NSW EPA

Our reference: DOC16/124352-22:PW
Contact: Paul Wearne (02) 4224 4100

NSW Department of Planning and Environment
Housing Land Release
GPO Box 39
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Dear Sir

DRAFT MAMRE WEST REZONING PROPOSAL

I am writing to provide comment on the above rezoning proposal received by the Environment Protection Authority (EPA) on 4 March 2016. This includes the *Land Use and Infrastructure Plan* and associated *Development Control Plan.*

The EPA has attached comments and information (**Attachment A)** for the Department of Planning and Environment's (DPE) consideration. These comments relate to:

- Air Quality
- Water Quality
- Noise
- Contaminated Land Management
- Waste Management
- Sustainability.

The EPA is available to meet at a mutually convenient time to discuss any of the attached comments if required. Should you require any further information, please contact Mr Paul Wearne on (02) 4224 4100.

Yours sincerely

01/04/16

PETER BLOEM
Manager Illawarra
Environment Protection Authority

Attachment

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ATTACHMENT A

1. Air Quality

While much progress has been made in improving air quality across the Sydney Region, currently photochemical smog (ground level ozone) and particles (PM_{10} and $PM_{2.5}$) exceed national standards from time to time in Western Sydney. This may be exacerbated due to climate change. Health effects are also known to occur at air pollutant concentrations that are below national standards with the greatest health benefits being associated with reducing long term, large population exposures to average fine particle (PM2.5) concentrations.

Meeting national air quality standards in Western Sydney will be a significant challenge, particularly given the further pressure on air quality from increased population, development and economic activity. It is important that any development in Sydney supports air quality improvements in order to provide healthy lifestyles and liveable neighbourhoods.

There are a range of feasible, cost effective actions available to guide future development to reduce emissions which can deliver substantial public health and economic gains and contribute to air quality improvement in Sydney. The *Land Use and Infrastructure Plan* should include the following key air principles.

- *Promote development that maintains and improves Sydney's air quality with reference to national air quality goals as agreed in the National Environment Protection (Ambient Air Quality) Measure.*
- *Ensure potential new sources of particles or ozone precursors utilise best practice to minimise air emissions.*
- *Minimise exposure to harmful levels of pollution and odour.*

Application of the above principles will ensure the community's value for clean air is considered in conjunction with future land use and infrastructure decisions associated with the proposal. Further justification for the above principles is provided below:

- While Sydney has benefitted from a range of successful Government programs and initiatives to reduce air pollution since the 1980's, it is important that new development contribute to delivering air quality improvement. Maintaining or improving air quality not only benefits the environment and public health, it also delivers a more liveable, sustainable and prosperous city.
- Reducing emissions of particles, nitrogen oxides and volatile organic compounds offers the best options for reducing the health impacts of air pollution. Minimisation of these emissions from all controllable sources can reduce air pollution in cost effective and efficient ways. Effective controls and strategies are available that provide best practice for distributed energy, commercial, industrial sources and construction activities.
- Providing expectations upfront for the management of air pollution, including odour, provides greater certainty for new development. It can also be more effective and less expensive than subsequent measures to reduce pollution post development. Reducing emissions at sources also improves local amenity and makes land otherwise affected useful and fit for purpose.
- Community health and amenity benefits may be derived from protecting people from exposure to air pollution. This may take the form of siting people at distance from existing sources or providing building design that prevents ingress of air pollution into living and working spaces.

The air quality and odour objectives in the DCP promote development that maintains and improves Sydney's air quality with reference to national air quality goals as agreed in the National Environment Protection (Ambient Air Quality) Measure.

Section 6.6 Controls (a) of the DCP states that:

- *A development application seeking approval for the construction of a new building, major alterations and additions to an existing building and/or the occupation of an existing building may be required to be accompanied by an assessment of the potential impacts of the development on air quality in the region.*

The above requirement should be amended to ensure local air quality impacts are also appropriately assessed and managed from proposed developments. Care should be taken to prevent land uses conflict by ensuring any sources of air emissions do not impact on sensitive land users. Sensitive users include residential, schools and childcare centres, In addition regional air pollution and cumulative impacts should be considered. There are nearby industrial activities in the vicinity of the proposal. This includes St Marys to the north which includes Dunheved Estate, three brickworks to the east of Mamre Road including two at Horsley Park and one in Cecil Park. There are also a number of waste activities in the area.

