Dear Ms Waterworth

**RIVERSTONE EAST PRIORITY PRECINCT – NORTH WEST GROWTH AREA**

I am writing in reply to your request to provide comment on the above proposed Precinct and associated studies received by the Environment Protection Authority (EPA) on 2 October 2015.

The EPA has undertaken a review of the submitted information (Attachment A) and requests further information on the following key issues. These relate to:

- Odour
- Noise
- Water Quality and Waterway Health.

The EPA may have further comments on the above issues upon receipt and review of this information.

The EPA will provide further comments on contaminated land and waste management by way of a separate letter.

The EPA is available to meet with Department of Planning and Environment at a mutually convenient time to discuss any of the above issues. If you have any questions regarding this matter, please contact Mr Paul Wearne on (02) 4224 4100.

Yours sincerely

GREG SHEEHY
Acting Director Metropolitan
Environment Protection Authority

Attachment
ATTACHMENT A

1. Odour

Odour Assessment

There are a range of existing rural activities which have the potential to impact proposed sensitive land uses associated with the Riverstone East Precinct. These include poultry operations (broiler chickens, layer chickens and ducks), piggeries and a meat rendering plant.

The EPA regulates the meat rendering plant operation known as A J Bush & Sons (Manufactures) Pty Ltd, Environment Protection Licence (EPL) No 100 within the Box Hill Industrial Precinct. This operation produces pet foods and tallow products. This operation has been the subject of past community complaint in relation to odour and noise. Despite the application of feasible and reasonable mitigation measures, there is still the potential for activities at the premises to cause odour and noise impacts at future receptors.

The potential zone of impacts from activities such as rendering plants is recognised in separation distance guidelines from other jurisdictions such as the Buffer Guidelines Recommended Separation Distances for Industrial Residual Air Emissions – Guideline (EPA Victoria 2013). These guidelines states that rendering plants require a one kilometre buffer for activities which process greater than 200 tonnes of product per year.

The odour assessment has been conducted generally in accordance with the EPA Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales. In general, the odour study has highlighted the potential high risk for future land use conflict if the precinct proceeds.

The assessment states that there is a significant potential risk of odour within the precinct when assuming best practice at the piggeries and chicken farms and a 90 per cent reduction in odour from the rendering plant. The assessment also states that the predicted level of potential odour impacts from all assessed operations may be compatible with industrial use in the Precinct, but is not ideal for the immediate development of large commercial office use or urban residential use. The study recommends that it would be preferable to transition the development of commercial or residential land use over time. This would allow the gradual improvement or cessation of odorous operations. Further staging for residential use is also proposed with those areas nearest to the odour producing activities being the last stages for release.

With much of the precinct impacted by odour, the EPA supports the development of an agreed negotiated transitional approach with all existing agricultural operators, land owners and developers. This approach should outline a transitional time frame and detail actions including the implementation of mitigation options at the farms or other odour producing facilities and/or a staged release. The EPA considers that such a process would provide a proactive approach to mitigate land use conflict and should be undertaken as part of the precinct planning process. Further information on such approaches is provided in Chapter 5 of the Technical Framework: Assessment and Management of Odour from Stationary Sources in New South Wales.

For your information, the Sydney Agriculture Strategic Approaches Working Group has convened a technical working group with key agencies including Department of Primary Industries, DPE, EPA and Councils to explore approaches to manage land use conflict to guide land use change as part of growth. DPE may wish to table a recommended transition approach to this group to seek guidance and comment.

A range of recommended Development Control Plan (DCP) provisions are also proposed in the assessment. These include building design and orientation, requirements for mechanical ventilation and buffers. However the supporting information references the application of the odour provision in the Growth Centre Precincts DCP. A review of this DCP indicates that current management approaches involve the undertaking of additional odour assessments and the use of odour contours to inform separation distances. In addition, the Growth Centres Precincts DCP also advises of potential risk of odour impact for residences if they reside in these locations. The EPA recommends that the Growth Centres Precinct DCP be revised to address the matters recommended in the assessment.
2. Noise

Existing Noise Generating Activities
It is important that a process is documented as part of the precinct planning process that mitigates the potential risk for land use conflict due to noise. As identified in the supporting information, there are a range of existing activities that have the potential to produce noise. These activities can range from rural, commercial, industrial and infrastructure related activities. Advice on assessing noise in developing areas and the effects of changing land use is provided in sections 2.2.4 and 2.2.5 of the NSW Industrial Noise Policy (EPA, 2000). It is recommended that DPE consult this guideline when assessing the proposal.

