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Review of Birds Australia Report:

Planning for the Conservation of Birds in relation to the Melbourne Strategic Plan¹

1. Introduction

On June 17th the Victorian state government released its proposal for an expanded urban growth boundary (UGB) for Melbourne, a new Outer Metro Ring (OMR)/E6 transport corridor, a new regional rail link and two new grassland reserves to the west of Melbourne. Together, these four proposals are referred to as the 'Program'. The State Government's Report for public consultation on these proposals is called *Delivering Melbourne's Newest Sustainable Communities – Urban Growth Boundary Review²*.

Because the areas affected by the Program contain many flora and fauna species and communities which are listed under the Commonwealth Environment Protection and Biodiversity Conservation (EPBC) Act, the Program is being assessed under the strategic assessment provision of the Act. The state government has prepared a *Strategic Impact Assessment Report³* which is open for public comment⁴. After consideration of these comments, the report and the public submissions will be submitted to the Commonwealth Environment Minister who will determine approval of the strategic assessment.

Birds Australia was commissioned by the Victorian Department of Sustainability and Environment to report on planning for the conservation of birds in relation to the development proposals encompassed in the Program (as outlined in para.1).

This review of the Birds Australia Report [the Report], and the extent to which its recommendations have been incorporated into the Strategic Impact Assessment Report, has been undertaken by Merri Creek Management Committee (MCMC) in order to promote discussion and understanding of the technical information which provides a basis for the assessment of the impacts of the Program on biodiversity. The review has a particular focus on the conservation of birds in the upper Merri catchment, one of the proposed urban growth areas. Many of the comments are pertinent to all the proposed growth areas.

The author, Brian Bianbridge, has wide experience of the Northern Investigation Area and landscape ecology issues dating back over the previous 14 years and has a keen amateur interest in the birds of this area. The review has completed under tight time constraints, limiting the capacity to develop some of the discussions raised.

¹ Birds Australia *Planning for the conservation of birds in relation to the Melbourne Strategic Plan*. Report prepared for the Victorian Department of Sustainability and Environment, March 2009. See: [http://www.dse.vic.gov.au/CA256F310024B628/0/498A3FBC7A004D96CA2575D6001CF325/\\$File/DSE-supp-Birds+Aus+Rep.pdf](http://www.dse.vic.gov.au/CA256F310024B628/0/498A3FBC7A004D96CA2575D6001CF325/$File/DSE-supp-Birds+Aus+Rep.pdf)

² For Urban Growth Boundary review see: <http://www.dse.vic.gov.au/DSE/nrenpl.nsf/LinkView/C350816525A0D3A3CA2575D6001DAB9ECEEE2CCA29F0B7E7CCA2572DC001F183F>

³ For Strategic Impact Assessment Report see: <http://www.dse.vic.gov.au/DSE/nrenlwm.nsf/LinkView/4D120251A18885EFCA25757E00294A2ABFFDD52C4A0A10FBCA25713200061392#e6>

⁴ Public comments are due by Friday 17th July.

2. General comments

2.1 Strong Woodland recommendations - Weak Grassland recommendations

Overall, the recommendations in the Report for Native Woodland Specialist Bird Species are robust and strongly stated. Furthermore, these recommendations are well reflected in the exclusion of woodlands from the proposed UGB and the identification of woodland areas as 'Proposed Non-urban areas (development avoided)' for the Northern Growth Area (upper Merri & upper Darebin)⁵.

However, data and recommendations in the Report for Wetland Species, Grassland Species, Migratory Species and Shorebirds are considerably weaker. These weaker recommendations appear to be reflected in the far less comprehensive proposals for the protection of grassland habitats in the Northern Growth Area as outlined in the Strategic Impact Assessment Report.

The stronger recommendations for Woodland birds compared to Grassland species is not explained. It may reflect a number of factors including: the relative ease of determining Woodland extent, the relative ease in assessing biodiversity values from accessible woodland species data, and the relative wealth of published knowledge on woodland bird conservation. The values of the other EPBC listed bird habitats are more cryptic and transitory, less well documented and often less appreciated.

2.2 Deficiencies in structure of the Report

There are major deficiencies in the structure of the Report. It has no aims, objectives or methodology and lacks a distinct limitations section. This makes it impossible to assess the reliability of the Report's determination of areas of biodiversity importance. The Report itself states that it should be viewed as *"..an incomplete assessment, with the understanding that data is insufficient to meaningfully assess the importance of many areas."* (p.6). This lack of depth in the underlying data and subsequent coverage of the Report is readily apparent and is stated repeatedly by the authors throughout the Report.

