittlesea Quarry north of O'Herns Road is an example of this and has been a site of active community monitoring by the VNPA. See attachment II for VNPA Nature Watch Program report of GGF monitoring at Whittlesea Quarry.
- A levy of between \$6000 and \$8000 per hectare of per developable hectare is proposed as provision for 'compensatory habitat'. This will include payment funding for restoration and management of the proposed areas (total cost \$55 million). The waterways would generally be managed by Melbourne Water. The compensation levy of between \$6000 and \$8000 is likely too low and should be increased to ensure habitat restoration.
- The waterways should be in public ownership and managed in an integrated way for water quality, flood mitigation, biodiversity and recreation.
- The lack of clear guidelines/requirements to minimise the impact of infrastructure such as roads, bridges, sewers on GGF habitat corridors and equally so on other conservation areas. The Corridor Growth Plans give an indication of the extent of impact of the major road infrastructure whereas the maps which accompany the Biodiversity Conservation Strategy give little indication of the extent to which these areas may be impacted.
- The need for a more definitive commitment to effective protection measures for Conservation Areas, which can be clearly monitored and evaluated.
- There is no clear evaluation and monitoring framework in the strategy. A detailed evaluation and monitoring framework should be developed and released for public comment before the final plans are signed off by the Federal Government.
- The evaluation and monitoring framework should have clear measurable outcomes, which progress can be easily assessed by the community.

4.0 Golden Sun Moth Sub Regional Species Strategy

General Comments

- The Golden Sun Moth is a medium sized moth with wingspans of approximately 3.1 cm and 3.4 cm. Unusually for moths, the species is active during the day, favouring warm, sunny weather and calm wind conditions. The adults have no mouth and do not feed. They are thought to live for 2-3 years mostly underground and emerge 2- 5 days a year in spring and summer to breed.
- The Golden Sun Moth was listed as 'Critically Endangered' under the EPBC Act in 2002 and is also listed as a 'Threatened' under the Victorian Flora and Fauna Guarantee Act 1988. It is restricted to Victoria, the ACT and southern NSW. The moth occurs in native and non-native grassland.
- The Golden Sun Moth occurs in the West, Sunbury and Northern Growth Corridors. Approximately 11,000 ha of Golden Sun Moth habitat is proposed to be removed in the metropolitan area. Areas less than 100ha will be allowed to be cleared.
- The Federal Government approved a rule that aimed to ensure an 80% protection goal of all 'high contribution' habitat across the region.
- Allot (over 11,000 ha) of GSM habitat is being lost, and a large proportion of what is being retained has multiple uses such as grassland offsets.
- The 100ha threshold for retained habitat is too high and very little Golden Sun Moth habitat is being retained in the growth areas e.g. only 300ha.
- Completion of survey and reserve area design of key golden sun moth conservation areas with the urban growth areas be confirmed before final corridor plans are approved.
- Additional Golden Sun Moth conservation reserves should be identified as part of an urban conservation network within the growth areas such as smaller areas in Sunbury and the Northern Growth Corridor.
- Golden Sun Moth reserves should be established before clearance or removal of habitat is allowed.
- A clear and explicit commitment for an additional 2360 hectares of Golden Sun Moth reserves in the Volcanic Plain such as GSM should be 'protected' by inclusion in the formal public reserve system through purchase of private land by 2015.
- Concerns that the decision making process for the identification of additional Golden Sun Moth Conservation Reserves lacks transparency;
- Concerns that our understanding of GSM population genetics and ecology is not sufficiently well developed to understand the landscape scale needs of the moth.

Background and Discussion

In reference to the above DSE has gone through an exercise of applying the existing Golden Sun Moth prescription to identify areas of connected native grassland habitat > 100ha, with less than 25% cover of high threat weeds (and arguably the latter threshold is not a correct interpretation of the existing prescription anyway). Some sites of between 50 and 100 ha of connected native habitat are also included, especially in the north, and for some sites GSM has been confirmed on-site, whilst for others a GSM survey is still required (or has been undertaken and is not yet reported).

