2.0 Strategic Assessment Process and institutional issues

2.1.0 EPBC Strategic Assessment Process and timing

The VNPA has a number of concerns about the timing of the assessment and the comprehensiveness of the underlying ecological information. We believe that the timelines associated with the process are unreasonably short, especially considering the complex nature of the information, the importance of the process and the potential impacts of the decisions that will follow. There are four key concerns supporting the need for an extension or modification of the assessment process. These are:

1. **The Melbourne Strategic Impact Assessment is rushed.** There is clear discretion to extend the timelines – 28 days is the statutory minimum, not the norm. In fact other strategic assessments, none as large or as complex as the Melbourne one, have been done over years, not weeks, and have included a range of opportunities for community input. We have no direct experience with other Strategic Impact Assessments but understand that they are viewed as an approach that has merit when undertaken with due care and process. We are concerned that the process and timelines adopted for the Melbourne assessment will undermine the integrity of the approach.
2. **There is no further opportunity to comment.** Once submissions have been made on the draft, there is no opportunity to make additional comments on final proposals even if there have been significant changes.
3. **Significant delays in receiving the background information**. Many community groups have not received all the background papers and have had only 2-3 weeks to respond, which included two weeks of school holidays when many people have family care duties or take leave.
4. **The need for more biodiversity surveys and information collection in spring and summer**. Spring is just around the corner; it is a key time for grassland monitoring, and the only time for monitoring some of the key species such as Golden Sun Moth and Growling Grass Frog, which are only observable in spring and summer.

In our view, the additional time required would significantly improve the information base to allow proper assessment of the ecological impacts and mitigation measures proposed. It would also make the proposed Melbourne Strategic Assessment consistent with previous assessments.

These concerns are explored in detail below:

2.1.1 The Melbourne Strategic Impact Assessment is rushed

The use of the Strategic Impact Assessment provisions of the EPBC Act will potentially give the State and property developers an umbrella environmental approval for the next 20 years to clear significant native vegetation and habitat, without additional assessment, even if new information or knowledge arises or occurs. This means that the initial process should be undertaken with the highest level of integrity. The resulting decisions should be based on good quality data which is fit for the purpose.

The community should also be given sufficient time and opportunity for comment. Should Melbourne's Urban Growth Boundary be expanded as proposed, we are set to potentially lose significant amounts of Critically Endangered grassland areas, which equate to significant tracts of habitat for Nationally and State threatened species. In this context, we are very keen to see that the right decision-making process is being undertaken. On the basis of our preliminary assessment of the Strategic Impact Assessment process and resulting documents, we are not convinced that this is the case.

Two previous EPBC Strategic Impact Assessments have been commissioned: one in the Kimberly in Western Australia (started in February 2008) to look at the Natural Gas hub, and the other for urban

development for Molonglo in the ACT. Neither assessment has been completed and neither is at the scale and complexity proposed for Melbourne. Both these previous assessments have taken years, not weeks as for Melbourne.

Furthermore, these two previous assessments have had consultation periods on both the draft terms of reference and Strategic Impact Assessment reports. For the Melbourne Strategic Impact Assessment, there was no public consultation period on the terms of reference. An initial Memorandum of Understanding (MOU) was developed without consultation and signed between Commonwealth and State on 4 March 2009. Subsequently this MOU was re-written and signed on 16 June 2009, over three months later, again with no consultation. The renegotiation of the MOU was yet another opportunity for consultation that was not taken up.

The MOU was signed between the Commonwealth and the Victorian State Government to undertake a strategic assessment under Section 146(1) of the EPBC Act, 1999. The MOU sets out the following process:

- Consultation on Draft Report, 17 June –17 July 2009.
- Revise all Public Submissions and Final Report, Close of Business 14 August 2009.
- The final report consists of
  - (i) the amended draft report, and/or
  - (ii) a supplementary report
  - (iii) comments on how public responses have been taken into account

The timelines are ridiculously tight, with only four weeks between the closing of submissions and final lodgement. The process allows little time if further information is required or community views are given proper consideration, and gives a strong impression of a foregone conclusion.

The EPBC Act 1999 stipulates that the Strategic Impact Assessment report be exhibited for public comment for a period of at least 28 days. There is clearly discretion under the Act to allow for more than 28 days' consultation, as has been done in other cases.

We also note, based on legal advice, that there is nothing in the MOU between the State and Commonwealth which prevents an extension of the public consultation period, and that a variation to the agreement could be made subject to Clause 12 of the Agreement.

2.1.2 There is no further opportunity to comment

The State may make changes between the Draft Strategic Impact Assessment Report and the Final Report to be submitted to the Commonwealth on 14 August. Following the initial short submission period, there is no provision, other than directly through the political process, for the community and experts to comment on any revisions that will subsequently be submitted to the Commonwealth.

There should be substantial changes to some of the proposals to take ecological and community concerns into account. However, these changes cannot be assessed or commented on after the initial consultation period.

2.1.3 Delays in receiving the background information.

Many community groups and expert advisors did not received all the background papers for some time, and then had only 2-3 weeks to respond. In Victoria, the public consultation phase included two weeks of school holidays when many people had family care duties or took leave. For example, three key regional organisations (Merri Creek Management Committee (MCMC), Western Region Environment Centre and Cardinia Environment Coalition) ordered copies of relevant reports and supporting technical documents on either 17 or 18 June. Neither group had received copies by 26 June, effectively reducing the time to consider and comment on documents by a further two weeks.