Methodology. There is no description of the methodology.

- at one point the Report is described as a 'review' but as there is no description of information sources this severely limits the ability to assess the value of the Report's statements.
- there is no description of where the bird records were sourced, what the limit of their currency was (i.e. how old the oldest records were), no distinction between what might be considered 'vagrants' from regularly occurring species, nor how the significance of a species occurrence within the area was determined.

Recommendations The recommendations are scattered throughout the Report and are not organised in a consistent way (e.g. some recommendations only occur in captions to Figures in the Appendix). Many of the recommendations are highly qualified and as a consequence lack strength. As mentioned above (2.1) the Woodland recommendations are far more detailed and prescriptive than those for Grasslands. There appears to be an unacknowledged assumption that destruction of Grasslands, especially in the North Investigation Area is acceptable, while loss of Woodlands is to be avoided. Buffers for Woodlands are recommended for *all* Investigation Areas.

The Strategic Impact Assessment Report (sec. 3.7.2, p 46) states that *"Birds Australia provided advice on impacts and mitigation measures for all migratory species"* [emphasis added]. As detailed below, the section on migratory species in the Birds Australia Report only covers EPBC listed species, primarily migratory shorebirds. Of these, only the Latham's Snipe is covered in detail (under the section on Shorebirds). Although this is a species of primary concern for EPBC matters, the reference to all migratory species requires some qualification. The considerable number of 'within-Australia' migratory species which undertake annual altitudinal movements, and seasonal and drought-response movements into the investigation areas could justifiably be discussed under the topic of 'migratory species'.

3. Comments on specific Chapters

3.1 Overview of concerns held by Birds Australia (p.6)

The purpose of the 'overview of concerns' section is not made clear but it appears to be a list of recommendations.

The four main points it makes are:

1. That bird distribution, abundance, habitat requirements and tolerance to urbanisation is *poorly understood* within *much* of the area where urban development is proposed. As a result the report *strongly encourages* field surveys and further desk-top review.

⁵ Figure 8, p.48, Strategic Impact Assessment Report.

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A more direct statement should have been made. It is clear that information on bird populations and dynamics in the proposed growth areas is insufficient for decisions on land use affecting conservation of bird species. Recommendations on reservation of areas for bird conservation should therefore wait until there has been a thorough scientific review of literature and of records and until field-based surveys are completed.

2. A couple of statements are made about the impacts of habitat loss and urbanisation including: *'...efforts should be made to maintain existing native vegetation composition and structure, protect and buffer wetland habitats, and aim to protect larger connected habitats where possible.'* (p.6)

A more strongly worded recommendation would have been appropriate.

3. The third point states *'...reserve optimisation models that incorporate existing patches of native vegetation, costs of mitigation or offsets, and some assumptions about target bird species generally thought to be poor at adapting to urban environments, could conserve more of the overall diversity of birds and their habitats'* (p.6)

This appears to be a suggestion that a 'focal species' analysis (in the sense of Lambeck 1997, see Noss, in Lindenmeyer and Hobbs 2007, p. 267) should be conducted.

A 'focal species' analysis would be a very useful approach and would supply a more rigorous and scientifically based approach to assessing habitat values. The suggestion should be made as a direct recommendation.

4. The final paragraph on p.6 is effectively a statement of limitations. It emphasises that the Report should be viewed as an 'incomplete assessment' and also that:

- The data is insufficient to meaningfully assess the importance of many areas;
- Historic bird records are lacking in much of the proposed development areas;
- Existing records may include location errors;
- Existing records may not reflect current conditions; and
- EVC and other overlays lack the precision required to identify avian habitat.

These statements should be clearly identified as limitations to the Report. They are serious limitations and should have been considered and re-stated in any reference to the Report's 'recommendations' in the Strategic Impact Assessment Report.

3.2 Shorebirds (p.7) Latham's Snipe

Latham's Snipe is highlighted as the species most likely to occur within the Northern Investigation Area in nationally significant numbers and the Report states that *"Any loss of wetland habitat carries the risk of losing habitat used by nationally significant numbers of Latham Snipe ..."*

This section also includes the statement:

'...we recommend that an effort be made to conserve all permanent and ephemeral wetlands within the proposed investigation area'. [emphasis added] (p.7)

A more strongly worded recommendation would be appropriate.