Aircraft Noise
The noise assessment considers potential impacts from aircraft noise based on Australian Noise Exposure Forecast (ANEF) zones. However, the report was prepared prior to the release of the draft Environmental Impact Statement (EIS) for the proposed Western Sydney Airport. It is recommended that potential aviation noise impacts are re-assessed based on the information currently available.

Road Traffic Noise
Road traffic noise should be considered as part of the assessment to inform the final design of the precinct.

The noise provisions in the Infrastructure SEPP are triggered where roads have an AADT greater than 40,000 vehicles. It also recommends that roads with an AADT of 20,000 vehicles or greater should also be considered. Road traffic noise can still result in noise impacts even below these AADT levels.

The supporting information states that a number of roads associated with the precinct will be upgraded and traffic capacity increased. These include: Garfield Road, Cudgegong Road, Tallawong Road, Schofields Road and Windsor Road. The noise assessment indicates that no roads will exceed 40,000 AADT, however there has been no consideration of roads which could have 20,000 AADT or greater. The noise assessment also recommends the provision of reasonable acoustic amenity in open space to provide relief from road traffic noise.

The EPA recommends that road traffic noise impacts associated with road traffic levels at (or below) 20,000 AADT should be assessed and appropriate noise mitigation measures identified including measures to protect external amenity.

Noise and vibration - Metro rail station, transport facility and network link line
The Northwest Rail Link train stabling facility is proposed to be built at the southern end of the Precinct (between Clark Street and Tallawong Road) close to the Stage 1 housing land release. The industrial zoning shown on the Precinct 'Land Zoning Map' coincides with the stabling facility site. Clause 87 of State Environmental Planning Policy Infrastructure 2007 (Infrastructure SEPP) identifies considerations for new noise sensitive developments encroaching on existing road or rail corridors. In the event that housing development proceeds for Stage 1 prior to the commissioning of the Rail Link project, it is important that such housing should be designed to consider potential rail noise impacts from the project.

Table 7.1 noise assessment summary to the Riverstone East Precinct 'Noise and Odour Assessment, March 2015' is based on the EIS technical papers for the Rail Link project which were prepared in the absence of any firm proposal for the development of the Precinct. Table 7.1 states that a buffer zone of business/commercial development will be provided to the north of the stabling facility. However, the Precinct Land Zoning Map documented in the supporting information proposes public recreation zoning to the north of and medium density residential (on the eastern side of Tallawong Road) immediately opposite the stabling facility.

The EPA is unclear whether the proposed open space (that is, immediately north of the stabling facility) will provide adequate separation between noise making development and sensitive land use (the medium density residential development immediately east of the stabling facility).
The EPA receives complaints about noise (particularly, night-time impacts) from activities at train stabling facilities across the NSW rail network. The proposed residential zonings in the vicinity of the stabling facility may be incompatible and require appropriate noise mitigation measures to avoid land use conflict.

It is important that appropriate noise mitigation measures are identified and required in any associated DCP to ensure appropriate designed housing is developed and satisfies the requirements of the Infrastructure SEPP. Applying noise mitigation measures post rail development to housing can be challenging and expensive.

The EPA recommends detailed consideration of noise and vibration impacts in the vicinity of the proposed Cudgegong Road station, network access rail line and Tallawong Road train stabling facility should be required for the purpose of guiding:

- appropriate land use and setbacks in the Precinct and the adjoining areas of the North West Growth Centre
- noise mitigation measures to achieve appropriate amenity for nearby noise sensitive developments, including residences, child care centres and schools.

The EPA recommends that an acoustic assessment should be undertaken at the detailed design stage to ensure potential noise conflicts and cumulative impacts are identified and managed appropriately. This assessment could also be used to inform and support the proposed land uses and address matters including:

- Provide guidance on the design and layout of residential land uses and other sensitive land uses to ensure optimal noise levels.
- Consider how noise from existing and proposed transport sources can be managed to minimise impacts on surrounding noise sensitive land uses.
- Inform the development of specific noise provisions to be included in any associated planning instrument.

The Development Near Rail Corridors and Busy Roads—Interim Guideline (Department of Planning 2008) provides planning guidance and recognises the need for judicious land use planning, architectural design, building orientation and good internal layout to achieve acceptable acoustic amenity in close proximity to busy transport corridors. Residential and other sensitive land uses should seek to achieve the internal noise levels specified within the Interim Guideline based on noise from road and rail traffic. The assessment should take account of local roads with less than 20,000 AADT and consider measures to protect external amenity. Consideration of aircraft noise from the proposed Western Sydney airport should also be factored into the design of the precinct and development associated with the Rail Link Project.

