

DOC18/644981-32

Department of Planning and Environment (Attention: George Koshy) GPO Box 39 SYDNEY NSW 2001

Dear Sir

Draft Masterplan for West Schofields

I am writing to provide comment on the Draft Masterplan for West Schofields and associated technical assessments received by the Environment Protection Authority (EPA) on 10 August 2018.

The EPA has attached comments (**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.

The EPA would like to work with DPE in the continued development of the Masterplan and are available to meet, at a suitably convenient time, to discuss the above matters, if required.

If you have questions regarding the above, please phone Paul Wearne (02) 4224 4100.

Yours sincerely

PETER BLOEM

Manager Regional Operations Illawarra

Environment Protection Authority

11/10/18

Attachment

ATTACHMENT A

EPA COMMENTS ON DRAFT MASTERPLAN

AIR QUALITY

Currently air quality appears to be considered in the Masterplan documentation only in the context of odour. Air quality is an issue more broadly for North Western Sydney and the West Schofields precinct. This includes potential air quality impacts on the new Western Schofields community and potential emissions from the new precinct impacting locally and on the wider airshed.

Although Sydney's air quality is relatively good by world standards, air pollution at times exceeds national health-based standards and there is evidence of health impacts even when national standards are met. North-west Sydney experiences more "poor or worse" air quality days due to both ozone and particle pollution when compared against national standards. Population growth and climate change will continue to place pressure on air quality in the future.

The Western District Plan states in relation to air quality: "Past and present urban development and activities can also create urban hazards such as noise, air pollution and soil contamination. Compared to many cities around the world, Greater Sydney enjoys excellent air quality, which enhances its reputation as a sustainable and liveable city. However, the combined effect of air circulation patterns in the Sydney Basin, local topography, and proximity to different sources of air pollution such as wood-fire smoke, can lead to localised air quality issues".

Currently the West Schofields Masterplan sets out measures that will benefit air quality where they also achieve other planning objectives. This includes; having active transport routes laid out prior to designing roads and allotments, locating new residential development with ready access to open space and services by public and active transport. It does not appear to include actions specific to protecting air quality and human health in the new precinct.

Key issues in relation to air quality for Western Schofields (in addition to odour) will be potential exposure to household and traffic emissions associated with increased population and traffic movements. These are further discussed below.

Odour Assessment

The odour impact assessment is generally consistent with the Technical Framework: Assessment and Management of Odour from Stationary Sources in NSW (DECC, 2006a) and its associated Technical Notes (DECC, 2006b). The impact assessment has identified potential sources of odour that may impact on future development in the Project area. In particular:

- A number of poultry operations in the vicinity of the Project study area. The north, east and western borders of the Project study area are predicted to be affected by poultry farm odour; and
- the Northwest Recycling Centre, which is located within the Project boundary. This odour source is identified as predominantly affecting the northern portion of the Project site.

The odour impact assessment appropriately recommends that, in order to increase confidence in the assessment results and to potentially reduce the areas of influence around odour sources, a Level 2/3 odour impact assessment be conducted for the sources that were identified as potentially impacting the Project study area. It should be noted there are two poultry farms which marginally pass the Level 1 assessment, namely:

 1148 Richmond Road, Marsden Park and 1132 Richmond Road, Marsden Park: separation distance of 1773 metres is calculated and distance to the project is 1800 metres. Should the Level 2/3 odour impact assessments show the odour sources have a greater odour impact than indicated in the Level 1 assessment, then it would be appropriate that a Level 2/3 assessment is conducted for the poultry farms at 1148 and 1132 Richmond Road, Marsden Park.

It is also suggested that an analysis of odour complaint data could provide a further indication of the potential impact of the odour sources on the Project Study area.

The EPA recommends the following:

- Results of the Level 2/3 odour impact assessments be compared to the Level 1 assessment results to determine if the Level 2/3 odour assessment shows a reduced area of impact around the odour source
- Should the Level 2/3 odour impact assessment show a greater potential odour impact on the Project Study area, then a Level 2/3 odour impact assessment should be conducted for the sources demonstrating marginal compliance in the Level 1 assessment (1148 and 1132 Richmond Road, Marsden Park).
- Odour complaint data could be analysed to provide a further indication of potential odour impact on the Project Study area.

Household emissions

The West Schofields Precinct Exhibition Discussion Paper includes Part 3 on relevant legislation and policies and *Blacktown City Council Growth Centre Precincts Schedule 9 - West Schofields Precinct* is included in the exhibition documents. However, there is no reference to the full *Blacktown City Council Growth Centre Precincts Development Control Plan*, which includes measures specific to protecting air quality by minimising emissions associated with household heating and cooling and other energy use. In particular, Section 4.1.3, Sustainable building design, will need to be implemented in the planning and design of the new precinct.