The Report mentions the need to manage wetlands appropriately and to retain buffer areas; however one critical factor is not mentioned and that is the importance of ensuring the continuance of local hydrological conditions for ephemeral wetlands. These can very easily be disrupted by urban development. For example, Merri Creek Management Committee has witnessed the drying of an ephemeral grassy wetland at Ngarri-djarrang (Central Creek Grassland) in Reservoir that appears, in part, to be due to the loss of runoff from a nearby residential area, 100 metres from the edge of the wetland.

The 'Impact mitigation' section (p.3) states *'We would strongly recommend avoiding development in the wetlands or the grassy areas surrounding wetlands within up to 100m of where Latham's Snipe, or Australian Painted Snipe have been recorded'*. (p.8)

Beardsell (1997) noted Latham's Snipe at the following locations which are within the Northern Investigation Area:

- Camoola Swamp in November 1991 (5 individuals);
- Hernes Swamp in 1989 (12 individuals);
- Spring Street Swamp, Beveridge on 24 November 1991 (10 individuals);

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- o Spring St Swamp on 11 November 1991 (6 individuals);
- o freshwater marsh on west side of Merri Creek at the junction of the Merri Creek and 'Bald Hill Creek' 1988 (5 individuals).

Kalkallo Common was also identified as a potential place for this species.

The caption to Figure 6, which shows the above records, includes the statement that '*We feel it is unlikely that many of these areas would hold significant numbers*'. This is an inappropriate basis for discounting these areas from consideration, especially as the identity of the authors and their experience is not detailed, nor do they detail the basis on which the 'feeling' is made. It is also at odds with the earlier statement that "*Any loss of wetland habitat carries the risk of losing habitat used by nationally significant numbers of Latham Snipe ...*" (p.7).

The basis for the Report's interpretation of the importance of the areas identified by Beardsell (op.cit) is the 'threshold' for significance. The 'proposed threshold for National Significance' for Latham's Snipe - 18 birds observed - is included in Figure 4 (p. 24) of the Birds Australia Report. Although it is not referenced, this threshold appears to originate from the draft EPBC Act Policy Statement 3.x Migratory Species⁶. The Policy Statement identifies the use of threshold criteria as a 'crude method to designate important sites but effective in the absence of data sufficient for more rigorous methods' (p. 8). Given this, and the high mobility of Latham's Snipe and the dynamic nature of the Snipe's ephemeral wetland habitat, it is reasonable to expect the threshold to be used with a very careful degree of interpretation.

A reasonable conjecture would be that some of the ephemeral wetlands that Latham's Snipe has been recorded at may support Snipe at numbers exceeding the proposed threshold at some times.

When Latham's Snipe is discussed in the Migratory Species section of the Strategic Impact Assessment Report (6.4, pp.186-190), the threshold of more than 18 birds is used in a definitive manner, without qualification or reference to its being a proposed threshold. It is thus 'accurately', if misleadingly stated that there are no sites in the study area where Latham's Snipe has been recorded in significant numbers.

This is then reflected in the key Mitigation Strategy of 'Avoid' in the Strategic Impact Assessment Report which states (p.188):

"...the Investigation areas, Urban Growth Boundary revision and related infrastructure have been located to avoid many wetlands, including all those known to support nationally significant numbers of migratory species."

An 'avoid' mitigation strategy is fairly easy to achieve when Latham's Snipe is the only species discussed and no known areas with 'Nationally significant' populations are said to exist in the Investigation Area.

A precautionary approach would require that all areas of ephemeral wetland, especially any that have records of Latham's Snipe, not only those which have nationally important populations, should be excluded from development areas.

3.3 Other Migratory Species (p.11)

The Report mentions the following 'other' migratory species:

Tree Martin, Australian Reed Warbler, Black-faced Cuckoo Shrike, Little Raven, Magpie-lark, Horsefield's Bronze Cuckoo, Silvereye and Whistling Kite.

It states that "*None of these species are currently classified as threatened or vulnerable under the EPBC Act or in Victorian FFG Act 1988, and none are at special risk from impacts arising from urban development within the four investigation areas. Therefore impacts and mitigation for these species have been generally covered in other sections of the report i.e. wetland dependent species, native woodland specialist species*". (p.11)

This statement, which appears to be the basis for discounting the need to address these migratory species more fully, has the following problems:

⁶ viewed online (13 July 2009)

http://www.justice.tas.gov.au/data/assets/pdf_file/0014/123422/PoE_8.1_Draft_Policy_Statement_Migratory_Shorebirds_2009_v0.2.pdf.