This should also include the development of an agreed negotiated transitional process that considers all feasible and practicable management and mitigation options to reduce the risk of noise impacts at future residential receptors.

A range of noise mitigation strategies can also be implemented at the subdivision design stage to manage unavoidable noise impacts. This also includes the application of noise control measures into the building design stage to ensure internal noise levels are acceptable. Further information is provided in section 3.1 of the Noise Guide for Local Government (EPA 2013) (http://www.epa.nsw.gov.au/noise/nlgl.htm) and section 3 of Development Near Rail Corridors and Busy Roads—Interim Guideline (Department of Planning 2008).

3. Water Quality and Waterway Health

Ensuring the Precinct supports the community’s uses and values of waterways
Waterways within the Precinct flow via First Ponds Creek and Killarney Chain of Ponds Creek to South Creek which flows into the Hawkesbury/Nepean River. Currently, the health of these waterways is poor due to a range of issues including elevated pollutant levels such as nutrients and reduced river flows as a result of urbanisation in these catchments.
It is important that land use changes associated with this new precinct delivers a sustainable development outcome that not only supports on-going improvement in the health of these catchments but also allows the NSW Water Quality Objectives (WQO) to be met over time.

The NSW WQO provide a framework and benchmarks for the community uses and values of waterways and the water quality that is needed to support these. They were developed using the Australian and New Zealand guidelines for fresh and marine water quality (2000) and are the government endorsed environmental values and long-term goals for NSW's surface waters.

In general where the environmental values are being achieved in a waterway, they should be protected; and where the environmental values are not being achieved in a waterway, all activities should work towards their achievement over time. These guiding principles will assist in meeting the actions in a Plan for Growing Sydney (DPE 2014).

The NSW government has invested considerable monies and undertaken a range of programs over the years to improve waterway health outcomes in the Hawkesbury Nepean Catchment System. A healthy water environment is essential for maintaining and improving the community uses and values of waterways and in creating more sustainable and liveable cities and suburbs. Healthy waterways and water catchments are integral to the economy and lifestyle of the people of NSW.

The EPA notes that the submitted information does not provide details of expected water quality outcomes, but states that post-development water quality will comply with the generic per cent load reductions based on the Growth Centre DCP and Blacktown City Council guidelines (that is, Gross Pollutants 90 per cent, TSS 85 per cent, TP 65 per cent, TN 45 per cent).

It is important that ambient water quality targets for the receiving waters are developed rather than applying generic per cent load reductions that have no reference to receiving water outcomes that support the NSW WQO. Furthermore, these generic targets do not reflect contemporary Water Sensitive Urban Design (WSUD) performance and may not deliver improvements in the health of South Creek. The EPA also notes that the Growth Centre Codes are currently under review.

The EPA recommends that appropriate water quality targets be developed that support the NSW WQO and determine whether proposed mitigation measures including WSUD are adequate. Further information on contributing to improving the health of waterways through strategic planning can be found at: http://www.environment.nsw.gov.au/water/planningusingwqos.htm.

The EPA Riverstone East Precinct should deliver an outcome that provides for a healthy water environment that maintains and restores the community’s uses and environmental values of waterways. With an already urbanised catchment and greater intensification for growth, opportunities to restore and maintain the community uses and values for waterways where they are not being achieved should be considered.

To address the above issues, the EPA recommends the following requirements be included in any associated DCP for the rezoning to ensure development will achieve the following:

- To minimise the impacts of urban development on the community's uses and values of waterways including the support of human and environmental health, and provision of amenity and recreational opportunities.
- To manage the water quality and erosion impacts of stormwater on receiving waterways and provide opportunities for stormwater harvesting, public open space and recreational and visual amenity.
- To facilitate urban development that maximises benefits for the community by supporting liveable and sustainable communities and manages the risks of local stormwater flooding.

Integrated Water Cycle Management
The supporting information states that development of the precinct will provide opportunities to incorporate water conservation and WSUD. However, the EPA considers stormwater management should also contribute to an integrated approach to water management to support a healthier water environment that
considers all relevant impacts and benefits including water quality and erosion, stormwater retention and detention, public open space and recreational and visual amenity. Stormwater management should be considered within integrated water cycle management planning processes.

It is also important to ensure appropriate management measures are developed and implemented to address salinity issues. As the supporting information states that soils at the site are highly sodic and sodic soils appear widespread and will require specific site management.

Planning, design and development outcomes should be guided by a requirement to maintain or contribute to meeting local WQO. These WQO reflect the community’s values and uses for waterways and should be considered in the planning process to help ensure that water quality is able to support the community’s desired uses for a waterway. Where local water quality objectives will not be met, proponents should consider using offsets to help achieve the required objectives.