We have also had reports of people requesting documents being 'grilled' and questioned about their right to receive the documents if they were not an impacted landholder. Some were also told that a submission was not required unless their position had changed since the opportunity for comment via previous submissions on the location of the Urban Growth Boundary. Although this should be irrelevant, there was very little (in fact virtually no) information provided in earlier consultation on the UGB on ecological issues or impacts.

2.1.4 The need for more biodiversity surveys and information collection in spring and summer

The majority of the data which has informed the Strategic Impact Assessment was mainly sourced via a series of desktop studies. This includes both the consultants' reports and the Strategic Impact Assessment document itself. Very little on-ground assessment was conducted, and the majority of this was associated with ground-truthing native vegetation. Most of the field assessments were undertaken from mid to late summer and autumn. All consultants identified the need for targeted surveys, in the correct season, namely spring to early summer, especially of EPBC-listed species.

In view of the importance and lasting consequences of the outcomes of this process, we consider that the methods used and constraints to the studies have not resulted in good quality data, nor is it fit for purpose. Further detail is provided below.

Spring, just over a month away, is is a key time for grassland monitoring, and the only time for monitoring some of the key species such as Golden Sun Moth, only observable in spring and early summer; Growling Grass Frog, which calls from September to December; and Southern Brown Bandicoot, which is most active in spring. An extension to the process, particularly to allow additional ground-truthing and monitoring, is critical if the ecological purposes of the Strategic Impact Assessment and the EPBC Act are to be fulfilled.

2.1.5 Limitations of the studies informing the Strategic Impact Assessment

A range of consultants were contracted by the Growth Areas Authority to provide advice on the constraints due to biodiversity values that should be applied to zones under consideration for development via the expansion of the Melbourne Urban Growth Boundary. The consultants each undertook an assessment of individual species of importance and native vegetation.

Limitations were identified to be associated with a few key areas, which included, but were not limited to:

1. Datasets and data provided by DSE (Native Vegetation and flora and fauna).
2. Lack of access, particularly to private land, for ground-truthing the presence, type and quality of native vegetation.
3. The timing of the assessments, potentially resulting in misleading results.
4. The incomplete alignment of DSE vegetation assessment methodology and classification with EPBC listed communities.

An additional limitation of the studies is associated with the fact that they did not consider on a case-by-case basis the ecological communities that are nominated for listing under the EPBC Act 1999. This should also be addressed prior to the development of the final report.

SMEC (2009) states that their assessment is '*a region-wide assessment and is not suitable for site specific or precinct based planning*'. They also state that '*it is apparent that some elements of the underlying data are deficient, inaccurate or old. In particular, the level of knowledge and survey effort for some threatened flora and fauna is very poor or highly restricted to a few surveys. Also, the timing of surveys and incidental observations may not correspond with ideal sampling periods*; *there may be limited survey effort in the area if it is extensively private land; and some species have naturally low detectability rates*.' They provide detailed information on the gaps associated with the study and recommendations for future work, and identify 25 areas that should be subject to supplementary field assessments.

Similarly, Biosis (2009) states that '*a full assessment of the ecological values of the Melton Desktop Area was not conducted…. However this assessment can be used to identify sites that require further field assessment to satisfy environmental legislation and policy requirements*'.

Birds Australia likewise highlights the incomplete nature of the studies. They comment: *'This should be viewed as an incomplete assessment, with the understanding that data is insufficient to meaningfully assess the importance of many areas.' (Birds Australia 2009).* They also *'... strongly encourage field surveys and further desk-top review to understand and limit possible impacts on birds'*

Native vegetation analysis was undertaken via three methods:

- using DSE's modelled native vegetation extent dataset
- aerial photograph interpretation
- ground truthing using a rapid qualitative assessment method across a small percentage (only 20% for the SMEC study) of each investigation area. Ground truthing was restricted to 'over the fence' assessments from public access points (largely roadsides) for private land, resulting in the majority of the investigation areas being poorly assessed.. In some cases, estimates applied to the extent of an entire property.

A number of the ecological consultants also commented on the limitations and the need for additional work on threatened flora and fauna, including: *'The assessment was conducted over a range of seasonal conditions which included both optimal and sub-optimal times for survey. As such the majority of seasonally visible species are likely to have been overlooked with a single site visit'.* and *'Seasonal surveys for threatened flora species should be conducted within relatively intact areas of native vegetation before any decisions are made as to their presence, absence or population size' (Biosis 2009 p6)*

In particular SMEC also identify that targeted flora and vegetation community assessment is recommended for almost all the sub-areas within the Investigation Area (Areas 2a, 2b - Sunbury/Jackson's Ck), 3a (most of upper Merri) and 3b, 3c and 3f). The report states: *'t is recommended that a survey is undertaken across the entire extent of Area x to identify areas of native vegetation (as defined by DSE) and to determine their quality (Habitat Hectares) based on DSE approved methods'* and*:* '*It is further recommended that targeted surveys be undertaken for the highly restricted Basalt Peppercress and Plump Swamp Wallaby-grass based on their known distribution and preferred habitat.' (P.197)*

2.1.6 No field assessment of E6 Transport Corridor

Further, there has been no on-ground assessment of the Outer Metropolitan Ring road and E6 Transport Corridor. A desktop assessment completed by Brett Lane & Associates Pty Ltd estimated the area of native vegetation to be cleared. The report itself notes: *"The current assessment was strictly limited to a desktop study and some threatened species may have been missed due to minimal previous research in some areas"* (p2). The consultants recommend that a broader 2km search area be undertaken and detailed field assessment carried out.

