



## Office of Environment & Heritage

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Mr Brendan O'Brien  
Executive Director Infrastructure, Housing & Employment  
Department of Planning and Environment  
GPO Box 39  
SYDNEY NSW 2001

Attention: David Fitzgibbon

  
Dear Mr O'Brien

### **Greater Macarthur Land Release Investigations**

I refer to the recent exhibition of the draft State Environmental Planning Policy and the release of the Greater Macarthur Land Release Investigation – Preliminary Strategy and Action Plan. The Office of Environment and Heritage (OEH) supports the provision of housing and employment lands in these new growth areas. With careful planning, Sydney can grow while preserving the natural and heritage assets that underpin our quality of life. This includes our bushland and waterways, and the rich biodiversity they contain, as well as our Aboriginal and historic heritage. New urban growth also offers the opportunity to deliver liveable, connected and sustainable communities.

OEH is keen for the future planning of these areas to:

- Investigate the use of biodiversity certification to provide greater certainty for landowners and developers, and reduce the time and cost of environmental assessment. Importantly, certification will ensure that biodiversity values are 'improved or maintained'. The work currently being done by the Department of Planning and Environment (DPE) around the certification of land at Ingleside will help inform a way forward for the Greater Macarthur priority growth areas.
- Deliver sustainable and resilient communities that make a positive contribution to the economy and liveability of the region. This could include: the creation of jobs that are close to homes; ready access to community and commercial services; the linking of neighbourhoods to bushland and the provision of recreation and active transport opportunities; and the establishment of neighbourhoods that are diverse and vibrant and connected with fast and efficient public transport and new road infrastructure.
- Identify, protect and enhance heritage for current and future generations.
- Avoid and adapt to natural hazards including the impacts of climate change.

OEH would welcome the opportunity to work with DPE in drafting the special requirements for the technical studies associated with European and Aboriginal Heritage Assessment, Biodiversity Assessment and Water Management. OEH is also keen to explore with DPE how the indicative layout plans, statutory planning instruments and development control plans can include features and provisions which address liveability and sustainability, including 'green cover' and opportunities to use urban precinct sustainability tools.

Unfortunately comments on the Greater Macarthur Water Management Report (GHD) have not been included in the attached comments. These will be provided in the coming week. If you have any questions please contact Susan Harrison, Senior Team Leader Planning, on 9995 6864 or at [susan.harrison@environment.nsw.gov.au](mailto:susan.harrison@environment.nsw.gov.au).

Thank you for the extension in time to allow us to get these comments to you.

Yours sincerely



3.12.15

**TOM GROSSKOPF**  
**Director Metropolitan**  
**Regional Operations**

Contact officer: SUSAN HARRISON  
9995 6864

Enclosure: Office of Environment and Heritage comments on the proposed amendments to the State Environmental Planning Policy (Sydney Region Growth Centre) 2006 and the Greater Macarthur Land Release Preliminary Strategy & Action Plan – November 2015

## **Office of Environment and Heritage comments on the proposed amendments to the State Environmental Planning Policy (Sydney Region Growth Centre) 2006 and the Greater Macarthur Land Release Preliminary Strategy and Action Plan – November 2015**

### **Greater Macarthur Land Release Preliminary Strategy**

It is not clear from the Explanation of Intended Effect or the Preliminary Strategy and Action Plan what exactly will be the structure plan referenced in the amended SEPP. Is it Figure 1 and/or Figures 2 and 3? OEH considers that Figure 1 gives a more indicative vision which delivers an intent but would allow the detailed assessment and planning to flesh out the boundaries of between developable, conserved and retained rural lands.

### **Sustainability and Liveability**

There is an opportunity to establish new, but affordable standards of sustainability and liveability in the communities (both residential and commercial) that will be created in the Greater Macarthur Land Release area.