Section 6.6 Controls (b) of the DCP states that:

- *All development should be designed to avoid potential air quality impacts, including the appropriate selection of plant and equipment, minimising emissions and the like.*

The above DCP requirements should be strengthened by requiring best available emission controls for new development. For example, distributed energy is an option available to minimise energy costs. However some distributed energy sources, such as co-generation gas turbines, are significant emitters of nitrogen oxides (NOx), if not designed to limit emissions. EPA policy on best practice for these activities can be found at the following web site: http://www.epa.nsw.gov.au/air/cogentrigen.htm.

Development can also include sustained use of construction machinery driven by diesel engines. Non-road construction equipment such as diggers, backhoes, generators and borers, are not subject to the Australian emission standards that apply to registered or on-road equipment, such as freight carriers. The Government's Air Emissions Inventory has established that construction equipment constitutes a significant source of air pollution in the Sydney basin. Where government equipment or contracts are involved, air emission standards for mobile non-road diesel equipment and plant should apply under the NSW Government Resource Efficiency Policy. Further information on best practice diesel emissions management is available on the EPA website at: http://www.epa.nsw.gov.au/air/nonroaddiesel.htm.

To address the above issues Section 6.6 Controls (b) should be amended as follows:

All development should be designed, installed and maintained to avoid potential air quality impacts and land use conflicts. This should include the appropriate selection of plant and equipment during construction and operation that minimises emissions by having regard to best available emission controls.

Transport is a significant source of emissions in Sydney. Consideration of emissions from transport in the local and regional area are required in order to:

- identify and prioritise the most appropriate development opportunities;
- situate developments close to employment, schools, services and convenient public transport;
- maximise active transport; and
- minimise transport emissions.

Section 4 Objectives (c) and (d) of the DCP state the following to manage private transport:

- *To provide adequate car parking that meets the expected demand while avoiding unacceptable impacts on the surrounding road network.*
- *To encourage the use of alternative forms of transport where feasible and practical.*

These objectives should be expanded to prioritise active transport over other forms of transport. Incorporating the EPA's *Air Quality Transport Appraisal Tool* as part of assessment procedures would also allow practitioners to consider the air emissions of land use scenarios with regard to the transport demands and vehicle emissions. For example, greater priority could be given to building cycling infrastructure in Mamre West and connecting with existing cycling infrastructure. The Traffic Impact Assessment notes the infrastructure for cyclists through bicycle paths along Erskine Park Road and parts of Mamre Road, with links to the regional cycling infrastructure along the M7. Development could require cycle infrastructure to continue these cycling links. Measures to manage conflicts between trucks and cyclist in Mamre West should be carefully considered.

Mamre West is not currently served by public buses into the site. Negotiation to extend the 779 bus route into the Mamre West industrial area appears to be progressing. To favour public transport use, priority walking routes should be provided from the bus stop to various parts of the Mamre West precinct. This will provide opportunities to visit commercial premises along the way, such as cafes and grocers and contribute to reducing VKT.

As new roads are built and vehicular traffic increase, busy roads can be a source of air pollution. When roads are flanked by continuous walls of buildings, the air pollution from vehicles may become trapped, exposing the users of roads and buildings to higher levels of air pollution. Certain elements of building design can assist in dispersion of pollution, for example:

- Clear air space provided around buildings
- Horizontal and vertical articulation used on the street frontages
- Varied roof forms.

The proposed setback distances and vegetation requirements in the DCP will assist in protecting users of the buildings from emissions from diesel vehicles using the area. However further setbacks along Mamre Road should be required to maintain a 20 metre buffer between future users and the expanded road. In addition the DCP should require mechanical ventilation air intakes to be positioned away from significant pollution sources, such as major roads.

Section 3.3.2 of the DCP refers to buildings being sited and designed to minimise visual impact. These requirements should also require buildings along Mamre Road to be articulated and have varied roof forms. These measures will increase dispersion of pollution from the road corridor.