2.1.7 Targeted flora and fauna surveys required for critical species

As indicated above, the majority of the ecological consultants have highlighted the limitations associated with their assessment of potential impacts on threatened species, and recommend targeted flora and fauna surveys.

For example, SMEC, which surveyed areas to the north of Melbourne, and Biosis, which surveyed the west, highlight in their recommendations targeted fauna surveys for all sub-areas. Critical species include Golden Sun Moth, Growling Grass Frog, Brown Toadlet, Southern Toadlet, Striped Legless Lizard, Grassland Earless Dragon, Eastern Great Egret, Brown Quail, Diamond Firetail, Swift Parrot,

Azure Kingfisher, Plains Wanderer, Barking Owl, Fat-tailed Dunnart and Brush-tailed Phascogale (SMEC pp.201-208). Biosis (2009, p45), similarly recommends that targeted surveys be undertaken for all species of national and state significance in areas they identify as 'High Retention Areas' and in other 'Retention Areas' identified as containing likely habitat.

The only targeted surveys undertaken to inform the Strategic Impact Assessment were in the South-east expansion zone for the Southern Brown Bandicoot. In this case they were confined to motion-activated cameras at two locations and day-time survey (for a nocturnal animal). Survey for the Growling Grass Frog was also initially proposed for the South East, but the time of year, high temperatures and lack of access to private land ruled out this option (Practical Ecology, 2009).

Furthermore, the Strategic Impact Assessment Report identifies a number of species that require targeted survey (pp. 102-108). We strongly support the targeted survey and request that it be undertaken as part of the process of the Strategic Impact Assessment, not afterwards.

Timing is critical for further survey of flora and fauna species. It is widely acknowledged that spring and early summer are the best times for surveying grassland flora and many fauna species. Practical Ecology (2009, p. 11) states that more in-depth studies across the entire South East investigation area are required from September to December for Growling Grass Frog, and in spring for Southern Brown Bandicoot, using a wider variety of methods.

The EPBC Critically Endangered Golden Sun Moth is particularly prevalent in the grasslands to the north and west of Melbourne. Six years of study by the Merri Creek Management Committee have shown that Golden Sun Moth emergence times are erratic and seasonally dependent, the moths emerging mainly in early *summer* rather than spring. In 2005, a student studying Craigieburn grassland recorded 13 suitable dates for recording moth numbers between 12 November and 29 December. This would be the period when best results can be achieved, and attempting surveys outside optimum emergence periods risks false negative results.

Finally, many grassland flora and some fauna species are best and only observed in spring. The EPBC Policy Statement 3.8, Natural Temperate Grassland of the Victorian Volcanic Plain, for example, highlights the variable nature of grassland species: "*It can vary seasonally because many wildflowers only become visible during spring and early summer…. Therefore, any proper assessment should occur in spring and must occur more than 2 months since recent disturbance….".*

Recommendation:

a) *That the period for consultation for the Strategic Impact Assessment be **significantly extended**. The extended timeline should:*
   a. *Facilitate the detailed field assessment of ecological values, much of which would need to occur in spring and early summer.*
   b. *Allow for additional studies required to address ecological communities listed for nomination under the EPBC Act 1999.*
   c. *Allow for adequate time for the community and experts to comment on any new data, as well as existing data.*

b) *That the Memorandum of Understanding between the State and Commonwealth be **altered** to include further opportunities for consultation with the community.*

2.2.0 Strategic Assessment Mitigation Strategy

The proposal for 15,000 ha of new grassland reserves is great news, but it is no excuse or substitute for the massive amount of native vegetation clearing proposed.

The integrity of the entire Strategic Impact Assessment Report has been undermined by the data on which it is based. Furthermore, it appears to be a biased assessment, predisposed to allow the clearing of 6,918 ha (3093 habitat hectares) of Natural Temperate Grasslands of the Victorian Volcanic Plain and 924 ha (275 habitat hectares) of Grassy Woodlands of the Victorian Volcanic Plain – a total of 7842 hectares.

The proposed reserves are on different soils and therefore have a significantly different floristic make-up compared with the grasslands within the proposed development areas. This means that grasslands within the Urban Growth Boundary (UGB) may not be directly comparable with those outside (see section 2.0 for more detail). There is also a need to refine the reserve proposed to link the two parks, and incorporate some additional areas of high value grassland (see section 3.2, Wyndham Growth Area, for detail)

Across the volcanic plains less than 30 000 hectares remain of Natural Temperate Grasslands of the Volcanic Plains. The proposed clearing of 8,000 ha is a significant portion (26%) of remaining native grassland habitat. The proposed new reserves may make up a significant proportion of remaining ecosystems, if they can be effectively delivered, but it is not clear that this does equate to a 'net gain' or even 'no net loss' of vegetation, unless significant management gains can obtained in new reserves.