OEH is keen to encourage and assist in the implementation of Ecologically Sustainable Development in order to establish communities that are more sustainable, liveable, efficient and healthy. This could include, but not be limited to:

- Maximising natural areas and green infrastructure to deliver habitat, health, social connection and broader liveability benefits
- Creating urban environments that aid climate change adaptation and mitigation and build community resilience
- Minimising the ecological footprint of communities by helping them to use energy, water and resources efficiently and encouraging active transport solutions.

The vision for the Greater Macarthur should include the creation of liveable and sustainable communities where people live and work in a healthy environment. It should be a place where jobs are closer to home or connected to efficient, rapid transport. It should also be a place where homes and commercial buildings are comfortable and efficient because they are well designed (e.g. orientated and designed for passive solar benefits), make efficient use of energy and water (e.g. reuse for no-potable purposes; evaporative cooling; watering gardens) and treat waste as a valuable resource.

Greater Macarthur should also be a place where the principles of a Water Sensitive City are applied and the impacts of urban heat are reduced by using water and green cover. As well, it should provide liveable communities that are safe and protected from natural hazards, enjoy good air quality, a vibrant street life, excellent access to natural areas (bushland), active and public transport and a full range of community and commercial services. The co-benefits of these liveable neighbourhoods will include improved physical and mental health for their residents.

While there may be limited opportunities to articulate these concepts in the structure plans, the preliminary strategy and action plan does not address liveability or deliver a vision of what the expectations are. For example the Key Rezoning Issues could include

“Sustainability” or “Liveability” as issues that need to be addressed through the development of a liveability strategy or sustainability plan, as part of the rezoning process. This could include the application of one of the urban sustainability precinct assessment tools currently being used in Australia as well as the Infrastructure Sustainability Council of Australia’s *Infrastructure Sustainability Rating Scheme*.

**Recommendation:** *That sustainability and liveability are key issues addressed at the rezoning stage. OEH can assist DPE to: further explore affordable or net positive options, develop specific requirements for a sustainability and liveability study, and to review appropriate sustainability assessment tools.*

## **Green Cover**

An important aspect of liveability will be the ability of communities to adapt to the impacts of climate change. It is expected over the near and far future that maximum and minimum temperatures will increase, as will the number of hot days and severe fire weather days. ([Metro Sydney Climate Change Downloads](#))

Unlike hard surfaces, trees and vegetation reflect heat and cool and clean the air by evapotranspiration. Other benefits are better health and well-being for urban-dwellers, more biodiversity and wildlife, and regulation of localised flooding.

Types of urban green cover include bushland, private and community gardens, parks, greenways, habitat corridors, street trees, roof gardens and plant-covered walls, as well as reflective and permeable walls, pavements and other surfaces. Protecting local green spaces, designing eco-friendly buildings and creating urban networks of green space can help to minimise the impacts of urban heat in our cities and towns.

The NSW Government has produced [Technical Guidelines for Urban Green Cover in NSW](#) to provide practical advice on best practice. The purpose of these guidelines is to increase the resilience of NSW settlements and communities to climate change, specifically to increasing temperatures in urban settings. OEH recommends that DPE look for opportunities to address and deliver the green cover in the precinct planning process and in the development of development control plans (DCPs).

In addition to mitigating the effects of urban heat, a UTS study has recently found that green space and urban tree cover impacts the concentration of airborne particulate matters. Particular matter generally comes from motor vehicle exhaust and this pollution is responsible for several cancers and serious respiratory diseases like asthma. The study concluded that regardless of where people lived in Sydney, the volume of trees within 100m radii of where a person is, is the most important determinant of the quality of the air people are breathing.

**Recommendation:** *That detailed development controls are specifically developed to deliver green cover and require the retention of existing vegetation through the design of subdivisions and the location of infrastructure and building envelopes.*

## Green (and Blue) Grid

Recent research and studies suggest that the natural environment may have direct and positive impacts on well-being. *A Plan for Growing Sydney* includes the direction, “Create a network of interlinked multipurpose open and green spaces across Sydney”. It is important the concept of Green Grid be applied at the rezoning stage and built into the indicative layout plans, rather than trying to retrofit at a later stage. Integrated into this should be the Nepean River, its tributaries and creeks and their surrounds. Pedestrian and cycle pathways linking residential areas to transport and commercial hubs, schools, community facilities, riparian areas, sporting facilities and parkland, need to be considered as part of the planning process and delivered as part of the indicative layout plan.