In this regard, the EPA recommends that water quality and flow targets should be developed as part of the precinct planning process and secured in the DCP. These targets would then apply to any new development associated with the precinct.

There are several guidelines that should be consulted to assist in meeting the stated environmental outcomes. The Managing urban stormwater: harvesting and reuse Guideline (DEC 2006) provides an overview of stormwater harvesting and its potential benefits and limitations. The WSUD Guidelines (Landcom 2009) establishes objectives for water conservation, pollution control and mitigation of the effect of increased flow as a result of catchment urbanisation. The Managing urban stormwater: soils and construction series provides a range of information including guidance on erosion and sediment control during construction and other land disturbance activities.

The proposal involves a treatment train process to manage and treat stormwater. This is as follows:

- Rainwater tanks are to be provided on the developed dwellings for at source treatment and re-use of roof water
- Creek/swale systems to convey runoff to the trunk water treatment facilities
- Gross pollutant traps and trash racks to capture larger pollutants and sediments before discharge into the watercourse
- Bioretention “raingardens” to provide online treatment for effective removal of fine sediments and nutrients.

While the EPA supports an integrated approach to water management including the proposed use of water conservation and WSUD techniques, they are reliant on effective maintenance and monitoring into the future. The EPA recommends that DPE explore opportunities through section 94 contributions or the use of Voluntary Planning Agreements to secure these arrangements, financial contributions and accountable parties through the planning process. This will ensure that the integrated system will have an effective governance structure in place maintained in perpetuity and will continue to meet the expected environmental performance outcomes.

Sewage Management
The supporting information states that water and sewerage are scheduled to be available for Stage 1 by the end of 2015. Further development of Stage 2 will be based on the timing of infrastructure delivery. Services are not programmed for Stage 3 at this time.

The supporting information also states that sewage from the precinct is proposed to be directed to the Riverstone Sewage Treatment Plant. Riverstone sewage treatment works is subject to a nutrient cap on effluent discharged by Sydney Water to South Creek which flows into the Hawkesbury/Nepean (HN) River.

There is a major issue regarding the ability of South Creek and the HN River to take the increased nutrient loads from sewage discharge. The EPA advises that it is currently examining a potential framework for the regulation of nutrient discharges in the HN River system. The intent of this framework is to ensure that
population growth in the catchment does not cause further deterioration in the condition of the river and its ability to meet the community’s desired uses. It should also be noted that:

- The EPA has worked with Sydney Water to significantly reduce the level of nutrients going to the HN River from sewage treatment plants.
- Reduced nutrient inputs (currently below licence limits) from sewage treatment plants has significantly improved river health.
- Although the majority of nutrients entering the Hawkesbury Nepean come from diffuse sources, those nutrients enter during periods of high rainfall and are in a form that is not readily available for use by weed and algal species.
- During dry flow periods, the majority of nutrients entering the river come from sewage treatment plants and those nutrients are in a form that is immediately bioavailable.
- It is during low flow that impacts to river health from nutrients occur.
- The EPA is continuing to work with Sydney Water towards reducing nutrient inputs from sewage treatment plants to accommodate growth without compromising river health.

The EPA recommends that the proposal should provide clear direction for the provision of sewerage services and expected environmental performance. In particular, if increased loads of pollution on the receiving environment result from additional sewage capacity, there needs to be identification of what practical and cost effective measures can be taken to maintain or restore the community’s uses and values of waterways and protection of public health. This would include sewage overflows from any existing sewage pumping stations and discharges from any existing STP. The EPA’s policy is that for new systems, there should be no pollution of waters as a result of overflows during dry weather and that overflows during wet weather should be prevented. Sewage overflows have been identified as one of the major contributors to diffuse source water pollution in urban environments.

In accordance with clause 18 of the State Environmental Planning Policy (Sydney Growth Centres) 2006 information should be documented on water recycling and conservation initiatives. Subclause 2 of this policy states that “a consent authority must not grant consent to the carrying out of development on land unless the consent authority is satisfied that recycled water from the water recycling plant will be provided to the development”.

The EPA is also currently discussing with DPE and other key government agencies, the development of a whole of government approach that can deliver water way health outcomes for the South Creek catchment as part of future growth. The development of the Riverstone East Precinct needs to carefully consider the capacity of the Sydney Water’s Riverstone Waste Water Treatment Plant and system to cater for additional load. The EPA would like to have further discussions with DPE and Sydney Water regarding this issue to inform precinct planning and infrastructure delivery.