'Avoid': The Mitigation objective of 'Avoid' has been stated as having been met through locating the UGB and infrastructure to avoid the 'relevant matter for target'.

This may sound reasonable, but it does not actually address any steps that have been taken to avoid impacting upon the 'relevant community or species' within the proposed and existing UGB. Essentially, this should be the main focus of 'Avoid' but has not yet been addressed by the Strategic Impact Assessment. Furthermore, without actually addressing the whole question of how impacts will be avoided, there is no opportunity available to understand how 'Avoid' would be applied – if it was ever intended to be. This is not acceptable

'Minimise': The Mitigation Strategy to minimise impacts appears to rely almost exclusively on the Precinct Structure Planning Process. Prescriptions have then been developed to guide how this process would address Matters for Target.
Deference to the Precinct Structure Planning Process is not an adequate substitute for a comprehensive higher level approach to minimise impacts. Precinct Planning will occur at a scale that is not appropriate to address the potential impacts of multiple occurrences of impact across the landscape.

'Offset': The Mitigation Strategy advises that it will offset any impacts largely by establishing the proposed Western Grassland Reserves. There is mention of the establishment of a grassy woodland reserve in the Sunbury area and another in the Whittlesea area, and of securing the Clarke's Road Grassland reserve. There is also mention of retaining some habitat following the cessation of quarrying activity in the South East.

There are no details for how any species offsets will be provided, nor details for any of the reserves and how they will meet the habitat requirements not only of individual species but of multiple species that have different requirements from the same vegetation/landscape mix. Essentially it has been made very difficult to comment on any of the offset proposals due to the scant detail provided, and this detail really should be considered insufficient.

There is no strict “net gain” assessment proposed in the Strategic Impact Assessment Report, so it is unclear if the level of clearing meets the State Government’s own Native Vegetation Framework. The report does document the proposed losses (7842 hectares, 3093 habitat hectares) but not the projected gains (in habitat hectares) from the proposed new reserves or other mitigation measures. There appears to be an over-emphasis on offsetting. The report clearly states that “offsetting is the primary way to mitigate impacts” (p. 3) as opposed to “avoidance, minimisation and then offsetting” which is required in the state’s Native Vegetation Framework.

Many of the prescriptions proposed for grassland in the proposed growth areas are designed to facilitate clearing rather than avoiding or retaining even the highest value areas. There appears to be no justifiable relationship with many of the prescriptions in either State or Federal biodiversity or conservation policy.

Many of the prescriptions outlined in the strategic assessment report depend on reserves being in place before clearing commences. For example, the prescription proposed in the Strategic Impact Assessment Report (page 139) claims that impacts on native grassland and Striped Legless Lizard habitat has already been avoided (assumed as part of the new grassland reserves). However, this is only the case if the reserves are secured prior to clearing commencing.

There needs to be a transparent and detailed reserve design plan developed which demonstrates in detail the gains to be achieved in any of the offsets, and includes a detailed implementation timetable developed to ensure that gains are in place before any clearing occurs.

Recommendation: *That a transparent and detailed reserve design plan be developed which demonstrates in detail the gains to be achieved in any of the offsets and includes a detailed implementation timetable developed to ensure that biodiversity protection gains are in place before any clearing occurs.*

2.3.0 Institutional arrangements for new grassland reserves and offsets

The Victorian Native Vegetation Management Framework includes an offset multiplier of x2 for very high conservation significance vegetation. In fact the offsetting of unavoidable losses under the Framework generally requires an area-to-area offset ratio of between 5:1 and 10:1 to ensure there is no net loss of native vegetation.

The new reserves will be subject to a public acquisition overlay, which will depend on individual property owners selling to the state. There is no guarantee (and in fact it is highly unlikely) that all individual landowners in the reserve area will be willing to sell, so there needs to be some flexibility and contingency developed as part of a detailed reserve implementation plan, with clear timelines, milestones and audit requirements.

Further, the proposed areas will require both transitional controls and incentives to ensure that habitat is not lost or degraded while the reserves are being acquired. Controls should take the form of both planning control through the establishment of a new ‘high priority conservation zone’ to restrict current as-of-right agricultural use, and a specific coordinated enforcement and monitoring program.

Stewardship incentives for good management should also be considered as both a transitional arrangement and possibly an add-on to encourage broader landscape scale conservation across the bioregion. This could be informed by a sub-regional and bioregional landscape protection plan and enforced or established through an EPBC Bioregional Plan and supporting state implementation plan. This would increase both implementation flexibility and likely conservation outcomes. It could also allow for offsets required from existing UGB areas to be targeted to other areas.

While the first priority should be to retain high value areas as part of the urban conservation network, where offsets are required the priority should be:

1. Establish the grassland reserves
2. Support private land conservation across the Werribee Plains and adjacent regions
3. Support private land conservation across the Victorian Volcanic Plains (VVP) Bioregion.

The establishment of a prescriptive formula for every hectare of habitat cleared in the secured area should be:

- 80% is secured in the proposed grassland reserve (sourced from clearing between existing growth area and new boundary)
- 20% is secured in private land covenants within the Werribee Plains Region and adjacent regions to establish a regional conservation network across tenures (sourced from clearing between existing growth area and new boundary)
- Private land conservation via Trust for Nature covenants supported by a stewardship program across the VVP is supported by offsets required from areas within existing growth boundaries or other associated clearing.