2. Water Quality

The Development is located within the South Creek catchment which flows into the Hawkesbury-Nepean River. South Creek is one of the most highly disturbed aquatic systems in NSW. A range of issues continue to place pressure on these waterways and can contribute to the degradation of their health. These include urban stormwater runoff, sewage, agriculture and industrial discharges.

There have been a range of Government programs for these waterways to improve water quality. Further work is however required before the NSW Water Quality Objectives (WQO) are met. For example, despite decreasing trends in nitrogen levels at sites along the Hawkesbury-Nepean River, nitrogen levels often remain well above the ANZECC/ARMCANZ Guideline levels throughout the river system. In addition there are also emerging issues such as conductivity levels increasing at many sites. *(Hawkesbury-Nepean River Environmental Monitoring Program Final Technical Report,* DECC 2009)

The consequence of these impacts can include algal blooms and excessive aquatic weed growth, which hamper recreation and commercial uses of the waterway and affect aquatic life. It is estimated that approximately 74 per cent of the length of the waterways within the catchment are degraded while the remaining 26 per cent are in moderate condition. There is also evidence that peak flows in the catchment have increased due to current urban development resulting in bank erosion.

Monitoring programs undertaken by NSW Office of Environment and Heritage (OEH) and Sydney Water have identified that there are still a range of natural values remaining in the South Creek Catchment, possibly even habitat for iconic species. The waterway is also recognised for recreational fishing. This range of community values has an important role in enhancing the liveability of places and contributing to the wellbeing of communities in Western Sydney.

The NSW Government has, and continues to, invest in a range of programs and initiatives to manage elevated nutrient loads in the Hawkesbury-Nepean catchment. These include:

- Hawkesbury Nepean River Recovery Program
- Lower Hawkesbury Nepean Nutrient Management Strategy
- Stormwater Management Service Charge

- South Creek Bubble licence
- South Creek Offsets pilot scheme

An important outcome for future growth in the catchment will be ensuring that the NSW WQO for the Hawkesbury-Nepean catchment are supported. To address this issues the *Land Use and Infrastructure Plan* should include the following principle:

- *To deliver development that protects and maintains the community's values and uses of waterways or restore those values and uses where they are not being achieved.*

To support the above principle the DCP should also be amended as follows:

Objectives

a) *To maintain or restore the community's values and uses of receiving waters by improving the quality of stormwater run-off entering those waters*

Controls

- *Identification of water management objectives, and assessment of the implications of the Water Quality objectives (WQO) for the Hawkesbury-Nepean catchment*
- *Identification of stormwater targets that maintain or contribute towards achieving the relevant WQO.*
  c) *Identification of the River Flow Objectives (RFO) for the Hawkesbury-Nepean catchment and assessment of how any changes to the flow rate and flow duration within the receiving waters as a result of the development will be managed to maintain or restore those RFO. Natural flow paths, discharge points and runoff volumes from the Development should also be managed to maintain or restore the relevant RFO.*

The proposed DCP does include percentage load reduction targets however these are not tailored to the receiving waters and do not reflect contemporary performance of Water Sensitive Urban Design treatment and practices. Stormwater pollutant reduction targets should be derived that maintain or restore the NSW WQO of the receiving waters.

The EPA has developed a risk-based decision framework for integrating water quality outcomes in the strategic planning process. This approach combines existing NSW government policy and processes with contemporary catchment and ecosystem response modelling in a structured, risk-based decision-making framework that delivers Ecological Sustainable Development. This approach forms an action in the Illawarra Shoalhaven Regional Plan and is currently being considered for use in Sydney's District Plans. DPE may wish to consider this approach to assist in the development of suitable local targets for the proposal.

The *Land Use and Infrastructure Plan* states that existing sewer services will be upgraded as required to facilitate the redevelopment of the site for industrial uses. New development should be designed to allow for future extensions to the reticulation system which will not adversely affect the performance of the existing system. Extensions may include amplifying existing sewers and pumping stations. Written advice should be sought from Sydney Water confirming whether there is adequate capacity in the existing sewerage system to cater for additional loads and the systems environmental performance will not be compromised. It is NSW EPA policy that any new reticulation system should be designed and constructed so that:

- there is no pollution of waters as a result of sewage overflows from new sewage pumping stations in dry weather; and
- wet weather overflows from the reticulation system are minimised.