Decisions about the protection of grassland sites need to be based on grassland community values (including quality, species richness, ecological function – values identified in VNPA's previous submission), as well as the presence of Golden Sun Moth and other EPBC listed species. There is no need, as DSE is doing, to apply the existing arbitrary GSM prescription, as neither this nor any of the other existing grassland prescriptions have been approved for the expanded growth areas. Sites which are important for Golden Sun Moth are best identified from known high density and well connected populations, otherwise in the absence of effective surveys, high quality, species rich and connected grassland sites which also provide GSM habitat should be a priority for this species. The arbitrary prescription thresholds are not well grounded in the species' ecology. Grassland sites which are ecologically significant on their own merits should be protected, regardless of the presence of listed species.

For the connected native habitat sites identified in this way DSE is proposing 3 outcomes:

1. Protect as a reserve, in most cases due to grassland and threatened species values other than GSM, and hence not contingent on the outcomes of GSM surveys;
2. Protect as a reserve, but only if GSM is found in surveys – site designated as potential reserve investigation area;
3. Leave in development zones – especially due to high –edge to area ratios and manageability issues

The first type of outcome proposed by DSE will result in the reservation of a number of high quality, species rich grassland sites in the west and north, which depending on the site includes important populations of Spiny Rice-flower, Large-fruit Groundsel, and in a few cases confirmed GSM populations. This is a sensible approach to integrating high quality grassland conservation with GSM.

The second type of outcome however is paying no regard to the additional conservation values, such as critical grassland habitat link (Mt Atkinson site) and habitat area for Striped Legless Lizard (Skeleton Creek headwaters). For these reserve investigation areas grassland habitat and diversity values need to be weighed up as well as GSM.

The third type of outcome is proposing that some highly significant grassland sites, and some important GSM habitat are developed, without giving any description of these sites and the values to be lost. A key example here is the rocky ridge grassland between Ballan Road and Werribee River, which Biosis surveyed as an "excellent example of the EVC" and has an observed high density GSM population in connected (>100ha) habitat. No rationale has been provided as to why this site has been left out. The proposed conservation zone on the opposite (SW) side of Ballan Rd by comparison appears much more disturbed with extensive carpet weed. In addition at least one large block of potential high quality grassland and connected GSM habitat – the Bald Hill south Biosite (see below) – has been left of the GSM habitat maps altogether.

(add to this the list of new high quality grassland reserves, which are to be supported, and high quality or potentially high quality grassland sites still under threat of development – as sent in previous email – including small sites adjacent to waterways)

In addition the new conservation reserves within the Urban Growth Boundary proposed in the Draft Biodiversity Conservation Strategy (DSE 2011) will protect approximately 300ha of confirmed high contribution habitat. These sites include areas yet to be surveyed in detail and boundaries identified at:

- Sinclair's and Taylors roads, Plumpton.
- Grieg's road, Mt Atkinson road, Middle Road Mount Cottrell.
- Woods road, Truganina.
- Manor Quarry.
- Kalkallo west.

- Mickleham road, Mickleham.

These additions are welcome and include:

- Herb rich grassland sites north of Kororoit Ck, near Taylors Rd and Sinclair Rd (Plumpton, immediately W of Caroline Springs)
- Herb rich grassland sites immediately north of Ballarat Railway line at Ravenhall (one of largest populations of nationally listed Large Fruit Groundsel)
- High quality grassland site between north edge of Western Grassland Reserves (Mt Cotterell section) and Greigs Rd, with large populations of Spiny Rice-flower
- High quality stony grassland knolls and golden sun moth habitat at Woods Rd (NW of Trug Sth precinct) – but only part of this proposed for protection
- Grassland habitat link and golden sun moth site on southern slopes of Mt Atkinson, connecting Boral quarry grassland and Western Grassland Reserves – reserve for investigation
- High quality grassland habitat link and GSM site along Middle Rd – part protected, part to be investigated and part still in buffer/development zones