Other criteria for the establishment of new reserves include:

- **No clearing should be allowed until new reserves are in place.** It is absolutely critical that any new reserves are locked in as quickly as possible before property developers or the State Government start clearing for new housing or infrastructure. This is critical to ensure that gains are real before values are lost through development.
- **National parks.** Any new reserves should have the highest level of protection and be declared national parks.
- **Lines on maps are not enough, upfront funding is required.** It is very easy to draw lines on maps, but the purchase of private property for new national parks will cost hundreds of millions of dollars and take many years, even decades, leaving the fate of the grasslands open to the whims of multiple state and federal election cycles or speculative clearing by property owners. This means funding for the new reserves needs to happen upfront and a clear park implementation plan needs to be established.
- **New parks should be delivered within five years.** The reserves are proposed to be delivered within 10 years, while clearing will take 20 years. The areas for potential reserves may be damaged or neglected during this time while property owners decide whether to sell or not. Reserves should be delivered within five years, and a strict implementation timetable should be established.
- **Funding.** As yet there is no detail of how the new reserves will be funded. There needs to be at least $50 million, if not more, provided up front to ensure that reserves are purchased before clearing commences. If the proposal is to survive the inevitable changes in governments, there also needs to be a transparent and robust funding plan that includes:
    - Establishment of an independent trust, with a strict terms of reference, overseen by an independent board of trustees at arm's length from government
    - A publicly available register of all clearing and offsets.

Recommendation*: The detailed reserve design and implementation plan should include the following elements:*

- *Priority criteria and prescriptive formula for every hectare of habitat cleared;*
- *No clearing should be allowed until new reserves are in place.*
- *National parks status*
- *Lines on maps are not enough, upfront funding is required.*
- *New parks should be delivered within five years.*
- *Upfront Funding.*

2.3.1 Permanency and security of offsets

If market-based instruments are used to protect broader landscape areas as part of the offsets for urban clearing, the issue of permanency of gains made through offset schemes such as BushBroker, or BushTender or similar schemes also needs to be considered. BushTender and similar programs offer two types of agreements, one fixed-term and one permanent. The fixed-term management agreements are common law contracts between the Secretary of the Department of Sustainability and Environment and the landowner. Parties to these agreements are the Secretary of DSE and the landholder(s) of the site and are not registered on title. Sale of the site or transfer of the lease would terminate the agreement. DSE may offer the new landholder the opportunity to sign a new agreement for completion of the actions specified in the original agreement.

Landholders' management obligations under the fixed-term agreements cease at the end of the agreement period and they will be able to manage the vegetation according to their own wishes in accordance with other responsibilities applying at that time.

The permanent conservation option relates to ongoing land use and is registered on the title through a conservation covenant via the *Victorian Conservation Trust Act 1972* or an agreement under the *Conservation, Forests and Lands Act 1987*. The agreement is a simple, plain-English document of three to five pages (Fitzsimons 2006).

According to a detailed review by Fitzsimons 2006, conservation covenants signed through BushTender under the Victorian *Conservation Trust Act* could qualify as protected areas, whereas those signed under the *Conservation, Forests and Lands Act 1987* would not.

Fixed-term agreements, due to their lack of permanency (not transferred with the title) and security (agreement variation between Secretary and the landowner; breach of agreement simply means cessation of payment) would not qualify for protected area status. This is despite payments for those sites for ecological management purposes potentially enabling better biodiversity management outcomes than binding agreements with non-payments.

If we take the criteria used to define protected areas as a surrogate for good biodiversity protection (as is recognized in International Conventions, etc), there should be a clear preference in BushBroker or other stewardship schemes for <u>permanent</u> protection of biodiversity over short-term agreements, especially for any offset arrangements.

There is also a significant question regarding the value of spending large amounts of public money on biodiversity restoration which does not have a permanent outcome for the public investment.

Recommendation: *If market based instruments or stewardship schemes (such as Bush Broker) are used to offset grassland loss they should require legally binding permanent protection agreements, instead of short term contracts.*

2.4.0 Proposed prescriptions for grasslands within the Urban Growth Areas

The Strategic Impact Assessment report states that areas of grassland and grassy woodland within the UGB in the northern regions will only be retained if they are contiguous with other grassland areas *"typically of at least 150 ha*." (Strategic Impact Assessment Report, p.126). This threshold appears to be based only on the needs of the Striped Legless Lizard, and is too high a threshold.

A range of studies have highlighted the values associated with Melbourne's grasslands. For example *"The grasslands around Melbourne are floristically distinct to those in rural areas in western Victoria and contain threatened species not found at other sites""* (Williams, 2005)

"*Recent developments in the field of conservation planning and reserve design have emphasised the need to conserve areas based on their "irreplaceability" (the contribution that a site will make to the reserve network) and vulnerability (the likelihood of an area being destroyed or degraded)….Because of the very small amount of native grassland remaining in Melbourne, it is likely that all sites supporting native grassland in the region are irreplaceable and of great conservation value for any reserve system." (*Williams, 2005)

Many areas significantly smaller than 150 ha have been found to be viable and to maintain biodiversity. There should be no set minimum size; instead, areas for retention should be assessed on the basis of:

- species richness
- intactness/condition
- landscape context and connectivity, as part of a habitat corridor
- extent of occurrence of key species, e.g Nationally and State significant species
- irreplaceability
- role in ecological function/process
- reserve design and management opportunities.