The EPA is currently considering a framework for the regulation of nutrient discharges in the Hawkesbury-Nepean 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. The EPA is considering several options including a catchment based nutrient load limit. In the interim, the EPA recommends that infrastructure planning should deliver an outcome that ensures any new

sewage treatment scheme will achieve no net increase in nutrient load to the river. Offsets and other measures such as integrated approaches to water management can be used to help achieve this outcome. Any proposed discharge would need to be assessed in accordance with the ANZECC (2000) *Guidelines for Fresh and Marine Water Quality.*

3. Noise

The Acoustic Assessment attempts to quantify noise impacts, but because of the lack of detail available at this stage on future development, it makes a number assumptions. This means the findings and subsequent recommendations may be unreliable. Further work is recommended in the assessment at the detailed design stage so that impacts can be more reliably quantified and feasible and reasonable mitigation identified. The *Land Use and Infrastructure Plan* should provide information of when this work will be done as the area will be undergoing significant change as it transforms from rural to industrial use.

To assist with future planning for noise, including its associated effect on amenity, the following additional principle should be included in Section 3.5 of the *Land Use and Infrastructure Plan* to guide future development as the area transforms:

- *Promotes development and provides strategies at a local level that ensures that noise emissions do not cause adverse impacts upon the community's amenity or health and prevents land use conflict.*

The scope of the assessment does not appear to seek to influence the design and layout of the rezoning proposal to avoid potential land use noise conflicts. Retrofitting acoustic mitigation retrospectively once the layout is finalised and developed can be challenging and lead to higher costs. The *Land Use and Infrastructure Plan* should provide information on when these matters will be best addressed, such as during more detailed precinct planning. Appropriate planning controls should be identified and put in place to mitigate any impacts. This is best achieved by applying the following hierarchical approach to noise control.

1. Spatial separation of incompatible land use through appropriate zoning and placement of activities to minimise noise-related land use conflicts. For example, separating incompatible land uses with commercial buildings or recreation space or similar will provide a physical barrier and/or spatial separation. Retrospective control options are usually limited and more expensive.
2. Minimising noise emissions at source through best practice selection, design, siting, construction and operation as appropriate.
3. Reducing noise impacts at receivers through best practice design, siting and construction.

Proposed industrial development should be assessed in accordance with the *NSW Industrial Noise Policy* (INP) (EPA 2000). The INP outlines a strategic approach to ensure noise amenity is not eroded due to the cumulative impact of a group of developments. The benefit of this approach is it can be applied at a precinct stage to inform, for example:

- what industry types could be suitable for particular locations within the precinct
- appropriate noise limits for industries within the precinct - particularly for those established earlier in the process so as to provide scope for noisy industries that may come later to operate without causing amenity levels to be exceeded.

This type of approach has been applied successfully to provide an early indication to potential developers of expected noise emission requirements, and to preserve the noise amenity in adjacent areas. Examples include the Ingleburn Industrial Estate, Campbelltown; Glendenning Industrial Estate, Blacktown and Breamer Industrial Estate, Mittagong

The following documents provide further guidance in relation to land use planning and should be consulted:

- *Rail Infrastructure Noise Guideline* (EPA 2013)
- *NSW Road Noise Policy* (DECCW 2011)
- *The Development Near Rail Corridors and Busy Roads—Interim Guideline* (DoP 2008).
- *Noise Guide for Local Government* (EPA 2013)
- *Infrastructure SEPP.*

These guidelines recognise 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.

4. Contaminated Land Management

State Environmental Planning Policy (SEPP) 55 states that as part of the land use change process the following key considerations should be addressed:

- Whether the land is contaminated
- If the land is contaminated whether it is suitable in its contaminated state (or will be suitable, after remediation) for all the purposes to which the land will be used
- If the land requires remediation; will be made suitable for any purpose for which the land will be used.

