



Office of
Environment
& Heritage

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Ms Ann-Maree Carruthers
Director, Urban Renewal
NSW Department of Planning & Environment
GPO Box 39
SYDNEY NSW 2001

Dear Ms Carruthers

**Section 34A Consultation and Exhibition
Kellyville, Bella Vista and Showground Station Priority Precincts Rezoning**

Reference is made to your correspondence to the Office of Environment and Heritage (OEH) dated 17 December 2015 regarding the public exhibition of the Kellyville, Bella Vista and Showground Station Priority Precincts rezoning proposals.

OEH's comments on the rezoning proposals for the above Priority Precincts are provided in Attachment 1.

If you have any questions regarding this advice please contact Dana Alderson, Conservation Planning Officer on 8837 6304 or by email at dana.alderson@environment.nsw.gov.au.

Yours sincerely

S. Harrison 29/02/16

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ATTACHMENT 1

Office of Environment and Heritage comments on public exhibition Kellyville, Bella Vista and Showground Station Priority Precincts Rezoning

1. Background

OEH understands that the Kellyville, Bella Vista and Showground Station Priority Precincts are located in the Sydney Metro North West Urban Renewal Corridor. The Priority Precinct proposals will amend The Hills Local Environmental Plan (LEP) 2012 Land Zoning, Floor Space Ratio and Building Height Maps to facilitate the urban renewal of land adjacent to the above stations on the North West Rail line.

OEH has not commented previously on the Structure Plans for these stations, however has commented on the State Significant Infrastructure proposals for the North West Rail line and stations.

2. Biodiversity

OEH has reviewed the following reports:

- Kellyville Priority Precinct Plan Ecological Constraints Assessment (Eco Logical, August 2015);
- Bella Vista Priority Precinct Plan Ecological Constraints Assessment (Eco Logical, August 2015); and
- Showground Station Priority Precinct Plan Ecological Constraints Assessment (Eco Logical, August 2015).

The Ecological Constraints Assessments (ECAs) for Kellyville, Bella Vista and Showground Station Precincts note that the future development of the precincts will have a significant impact on the Critically Endangered Cumberland Plain Woodland Ecological Community (CPW).

The ECAs acknowledge that the reports are based on a desktop assessment only and will not be accurate. For example, the reports acknowledge that areas of "Cumberland Plain Woodland – Derived Native Grassland" cannot be identified via a desktop assessment. Therefore, it is possible that there are areas of ecological constraint that have not been identified through these assessments. OEH considers that on ground surveys should be conducted at the strategic planning stage to better inform the planning process.

Appendix A of all three reports state that the specimens of *Eucalyptus nicholii* are plantings, and as such are not considered threatened species under the *Threatened Species Conservation Act 1995* (TSC Act). OEH considers this statement to be inaccurate. All species listed under the TSC Act, regardless of whether they are planted, are considered threatened species and any impacts need to be appropriately assessed.

As stated in Section 6.1 of the Showground ECA, it is assumed that direct impacts to native vegetation will occur to sites that have a land use zoning other than green space/open space or sports fields. OEH disagrees with this assessment, as direct impacts can still occur in open space zoning. OEH considers that it would have been more accurate to assume that direct impacts to native vegetation will occur to sites that have a land use zoning other than E2.

There appears to be discrepancies between versions of the Structure Plan in the Precinct Proposal document as compared to the ECA version. For example, for the Showground Precinct, it appears that the riparian areas shown as to be retained as open space in the Precinct Proposal Structure Plan (Figure 5), are narrower than the riparian areas shown as to be retained as open space in the ECA (Figure 6). Similarly for Bella Vista, there are fewer areas identified as RE1 in Figure 20 of the Precinct Planning Report than in the Structure Plan in the ECA (Figure 2). It is assumed that the ECAs were prepared to inform the zonings which have been exhibited. It is recommended that amended assessments be prepared to reflect the proposed zonings in order to fully quantify the

potential impact of the proposals on the biodiversity values of each of the Priority Precincts, including the CPW.

OEH supports the implementation of the recommendations in section 6.3.1 of all reports, particularly the use of E2 zone for areas of high ecological constraint that are to be retained, and the requirement that offsets will need to be found outside the precinct, for any impacts that cannot be suitably offset within the precinct. Also, OEH considers that offsets should be quantified and identified during the strategic planning stage, to better inform the planning process.

3. Climate Change Adaptation and Green Cover Guidelines

Recent climate modelling shows that Western Sydney will be impacted by more hot and extreme temperature days in the near future. Increased maximum temperatures are known to impact human health through heat stress and increasing the number of heatwave events. Increased overnight temperatures (i.e. minimum temperatures) can also have a considerable effect on human health. Specific information for Kellyville, Bella Vista and Castle Hill can be obtained from the [Climate projections for NSW Interactive Map](#).

The [Plan for Growing Sydney](#) includes managing the impacts of climate change through applying the Green Cover Technical Guidelines in Priority Precincts. The [Urban Green Cover in NSW Technical Guidelines](#) aim to increase the resilience of NSW settlements and communities to climate change, specifically to increasing temperatures in urban settings.

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. Increased green cover (i.e. trees and vegetation) will reflect heat and cool and clean the air by evapo-transpiration. Other community benefits are better health and wellbeing, greater biodiversity and visual amenity, and regulation of localised flooding.

The future development of the Priority Precincts presents an opportunity to incorporate urban green cover in the design of buildings and the public domain. OEH recommends that detailed development controls for the Precincts are developed with the objective to reduce the impacts of urban heating, particularly as a result of climate change.