There are many small grassland areas which, with appropriate management, can be effectively managed for conservation. Examples include the Evans Street Grassland in Sunbury (3 ha), Central Creek Grasslands in the Merri Catchment (Ngarri-djarrang), Cooper Street (40 ha), Altona Reserve (4ha), etc. Also key species such as Golden Sun Moth occur in smaller sites. For example, of the 50 known sites for Golden Sun Moth, around half are less than 10 ha in size (see page 144 of Strategic Assessment).

Williams (2005) notes "…*current government conservation planning policy is to create a reserve system with an "emphasis on long-term viability", thus there (is) a concentration on larger sites away from urban areas…This policy assumes that urban grassland reserves are not viable in the long term, despite evidence that with appropriate resources and management they are able to persist and maintain the majority of their biological value."*

Many grasslands are currently degrading owing to surrounding areas of non-remnant or poor quality paddocks that are often poorly managed from an ecological perspective (increased exogenous disturbance, eg. by Serrated Tussock infiltration and or active spraying for weed control). It is arguable that turning the surrounding non-remnant and poor quality paddocks ('dead land') into housing will decrease the amount of exogenous disturbance, and if combined with active management, create viable conservation areas. Various studies have found that native grasslands are relatively insensitive to area- and isolation-based fragmentation effects, and habitat quality is strongly influenced by management levels and by the landscape matrix surrounding remnant patches through changes in fire regimes and increased external disturbance (Williams et al 2006, Williams et al 2005)

William et al (2006) comment that: "*This study extends these findings to include evidence that the landscape surrounding remnant patches, as well as the quality of the habitat maintained within the remnant, may be more important drivers of fragmentation effects on plant species than spatial attributes of patches, such as area and isolation"*

The prescription (page 139) for areas between the current and new UGB in the west (assume Wyndham and Melton Growth areas) states that sites will be assessed on a case-by-case basis and that sites with significant species such as Spiny Rice Flower, Matted Flax Lily and Golden Sun Moth will be retained, if they meet a relevant prescription for one of the nationally listed species. However the prescriptions, when reviewed in detail, largely allow (or even recommend) clearing, with offsets.

The proposed prescription for key species such as Golden Sun Moth allows clearing *'if at least 80 percent of the total area where 'high contribution to species persistence' and 'confirmed habitat' have been protected within the bioregion'*. The argument proposed is that the new reserves will fulfil this function. It seems difficult to see how these competing prescriptions can be implemented logically, and in line with the current EPBC recovery plans or Significant Impact Guidelines (were they exist). For example, the draft Significant Impact Guidelines for the Golden Sun Moth outline a range of thresholds as a guide for significant impacts which set thresholds as low as 'loss or degradation' of more than 0.5 of ha in areas of more than 10 ha, and loss of any habitat area of less than 10 ha (see SIAR page 144)

The sequencing of implementation for these competing prescriptions does not make sense. If it will take ten years (or probably more) to put reserves in place, the proponent cannot clear habitat (see Scenario 2 pages 149) until those reserves are in place, which by default means that smaller areas within the UGB which contain Golden Sun Moth or other species with a prescription will need to be retained unless a additional further offset can be secured.

This arrangement is likely to cause huge uncertainty unless reserves can be put in place very early in the process, or there is an opportunity to retain areas of high significance within the urban growth boundary as part of the urban conservation network.

Further, it is unclear what the basis is of 80% of the total area of places (in a bioregion) where 'high contribution to species persistence' and 'confirmed habitat' intersect. The 80% of calculation does not appear have any basis in policy or science or any relationship to the existing Commonwealth Policy (Significant Impact Guidelines) for critically endangered and endangered species.

In addition, if the 80% bioregional target is reached does this mean that existing reserves secured for protection of key species such as the sun moth are then eligible for development ?

2.4.1 Creating an urban conservation network

High conservation value sites should be retained within the UGB, particularly if they have multiple values and can be logically managed as part of the urban conservation network. Key criteria for retention of sites (as listed above) include:

- species richness
- intactness/condition
- landscape context and connectivity, as part of a habitat corridor
- extent of occurrence of key species, e.g Nationally and State significant species
- irreplaceability
- role in ecological function/processes
- reserve design and management opportunities.

Many of these decisions are also left to the precinct planning stage. If a truly strategic approach were undertaken, the high conservation value areas should be able to be indentified much earlier in the process. For example, additional targeted surveys in the coming spring would confirm many of the high value sites within the proposed UGB area and allow the establishment of a *detailed reserve design plan* or 'ecological structure plan'. This sort of plan would include a greater level of detail than outlined in the strategic assessment but allow for design, in broad terms, of areas required to be retained for conservation purposes as part of an urban conservation network., prior to precinct planning and as part of the Growth Area Framework Plans and not rezoned for development.

Priority sites should be considered on the basis of the key criteria (as above) and mapped as underlying networks of reserves and ecological features. This would allow a landscape approach to be applied before the pressures of development occurred, give greater certainty and security for both developers and the community, and produce a truly strategic approach to protecting biodiversity.