**Recommendation:** *That as part of the rezoning process, one of the required studies (e.g. a liveability assessment) addresses how the green spaces and pedestrian and cycle paths deliver a green grid.*

## Biodiversity Certification

The Mt Gilead, Menangle and Wilton are situated on the Cumberland Plain and contain significant areas of native vegetation, threatened species and threatened ecological communities. Also in the priority growth areas are found priority conservation lands (PCLs) identified in the Cumberland Plain Recovery Plan ([Cumberland Plain Recovery Plan | NSW Environment & Heritage](#)) as the lands that represent the best remaining opportunities in the region to secure long-term biodiversity benefits for the lowest possible prices.

Avoiding impacts on environmental values including biodiversity is a fundamental planning principle. It is also an important part of the assessment for biocertification. The land proposed for biodiversity certification should be on places free of environmental constraints. If impacts on biodiversity cannot be completely avoided, the impacts must be mitigated.

OEH supports investigating the use of biocertification because:

- it delivers better environmental outcomes from urban development, at lower cost
- it ensures conservation issues are considered early in the planning process and new urban areas will ‘improve or maintain’ biodiversity values
- by switching off the need for assessments at the DA stage, it saves time and money for landowners and local government and in the process speeds up land release and improves housing affordability.

The NSW Biodiversity Certification Assessment Methodology includes consideration of Commonwealth listed matters of national environmental significance. This provides the basis to harmonise the assessment requirements for NSW biodiversity certification proposals and the *Environment Protection and Biodiversity Conservation Act* (EPBC Act) strategic assessments and therefore strengthens the opportunity for biocertification to be used as the basis for securing a strategic approval from the Australian Government under the (EPBC Act).

Biodiversity certification of land can only be conferred by the Minister for the Environment where the biodiversity certification ‘improves or maintains’ biodiversity outcomes. The Minister will determine whether or not the overall effect of the proposed biodiversity certification is to improve or maintain biodiversity values on the basis of a biodiversity



certification assessment prepared in accordance with the [Biodiversity Certification Assessment Methodology](#). This requires demonstrating that the proposal has avoided and minimised biodiversity impacts.

It is important to note that the scale and type of all offsets must be identified at the time the biodiversity certification proposal is considered and approved and they must be delivered as development proceeds.

While the Biodiversity Assessment Report (BAR) prepared for the investigation provides a preliminary and broad overview of biodiversity values in the Greater Macarthur Investigation Area and it does not provide an indication of whether biocertification is likely to be achieved. OEH advises that Appendix L of the Biodiversity Certification Operational Manual (BCOM) <http://www.environment.nsw.gov.au/resources/biocertification/150310-biocert-manual.pdf> describes a process by which a preliminary evaluation can be made of whether or not a proposed growth area is likely to be suitable for biodiversity certification. The process in Appendix L has been designed to complement regional strategic planning processes. The process and subsequent report will assist planning authorities to identify and plan to avoid impacts on biodiversity of high conservation value. It is highly recommended that this be used to guide the precinct planning for the growth areas and be a supplement to that proposed page 11.

As noted in the BAR, it will probably be more manageable to deal with biocertification at the precinct scale rather than all of the Greater Macarthur Investigation Area at once. OEH and DPE are currently working through similar issues associated with biocertification as part of the development of an indicative layout plan for Ingleside. It is anticipated that this will assist in making decisions about the prospect of pursuing biocertification for the Greater Macarthur priority growth areas.