4. Watercourses and Water Sensitive Urban Design

OEH supports the recommendations in the ECAs that future urban development considers the provision of good quality instream habitat, longitudinal connectivity and fringing riparian vegetation. In addition, the ECAs recommend that the environmental functionality of riparian corridors should be restored and maintained by applying the following principles:

- Seek to maintain or recreate a riparian corridor / vegetated riparian zone with fully structured native vegetation;
- Seek to minimise disturbance and harm to the recommended riparian corridor / vegetated riparian zone;
- Minimise the number of creek crossings and provide a perimeter road separating development from the riparian corridor / vegetated riparian zone;
- Locate infrastructure and services outside the riparian corridor / vegetated riparian zone;
- Where services or infrastructure are located within riparian corridors, co-locate facilities in one concentrated area to minimise overall disturbance and breaks in corridor continuity; and
- Treat stormwater runoff before discharging it into the riparian corridor.

Eco Logical's recommendation that Water Sensitive Urban Design (WSUD) principles be applied to help protect downstream environments is also supported.

5. Flood Risk Management

OEH has reviewed the following reports:

- Flooding and Drainage – Kellyville Station Precinct (Hyder, August 2015);
- Flooding and Drainage – Bella Vista Station Precinct (Hyder, August 2015); and
- Hydrology and Drainage Report – Showground Station Precinct (Arup, August 2015).

The primary objective of the NSW Government's Flood Prone Land Policy is to reduce the impact of flooding and flood liability on individual owners and occupiers of flood prone property, and to reduce private and public losses resulting from floods. The most appropriate method to assess the development of flood prone land is through the floodplain risk management process, which is a risk based assessment detailed in the NSW Floodplain Development Manual (2005).

Section 117 Direction 4.3 'Flood Prone Land' of the *Environmental Planning and Assessment Act 1979* applies to the Precinct rezonings. A primary objective of this Direction is to ensure that development of flood prone land is consistent with the NSW Government's Flood Prone Land Policy and the principles of the Floodplain Development Manual 2005.

Kellyville and Bella Vista Station Precincts

The Kellyville and Bella Vista precincts are located within the study area of the Rouse Hill Flood Study (WMAwater, 2014). Hyder (2015) recommends that the RHFS modelling and results be reviewed in detail and refined where necessary, and OEH support this recommendation. However, the scope of refinement should be determined so that the updated models could be utilised to provide a comprehensive understanding of flood risk for mainstream and overland flow path to people and properties for the full range of floods up to the probable maximum flood (PMF) event for existing and developed scenarios.

1. Model requirements

The refined model should address the following floodplain risk management aspects:

- Potential long term cumulative impacts from potential foreseen development within the catchment.
- Compatibility of the proposed land use to the flood risk.
- The impact of the proposed precincts on existing flood behaviour and on adjacent, downstream and upstream areas.
- The impact of bulk earthworks and filling of land within the proposed precincts, based on an assessment of the cumulative flood impacts resulting from possible future development in the local catchment.
- The impact of hydraulic structures on flood flows including blockages and afflux. In addition, impacts of any potential modification should be assessed from a flood risk management perspective and be considered in emergency planning.
- A sensitivity analysis to determine the potential impacts from climate change (i.e. increase in rainfall intensity) on flooding behaviour.

2. Mitigation strategy

2.1 Flood Management Strategy

A Flood Management Strategy (FMS) should be prepared for flood affected land to ensure that the proposed development does not exacerbate existing flooding characteristics within the wider local catchment. This includes any potential increase in flood frequency, duration, extent and depth of inundation in adjacent, downstream or upstream properties. Consideration for flood mitigation requirements should be applied for both mainstream and overland flooding.

2.2 Detention Basins

Existing detention basins and potentially proposed basins should be assessed in accordance with the NSW Dams Safety Committee guidelines in order to ensure a certain level of safety for the basins under the risk management approach. Consideration should be given to basins overtopping during all floods larger than the design flood and to the outflow capacity of the

basins. The impact on downstream development and infrastructure should be assessed utilising effective management measures.

3. Emergency Management

Specific flood emergency measures may be required to be incorporated into the detailed design of the Precincts in order to mitigate impacts of rarer floods (i.e. floods larger than the design flood). Consideration should also be given to flooding outside the site that could impact on the ability of occupants to evacuate, even in minor events. If required, an Emergency Response Plan (ERP) should be prepared to assess flood evacuation needs and impacts from the proposed development on the capacity or operation of existing regional and local evacuation routes. Consultation with the State Emergency Service is recommended in preparing an ERP.

Showground Precinct

The recommendation by ARUP (2015) in section 7.2 to develop the Precinct Structure Plan in accordance with the existing flood control mapping due to time constraints of the project, is not supported.

OEH advises that considerable effort has been utilized to develop The Hills Shire Council Urban Overland Flow Study. This study is currently progressing and a draft Urban Overland Flow Study - Revision 1 (CSS, October 2014) has been completed. OEH recommends that this study is utilised because it is prudent to utilise the latest flood modelling and results as a base for a complete flood assessment of the proposed Showground Precinct.

The flood assessment should provide a sound understanding of flood behaviour for existing and developed scenarios, which will enable decision making to be based on a comprehensive understanding of the flood hazard and risk to people and property for a full range of floods up to the PMF event. The assessment should address the floodplain risk management aspects identified in Sections 1, 2.1 and 3 above.

6. Aboriginal cultural heritage

Please note that OEH is unable to provide comments or advice on Aboriginal cultural heritage at this time. This should not be taken as OEH support for the proposal, and the matters raised may still need to be considered assessed by the relevant consent authority.

(END OF SUBMISSION)