Lower value areas may need to be traded off during this process, but this should be done only as part of science-based and consultative processes. It is worth noting that these areas are unlikely to be huge or to significantly undermine the development objectives for Melbourne. Such an approach would be truly "Delivering Melbourne's Newest Sustainable Communities".

See Chapter 3 for list of priority sites identified by community groups.

Recommendations:
a) *High conservation value sites should be retained within the UGB, particularly if they have multiple values and can be logically managed as part of the urban conservation network. Key criteria for retention of sites include:*

- *species richness*
- *intactness/condition*
- *landscape context and connectivity, as part of a habitat corridor*
- *extent of occurrence of key species, e.g Nationally and State significant species*
- *irreplaceability*
- *reserve design and management opportunities.*

b) The proposed prescriptions for grasslands and key species are not in line with current science or policy for the protection of biodiversity and national threatened species and communities, and need to be revised to allow key high-value sites within the urban growth boundary to be retained as part of the 'urban conservation network'.

c) With additional surveys, high priority sites should be incorporated into a enforceable 'ecological' structure plan which outlines an urban conservation network for the growth areas which is incorporated in Growth Area Framework Plans and not rezoned for development.

2.4.2 Habitat links and utility reserves

It is well documented that many examples of high-quality grasslands remain along utilities such as road or freeway reserves, railway lines, waterways and even power lines. Williams et al. (2005) show in their studies that *"Patches that were privately or government owned, close to major roads and close to Melbourne, were more likely to be destroyed, while patches close to streams or on railways had a lower probability of destruction. Patches with high perimeter to area ratios had a higher probability of being degraded"* (*N.S.G. Williams et al. / Landscape and Urban Planning 71 (2005) 35–49)*

Williams et al (2005) add "*For example, based on our results, good quality grassland close to any planned freeways should be targeted for purchase or protection using planning controls, while weed control should be a priority along railway easements supporting native grassland".* (ibid.)

Rail, road or power line easements and the like which retain grasslands or act as high priority habitat links should have specific management plans or guidelines developed to inform management that takes into account protection of both flora and fauna. These should be based on relevant recovery and best practice ecological management.

The interim management guidelines currently recommended by the National Recovery Team for Striped Legless Lizards 1999-2003 suggest management guidelines based on Dorrough (1996) which include:

- Where grazing has been part of management, past grazing regimes should be continued, with monitoring of stocking rates, ground cover and weed species to ensure suitable habitat is maintained.
- Where burning has previously been employed, it should be continued in a mosaic pattern at intervals of 3-5 years, with monitoring of weeds afterwards.

- If mowing or slashing is to be used, mowing heights should be set at approximately 100mm to maintain suitable structure, and slash raked and removed. This type of activity should be avoided during spring and early summer, as this coincides with the peak flowering season of many native plants and the most active and breeding season of *D. impar*. Care should be taken to minimise importation of weeds carried by equipment.
- As with mowing above, weed control equipment should be cleaned to ensure seed is not transported. In significant grassland sites, including all containing *D. impar*, spot spraying is the preferred method of control.
- No physical soil disturbance, such as ripping or ploughing, or pasture improvement, should be undertaken, as this destroys the habitat values of native grasslands.
- Trees should not be planted in areas of remnant grassland.

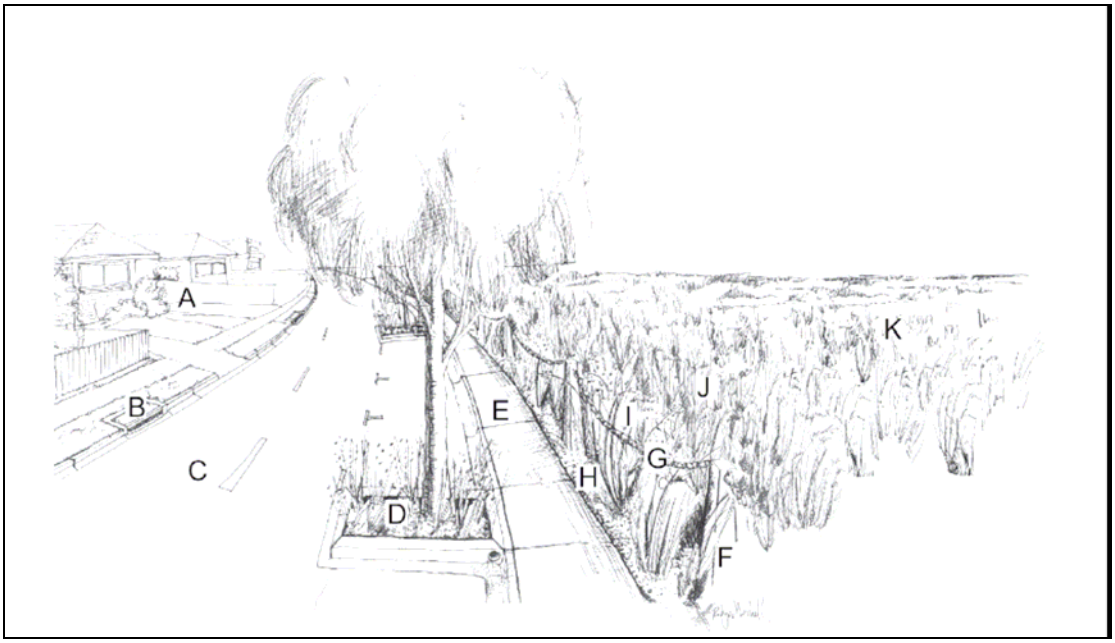
Likewise, Management Guidelines outlined in EPBC Act Policy Statement 3.11 are also a useful starting point.