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- Confusingly, some of these species (Horsefield's Bronze Cuckoo, Tree Martin and Silvereye) are included in the Woodlands section with a 'Migratory-EPBC' status⁷
- Tree Martin is a species that may predictably be severely impacted by the loss of large old River Red Gums with hollows. An example is the MCMC observation in 2008 of a large tree in the Amaroo Woodlands, Craigieburn, where nesting was observed in a tree slated for removal as a part of an industrial development. Even the selective removal of 'hazardous' dead limbs from trees retained in urban areas may substantially reduce the value of such trees for Tree Martin.
- Whistling Kite is a species whose nesting would predictably be disrupted by disturbance from urban development and the loss of grassland hunting areas.
- The loss of open long-grass spaces needed by Horsefield's Bronze Cuckoo is a predictable outcome of urbanisation.
- The following additional migratory species have been seen in the Merri Creek valley, (some only irregularly), by MCMC staff:
 - Flame Robin (IUCN near-threatened) – *mentioned in woodland section*
 - Latham's Snipe (EPBC, JAMBA) - *covered in shorebird section*
 - Eastern Great Egret- *in wetland section*
 - White-winged Triller
 - Rufous Songlark
 - Brown Songlark*
 - Grey Teal
 - Cattle Egret
 - Satin Flycatcher- *mentioned in woodland section*
 - Rose Robin
 - Little Button Quail *
 - Red-chested Button Quail- *mentioned in Grassland section but northern sightings not mentioned*
 - Pallid Cuckoo - *Mentioned in woodland section*
 - Fan-tailed Cuckoo - *Mentioned in woodland section*
 - Black-eared Cuckoo - *Mentioned in woodland section*
 - Royal Spoonbill

* indicates grassland specialist species

Not all of these species are discussed in other sections of the Report and coverage in the Grassland Species section is particularly poor.

The Report does not identify any specific actions to retain these migratory species in the Merri Creek valley. There is no discussion of the need for connectivity of habitat along likely migration routes nor is there discussion of the need for passage structures for the less mobile species across barriers such as freeways.

3.4 *Wetland dependant species (p.12)*

The Report mentions that many wetlands are not currently identified within desktop GIS layers and that '*..it would appear that many more wetland birds are using these areas than have been recorded*'.

The caption to Figure 8 in Appendix 1 (p.27) recommends surveys of mapped wetlands to verify they still exist. For the upper Merri, historically recorded wetlands have been identified and mapped in the *Merri Creek and Environs Strategy 2009-2014*. These [former] wetlands would be an important reference for any such survey.

In order to ensure *ephemeral* wetlands are conserved (as per Impacts and Mitigation, Direct Impacts - Point 1. p. 13), wetland surveys will be most accurate if undertaken after an extended period of heavy rain. Some ephemeral wetlands in the wider area have a long period of dryness between wet periods and they may not be obvious from their vegetation composition.

⁷ As far as Merri Creek Management Committee is able to ascertain, these three species are not on the EPBC – migratory list.

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3.5 Native Grassland Specialist Species (p.15)

The list of Grassland Specialist Species is an odd mix of common generalist species, vagrants or irruptive species and the Plains Wanderer. The latter is the only significant species listed that is closely tied to high quality grassland habitat. There are a number of other species from grasslands in the area that could have provided elements needed for a sensitive 'focal species' analysis for assessing Native Grassland. These include: Brown Songlark, Flame Robin, Rufous Songlark, Brown Falcon, Singing Bushlark and Brown Quail.

Although the Woodland section states that the species list (16 species) is not exhaustive and gives a list of additional species, no such qualification is given for the scanty list of Grassland species (6 species). This limited species list is used to define impacts, which consequently are limited.

The Impact Mitigation section states: *"We would strongly recommend avoiding development in any areas supporting native grasslands in the Western Melbourne (Werribee) investigation area because of potential for destruction of habitat vital for the survival of populations of threatened birds."* (p.16)

No recommendation is made about avoiding native grassland habitat in the Northern Investigation Area and no explanation is given for the geographic unevenness of this recommendation. Both Red-chested Button Quail and Plains Wanderer have been recorded in some of the grasslands in or near the Northern Investigation Area.

The lack of such a recommendation for grasslands in the Northern Investigation Area is at odds with the Report's statement about Plains Wanderer:

'Historic records of this species also occur in the Craigieburn and surrounding areas of the Northern Investigation Area. Given the recent find near the west of the Western Investigation Area, surveys of this region would also be worthwhile. Retention of these areas would be well justified for this species alone, but also for other species such as the Red-chested Button Quail.' (p.16)

The tone of this statement, which suggests Plains Wanderer may still be present in the Northern Investigation Area, is not reflected in the discussion of Plains Wanderer in the Strategic Impact Assessment Report which states:

'As indicated in Section 5.2.1[sic], although it cannot be ruled out, this species is unlikely to have persisted within the study area, although it would have been present.' (p.135)

The Strategic Impact Assessment Report thus concludes that: *'It is not considered likely that actions under the Program will cause significant impact on the Plains Wanderer.'* (p.135)

The Strategic Impact Assessment Report's conclusions about Plains Wanderer appear to reflect the Impact Mitigation section of the Birds Australia Report and thus continues the very unclear reasoning behind discounting the potential for persistence of Plains Wanderer in the North Investigation Area.