Missing areas

There are a number of areas, which have been missed and should be considered for protection”

- A key site missed is the rocky rise grassland between Ballan Road and the Werribee River at Wyndham Vale, which Biosis described as an excellent example of the Ecological Vegetation Community, and is full of Golden Sun Moth with connected habitat of over 100ha.
- There is a reserve to be investigated for a grassland adjacent to the headwaters of Skeleton Creek next to Boundary Road - this investigation area needs to be 4-5 times larger to include all of the potentially high quality grassland about the headwaters of Skeleton Ck - which has for a while been recognised as an important area for Striped Legless Lizard.
- Kororoit Ck reserve should be extended to include Rockbank radio station Red-gum woodlands and Lignum Swamp (also called by locals - Beatty's Road Sth).
- The creek reserves in the west need widening in a number of places: the reserves along Skeleton and Dry creeks appear to be about 50-100m either side (nowhere near 200m), and should be extended in places to include adjacent grassland sites

The proposed draft sub-regional species strategy proposes to meet this target by securing land proposed for the Western Grassland Reserves (to be completed by 2020) that will protect approximately 8100ha of confirmed high contribution Golden Sun Moth habitat (the same area is also being used to meet targets for grasslands). The total 'off-set' for the western grassland reserves needs to be clearly spelt out in a consolidated table, so the offset can be more transparent.

An additional, approximately 2360ha of confirmed, high contribution habitat would need to be permanently protected to achieve the 80% target, somewhere on the broader Volcanic Plain (e.g. between Melbourne and Portland). There is some uncertainty regarding the life cycle and genetics of the golden sun moth and questions if there may be GSM sub species occurring in other parts of the Volcanic Plains, which may bring into question the ecological basis of this idea.

If these reserves proceed, these areas should be identified up front and purchased as part of the formal reserve systems.

A charge or levy is proposed for 'developable land' to provide 'compensatory habitat' to fund reserve acquisition and management, however the basis of this calculation is not clear.

5.0 Other Issues

Grasslands & Grassy Woodlands

- A clear, legally binding commitment from the Victorian and federal governments that they will complete the purchase of the 15,000ha of proposed Western Grassland Reserves by 2020.
- Grassland reserves should be progressively put in place before clearing commences.
- Applications from properties within the grassland reserves that they should be 'part developable' urban growth areas as part of the State Government's 'Logical inclusions' process be rejected.
- Only 20% of the proposed grassland reserves are of high conservation value and significant resources and a dedicated team and management plan should be put in place to restore the area over time.
- Identify and protect high conservation value and botanically rich remnants (including areas designated for further investigation) within the urban growth boundary as part of an urban conservation network, before the final plans.
- The Biodiversity Conservation Strategy must include a clear plan that identifies and secures areas

Sunbury Growth Corridor

A number of high conservation areas within the Sunbury growth corridor appear to have been missed or inadequately dealt with including:

- The Shepherd's Lane/ Redrock Hill area, which represents a particularly high-value area.
- The Holden Reserve is of high importance and the threats posed by edge effects because of its long narrow geography. It has recreational, as well as biodiversity and landscape, values. It is also significant in protection from flood.
- There are questions about the creation of grassland reserves 20km away to offset grasslands destroyed in Sunbury.
- We support the Jacksons Creek Eco Networks call for the creation of a wild life corridor from suburban Keilor to Emu Bottom, North of Sunbury on the very edge of the Urban Growth Boundary. This is a significant opportunity to do so.
- Roads proposed to cross Jacksons Creek at Emu Bottom north of Sunbury and actually cutting across Redrock Hill and through Holden Flora Reserve.
- A proposed "Active Sports" reserve adjacent to the Emu Bottom Wetlands reserve, threatening the Growling Grassfrog habitat that has been documented by DSE in that area and the avulsion channel ("billabong"), which is listed as a Regionally Important landform.