**Recommendation:** *That DPE and OEH continue to investigate options for the delivery of biocertification in the Greater Macarthur Investigation Area.*

## Heritage

The Key Rezoning Issues also need to address unknown Aboriginal sites which could come to light as part of the assessment required for the rezoning process. Of particular concern to OEH is the scale of development in Western Sydney and nominal long term in situ conservation of Aboriginal cultural heritage that is being achieved. Because the regulation of impacts to Aboriginal cultural heritage usually occurs post-DA approval, it is difficult to get commitment to the strategic identification and conservation of Aboriginal cultural heritage at the landscape/precinct scale. OEH would welcome Aboriginal cultural heritage being considered at the rezoning stage with in perpetuity protection being considered for sites of cultural or archaeological significance and if possible, a representative sample of an archaeological landscape. This would require the on-going involvement of the Aboriginal community to ensure an 'understanding the significance' and to incorporate their views on conservation measures.

With regard to the two structure plans in the Preliminary Strategy and Action Plan, it was not clear what the "Aboriginal Heritage" was in the legend and where this feature was on the plan.

OEH reviewed the *Greater Macarthur Investigation Area, Aboriginal Heritage and Historic Heritage – Gap Analysis and Future Direction* (AHMS May 2015). In summary OEH's comments were:

- While a thorough document, it does not review all currently available heritage assessments. For this reason it cannot be considered an adequate gap analysis and its recommendations can be considered preliminary at best. OEH considers that at the precinct planning stage all available heritage assessments should be reviewed to identify any further areas for assessment.
- The report recommends that only certain areas need further archaeological, heritage and cultural assessment. However, the report also states that as a result of time constraints, it is not an exhaustive, or even a complete review of previous heritage work. Therefore, OEH does not consider there is the evidence to make a specific recommendation about where further assessments should occur.
- The report recommends establishing a Regional Archaeological Research Design and Management Strategy (RARDMS) for historic heritage and a separate regional cultural heritage framework for Aboriginal archaeology. OEH considers that it should be possible to create one strategy for both Aboriginal and historic heritage. It should identify what further levels of assessment are required throughout the GMIA and where, including sub-surface testing, what conservation outcomes are desirable and how to achieve them, establish research questions/directions, what mitigations should be undertaken, overarching interpretation strategies, ongoing consultation and community engagement should be outlined, among other things. It is important that all heritage in the growth areas is considered as one and managed appropriately. OEH considers that one strategy for heritage is more easily managed than two separate strategies.
- The provision of preliminary cultural values mapping at this stage is commended. OEH strongly believes that open, ongoing engagement with the Aboriginal community is vital and should occur well in advance of any project design. OEH recommends that the areas identified from the preliminary cultural values mapping as sites of cultural importance to Aboriginal people should be exempt from development in perpetuity. Further discussions need to occur with the Aboriginal community regarding the extent of curtilages that would be appropriate for each site and if listing sites on the State Heritage Register or having them declared as Aboriginal Places would provide further layers of protection for them.
- OEH also notes that the cultural values mapping is preliminary and as such, more areas may be identified as engagement with the Aboriginal community continues. Appropriate management recommendations must be put in place for any culturally significant areas that are identified. Similarly with archaeologically significant areas. The assessment states that the lack of previous assessments and excavations in the area of the GMIA is problematic and means that the predictive model proposed has not been subject to any groundtruthing, therefore, it is not possible to identify areas of archaeological significance that warrant conservation at this stage. Appropriate management recommendations must be put in place for any archaeologically significant areas that are identified, including conservation where possible and appropriate mitigations where not.
- A predictive model has been provided with this assessment, but it is not clear what criteria were used to inform it and it would benefit from clarity around this issue. Terms such as 'negligible' need clear definition. The predictive model indicates that

there is 'no-low value' in most areas of the GMIA, however, no groundtruthing has occurred and the paucity of previous work means that actual analysis and testing of the predictive model is problematic at this stage. The assessment states that the accuracy of the predictive model (on the basis of desktop analysis, not in the field analysis) is approximately 58% - 73%, depending on what variables are considered. Therefore, OEH recommends that further assessment of the predictive model occurs before it is used to inform any development planning.