Recommendation: *Enforceable management guidelines and management plans should be developed for all statutory authorities, local government and other utility operators with responsibility for significant grassland remnant patches in line with relevant EPBC Policy and Recovery Plans. These should be supported by initial seed funding by government, to enhance implementation.*

2.4.3 Design principles for urban grassland reserves

An extensive body of knowledge and experience is being developed for the design and management of urban grassland reserves. There is also evidence that these reserves have community support and help local communities to understand the nature of their environment. Williams (2005) highlights some key design features, outlined below.

Figure 1.0- Design of proposed buffer for residential or commercial development adjacent to native grasslands (from Williams et al 2005)



The diagram incorporates many of the ideas presented in the paper Williams, N.S.G (2005) *Management strategies for preventing weed invasion in urban grasslands.*

Legend:

A – New residential development. B– Storm water drain taking water away from grassland.

C – Road, footpath and car parking act as wide fire break. D – Planting cut-out containing compatible native

street trees and understorey planting. E – Footpath draining away from grassland. F – Fire resistant fence posts. G – Fence or chain and bollards to prevent vehicle and bicycle access and control pedestrian and pet access. H – Granitic sand to prevent weed invasion along path edge. I – Dense ornamental indigenous plantings to deter pet access.
J – minimum 15 m dense buffer zone planting of kangaroo grass.

Recommendation: *Grassland protection design guidelines should be developed for developers and responsible authorities for managing urban and peri-urban grassland remnant patches, in line with relevant EPBC Policy and Recovery Plans. These should be supported by initial seed funding by government, to enhance implementation and assist in long-term management of remnant sites.*

2.4.4 Limitations of Precinct planning – Truganina South case study

There are at least 872 ha of natural temperate grassland within proposed urban precincts, and much of this is likely to be removed (Strategic Impacts Assessment p123). Based on recent examples, such as Truganina South (see below), precinct planning essentially rubber-stamps vegetation removal even when there is potential for successful conservation reserves.

Under this Native Vegetation Precinct Plan, 75 hectares of grassland, including many of very high significance, and 31 habitat-hectares would be cleared, including Golden Sun Moth habitat and one specimen of Spiny Rice-flower. The Net Gain Target would be 58 Habitat-hectares of very high conservation significance.

1) Not one Grassland Reserve is proposed, even though there is a logical linear reserve in this precinct along the southern side of the drainage line. The viable reserve, integrated with open space, drainage works and a habitat corridor along the creek, would include HZs 1, 2, 4, 6 and 15 as a minimum.

2) Under current rules, each of the grassland sites would still need an EPBC permit to be cleared. Precinct planning is already being used to clear high conservation significant native vegetation.

3) This will create difficulties for developers in finding offsets. Even if the grassland reserves are established, the difficulty of finding and paying for offsets is consistently assumed to be easier than it actually is.

4) This proposal to clear Very High sites goes right against Net Gain policy. Only projects of State significance can be used as an excuse to clear such sites, and urban subdivision doesn't measure up to that standard.

5) Even if grassland reserves are established outside the UGB, this should not give a licence to clear every last hectare inside the UGB

Figure 2 Area of grassland to be cleared in Truganina South

Table 1: Patches of native vegetation to be removed -– Truganina South

ID	Address	Area to be removed (ha)	Habitat Score (out of 1)	Framework Conservation Significance
HZ 1	99 Palmers Road	0.37	0.32	High
HZ 2	25 Palmers Road	4.90	0.38	Very High***
HZ 3	25 Palmers Road	4.50	0.22	Very High***
HZ 4	250 Sayers Road	4.03	0.45	Very High***
HZ 5	240 Sayers Road	8.49	0.50	Very High***
HZ 6	260 Sayers Road	1.37	0.22	Very High***
HZ 7	260 Sayers Road	1.55	0.41	Very High
HZ 8	260 Sayers Road	0.46	0.49	Very High
HZ 9	260 Sayers Road	1.51	0.53	Very High***
HZ 10	260 Sayers Road	0.23	0.56	Very High
HZ 11	260 Sayers Road	0.94	0.48	Very High
HZ 12	270 Sayers Road	7.39	0.51	Very High*
HZ 13	270 Sayers Road	1.57	0.31	High
HZ 14	290 Sayers Road	1.19	0.41	Very High
HZ 15	Lot 6 Leakes Road	17.55**	0.45	Very High
HZ 16	280 Sayers Road	3.17	0.36	Very High***
HZ 17	105 Palmers Road	15.8	0.36	High

TOTAL 75.02

* = supports one specimen of the threatened Spiny Rice-flower

** = default score (BL&A Report 2006)

*** = threatened Golden Sun Moths were observed

Recommendation: *That precinct planning and the Biodiversity Precinct Planning Kit, be reviewed and modified to incorporate grassland protection guidelines and design principles to allow the retention of high conservation patches of grassland and associated ecosystems as part of the public open space network.*