In cases where land is potentially contaminated, the investigation and any remediation and validation work is to be carried out in accordance with the guidelines made or approved by the EPA under Section 105 of the *Contaminated Land Management Act 1997* and be in accordance with the requirements and procedures in the following:

- *Contaminated Land Management Act 1997*
- *Contaminated Land Management Regulation 2013*
- *State Environmental Planning Policy 55 – Remediation of Land.*

Section 6.8 off the DCP includes objectives and controls for the management of contaminated land. This approach is normally undertaken for the Growth Centres where more detailed land contamination investigation is undertaken at the development application stage. However the assessment has identified some areas of environmental concern that require more detailed investigation to identify suitable remediation or mitigation measures so the land is fit for its intended use. The DCP should require the involvement of an EPA-accredited Site Auditor during the contamination management process, including the provision of a Site Audit Statement certifying that the land is suitable for the proposed use(s).

5. Waste Management

The *Land Use and Infrastructure Plan* should include the following principles in relation to the management of waste:

- *Provides sound waste management strategies at a local level which are implemented to achieve the NSW Waste Avoidance and Resource Recovery Strategy (WARR Strategy) addressing the waste management hierarchy of:*
  - *avoidance of unnecessary resource consumption*
  - *resource recovery (including reuse, reprocessing, recycling and energy recovery)*
  - *disposal*
- *Compliments NSW Government's Waste Less, Recycle More initiatives and EPA waste and recycling programs.*

As part of recent waste initiatives the Regional Organisation of Councils obtained grant monies to develop and implement a regional waste strategy by 2017. It is anticipated that this strategy will identify the range of wastes managed and handled across the LGAs. This includes waste management and recycling constraints, identify opportunities for their improvement, and to provide key recommendations to inform EPA and councils on future infrastructure needs and improvements. Ensuring these initiatives are implemented will deliver waste actions in a *Plan for the Growing Sydney.*

DPE should engage with the Western Sydney Regional Organisations of Councils (WSROC) to explore opportunities for waste management to inform the proposal. The development should provide an opportunity to include appropriate provisions to guide the management of waste to accommodate future growth, especially future waste and recycling infrastructure needs. Existing waste facilities will also be important to meet recycling needs and the NSW government's objectives and targets.

EPA has developed information to improve waste management associated with new development. The *Waste Not Development Control Plan Guideline* (EPA 2008): http://www.epa.nsw.gov.au/resources/warrlocal/080353-model-waste-not-dcp.pdf is available to assist in guiding the development of appropriate requirements for the DCP. This guideline also provides suggested planning approaches and conditions for planning authorities to consider at the development application phase in relation to waste minimisation and resource recovery. This includes consideration of demolition and construction waste and the provision of facilities and services to allow the ongoing separation, storage and removal of waste and recyclables. In particular these provisions should include but not be limited to:

- *Any waste generated during demolition and construction needs to be classified in accordance with EPA's Waste Classification Guidelines and managed in accordance with that classification.*
- *Waste management planning for the new development needs to consider any regional waste management strategies.*

The following documents provide further guidance in relation to waste management strategies and should be consulted in the preparation of the DCP:

- *The Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities* (EPA December 2012). This guide can be accessed at: http://www.epa.nsw.gov.au/warr/BPGuideCIFacilities.htm.
- *The Better Practice Guide for Multi-Unit Dwellings provides waste management strategies for multi-unit residential developments* (DECC 2008). This guide can be accessed at: http://www.epa.nsw.gov.au/warr/BetterPracticeMUD.htm
- *The Better Practice for Public Place Recycling* (DEC 2005) provides information on standards for recycling systems in public places, such as parks, shopping centres, footpaths, bus-stops, etc. This guideline can be accessed at: http://www.epa.nsw.gov.au/warr/publicrecycling.htm.
- *Avoiding the dangers of accepting fill on your land* (EPA, 2013) should also be consulted. This guide can be accessed at: http://www.epa.nsw.gov.au/illegaldumping/landfill.htm.

6. Sustainability

The proposal provides an opportunity to develop key sustainability indicators that deliver the environmental outcomes for matters including water, air quality and waste. DPE should explore whether BASIXs can be expanded to include precinct based sustainability indicators for industrial development. Currently DPE is exploring whether BASIXs can be expanded to include sustainability indicators for the Rhodes East Planning Proposal. Such an approach could deliver development that is not only sustainable but is resilient, productive and provides liveable communities.