**Recommendation:** *That OEH provide DPE with advice on the special requirements for the European and Aboriginal Heritage Assessments required to deliver rezoned land.*

## Salinity

Salinity processes are driven by the interactions between the water use characteristic of vegetation, physical soil properties and hydrological processes within the hydrogeological landscape (HGL). More information can be found at [Salinity basics | NSW Environment & Heritage](#). Where vegetation is cleared and the landscape is altered by urban development through cut and fill and road and building construction and water movement is impeded and/or water use is increased, salinity may emerge as an issue. The Greater Macarthur Investigation Area contains the following two HGLs:

- Picton HGL – Moderate salinity, but with particular saline and sodic layers in the upper landscape element that will be an issue for development.
- Cawdor HGL – Severe salinity hazard with significant urban salinity already presenting on this landscape where it has been developed.

Where salinity is likely to occur in areas of urban development, the following overarching principles should apply:

- Land managers should clearly demonstrate what measures will be employed to ensure the salinity hazard does not increase (both on site and on adjoining land) as a result of a development.
- Identify and manage sensitive soils (e.g. sodic soils, reactive soils, type of salts, salt-loads).
- New houses, building and infrastructure (including roads, pathways and retaining walls) in current or potentially salt affected areas may need to be built to withstand the effects of salinity (including the establishment of good draining prior to construction).
- Employ deficit irrigation principles to prevent over-irrigation of sports ground, golf courses, parks, private gardens and lawns; and limit the application of extra salt through water recycling programs or irrigation of saline groundwater;
- Implement a monitoring program (where deemed necessary) including a clear identification of responsibilities.

It is important to note that the maintenance and enhance of vegetation and 'waterwise' gardening acts as a buffer to excessive water input and vegetation management in riparian areas will assist in minimising salt export to the creeks and rivers.

**Recommendation:** *That the risk of salinity in growth areas be understood and the indicative layout plan, cut and fill proposals and the location of infrastructure considered the management of salinity.*



## **Structure Plans and Suitability**

OEH is uneasy about how the structure plans will be interpreted and that it is not clear in the document that the boundaries between unencumbered, encumbered and constrained land are indicative only, though it is stated that, “Future rezoning process will and refine suitable locations for urban development...”. It is also not clear what the use of the land not suitable for development will be and how it will be managed, especially given its interface with future urban development. Without careful management these lands can become dumping areas, illegally accessed and vandalised or if appropriate asset protection zones (APZs) are not built into the developable land, will present a fire risk.

OEH will object to APZs being included on land identified for conservation or offset land and will always advocate their inclusion in developable lands.

Likewise the Delivery Pathway – Biodiversity (Preliminary Strategy & Action Plan – page 11) makes reference to biodiversity constrained land in Figure 8. At the scale presented, the boundary between constrained land and unconstrained land is indicative only. It is assumed by OEH that the “detailed biodiversity assessment” prepared in accordance with specific requirement of DPE, will provide guidelines for determining where this boundary should exist, after more detailed work. OEH would welcome the opportunity to work with DPE to develop the requirements for the detailed biodiversity assessment.

OEH also requires that the part of Upper Nepean State Conservation Area in the precinct boundary draft map for Wilton Growth Centre be removed.

## **Trust ownership of conservation lands**

Page 11 of the Preliminary Strategy and Action Plan proposes a Trust as an option for the long term management and ownership of conservation lands. OEH has previously stated in comments to the Department of Planning and Environment on Wilton Junction in August 2014 (DOC14/157559-01) that OEH will be looking for evidence that environmental offset and other biodiversity can be effectively secured by an independent trust that includes a robust governance structure to remove the risk of the Trust failing and to ensure there are measures to monitor and evaluate success. In addition, a Trust is not considered by OEH to be a conservation measure.

It is also considered that private ownership of conservation areas is not ideal unless there is a conservation measure in place which guarantees the conservation of biodiversity values (e.g. Biobank agreement; conservation agreement).

(END OF SUBMISSION)