The problem of uneven data is flagged in the section entitled 'Addressing Uncertainty and Managing Risk' (p.17) where statements regarding the lack of data and resulting uncertainty about results are found. Unfortunately there is no 'addressing' of this problem, nor are there any points made about 'managing risk'.

In conclusion, the Native Grassland Specialist Species section of the Birds Australia Report provides an inadequate basis for making bird biodiversity planning decisions for Native Grasslands.

3.6 Native Woodland Specialist Species (p.18)

The impact mitigation measures in this section are detailed and robust (pp.19-21). The following is a summary of the measures.

- Loss of woodlands should be avoided in all investigation areas;
- Strongly recommend avoiding development of all woodlands or within a 100 metre buffer zone (at the very least);
- Restore woodland remnants and connectivity within the landscape;
- Reconnect isolated remnants through strategic urban design;
- Corridors between patches be maintained or created;
- Corridors 300-600 metres wide;
- Small remnants large enough (greater than 36 ha) and have a 'smooth edge-geometry (specifically in relation to Noisy Miner colonisation).

Many of these measures are reflected in the Strategic Impact Assessment Report's identification of areas to be excluded from development.

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In regard to Swift Parrot, the Report states, "*Retention of connected intact woodland vegetation is important for the Swift Parrot...as it requires suitable foraging sites in the Greater Melbourne region to meet its energy demands post and prior to migration across Bass Strait to Tasmania*". However the Strategic Impact Assessment Report states that the anticipated removal of Red gum Woodland in the southern part of the Melbourne North Investigation Area is 'unlikely to have a significant impact' (p.179) and no specific prescriptions are made for this species.

As in the Grasslands section, the 'Addressing Uncertainty and Managing risk' for this section is actually a statement of limitations and does neither of the things specified in the heading.

4. Conclusions

Overall, the uneven quality of data and analysis in the Report limits its usefulness and accuracy in planning for the conservation of birds in the proposed expansion of Melbourne's urban growth boundary. In particular:

- There are major deficiencies in the structure of the Report. It has no aims, objectives or methodology and lacks a distinct limitations section. This makes it impossible to assess the reliability of the Report's determination of areas of biodiversity importance.
- There is no description of where the bird records were sourced, what the limit of their currency was (i.e. how old the oldest records were), no distinction between what might be considered 'vagrants' from regularly occurring species, nor how the significance of a species occurrence within the area was determined.
- Conclusions regarding ephemeral wetlands that may be significant for Latham's Snipe are based on an unnuanced use of the proposed significance threshold for this species.
- The analysis of Grassland species is far less comprehensive than that for Woodland species and as a consequence the Native Grassland Specialist Species section of the Report provides an inadequate basis for making bird biodiversity planning decisions for Native Grasslands.
- By comparison the overall analysis of Woodland species is relatively robust and recommendations reasonably well-grounded.

The Report itself states that it should be viewed as "*..an incomplete assessment, with the understanding that data is insufficient to meaningfully assess the importance of many areas.*"

Further, the Report states that bird distribution, abundance, habitat requirements and tolerance to urbanisation is *poorly understood* within *much* of the area where urban development is proposed. It *strongly encourages* field surveys and further desk-top review.

Given these limitations, and the lack of attention to Grassland species, it is of great concern that the Strategic Impact Assessment Report appears to rely heavily on the recommendations of the Birds Australia Report. It is also of great concern that the Strategic Impact Assessment Report represents some of the Birds Australia Report's statements in what appear to be a misleading manner and that there is no proposal to undertake further surveys for planning for bird conservation at the strategic level.

5. References

Beardsell, Cam (1997) *Sites of Faunal and Habitat Significance in North-east Melbourne*. Report for North East Regional Organisation of Councils (NEROC) Nillumbik Shire Council

Lindenmeyer, David and Hobbs, Richard, (2007) *Managing and Designing Landscapes for Conservation*. Blackwell Publishing.

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Comments and corrections are welcome. Please email to brian@mcmc.org.au or via the contact details on page 1.