Traffic emissions

In relation to traffic emissions, reference should be made to: <u>Development near Rail corridors and busy roads – Interim guideline, NSW Department of Planning</u> (DoP 2008), to ensure that traffic levels are specifically considered in relation to any sensitive adjacent land uses, such as residences, child care and aged care, and that the following measures are implemented if applicable. The DCP should include the following provision

- 1. Development shall comply with:
 - a) Minimum separation distances from the kerb as outlined in the Table 1; or
 - Where minimum separation distances are not achievable, ducted mechanical ventilation for the supply of outdoor air in compliance with AS 1668.2: The use of ventilation and air conditioning in buildings Mechanical ventilation in buildings. Mechanical ventilation outdoor air intakes must be located at least the minimum distance from the kerb specified in Table 1, measured in the horizontal and vertical planes from the kerb. Filtration of outdoor air must be to a minimum Australian Standard performance rating of F6 or minimum efficiency reporting value (MERV) 9.

Table 1: Minimum setback required

Road classification	Residential type buildings	Child care centres hospitals, aged care facilities, schools
Motorway	30m	80m
High volume: more than 60,000 AADT; and 40,000–60,000 and 5% or more Heavy Vehicles	20m	80m
Moderate 20,000-40,000	n/a	40m
Intermediate Roads: 40,000–60,000 AADT ; and 30,000–40,000 and 10% or more Heavy Vehicles	10m	40m
High volume intersection	30m	60m

- 2. 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. Development in mixed use areas zoned for four floors or more shall:
 - a. Use horizontal and vertical articulation on the street frontages.
 - b. Vary roof forms between adjacent buildings.

WATER QUALITY

West Schofields Precinct is in the Eastern Creek catchment which forms part of the broader South Creek catchment. The Draft Report does not appear to have addressed the sustainability priorities in the Western City District Plan. Planning Priority Planning Priority W12 of this plan identifies "protecting and improving the health and enjoyment of the District's waterways". It is also supported by the action "improve the health of catchments and waterways through a risk-based approach to managing the cumulative impacts of development including coordinated monitoring of outcomes".

The NSW Water Quality Objectives (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 NSW Government's endorsed environmental values and long-term goals for NSW's surface waters. Land use changes associated with this new precinct should deliver a sustainable development outcome that not only supports on-going improvement in the health of these catchments and waterways but also allows the WQOs to be met over time where they are not currently being achieved.

The 'Flooding, Water Cycle Management and Riparian Corridor Assessment' states that water cycle management measures should achieve generic per cent load reductions based on Blacktown City Council's requirements (that is, Gross Pollutants 90 per cent, TSS 85 per cent, TP 65 per cent, TN 45 per cent). It further outlines measures to manage water quality including Water Sensitive Urban Design (WSUD) elements; rainwater tanks, gross pollutant traps, grass swales and bioretention basins.

Ambient water quality targets for the receiving waters should be developed instead of adopting generic per cent load reductions. These generic targets do not reflect contemporary integrated water cycle management performance and are unlikely to deliver improvements in the health of waterway in order to deliver the WQOs.

As recommended in the District Plan a risk-based approach should be adopted to assess the link between urban development, waterway health and the community's waterway values. This approach can then consider infrastructure needed to achieve desired outcomes. To help support this, Office of Environment and Heritage (OEH) and the EPA has developed a risk-based decision framework for integrating water quality outcomes in the strategic planning process. The framework can be accessed at:

https://www.environment.nsw.gov.au/research-and-publications/publications-search/risk-based-framework-for-considering-waterway-health-outcomes-in-strategic-land-use-planning.

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. The framework helps planning authorities:

- gauge the potential impact on waterways of land use scenarios and assess trade-offs
- inform and support community and government decision making by providing a structured approach to considering waterway outcomes in planning decisions
- identify locations that are more suited to particular development types and densities, and where landscape conditions could minimise and resulting impacts on water quality
- drive cost-effective delivery of environmental outcomes
- support healthy communities by maintaining natural assets.

The narrative for Masterplan would also benefit recognition of the Western City District key aims for waterways, by prioritising the waterways as green infrastructure. This involves

- reconceptualising waterways as an infrastructure asset that can provide environmental, social and economic benefits to communities
- integrating approaches to protecting environmentally sensitive waterways within a larger network of green infrastructure
- addressing the cumulative impacts of development and land management decisions across catchments in a way that improves water quality and waterway health.

The Masterplan should provide information on how the precinct is contributing to and helping to deliver the broader South Creek Corridor Plan. OEH has recently completed mapping for the South Creek Catchment to help identify High Value Aquatic Ecosystems where protection or improvement is required. This work is helping to inform the above broader work being undertaken by INSW and MEMA Actions. The map is informed by indicators representing high value water ecosystems, based on criteria specified to meet legislative requirements in the BC Act, FM Act, Water Management Act, POEO Act and Marine Estate Management Act. Also included are criteria representing local community values and these can be used to inform the extent and type of stormwater and wastewater infrastructure required. DPE should update the Masterplan with this contemporary information. Further information on this mapping can be obtained for OEH Science, Jocelyn Dela-Cruz, phone (02) 9995 5508.

In relation to salinity in the catchment DPE should consult work undertaken by LLS - "Hydrogeological Landscapes for the Hawkesbury-Nepean Catchment Management Authority, Western Sydney Study Area". A copy can be obtained at the following link: http://data.environment.nsw.gov.au/dataset/western-sydney-hydrogeological-landscapes-may-2011-first-editionf20fe/resource/61ac3645-25c0-4380-aee0-c286aa4b7ea6?inner span=True.
It appears that this more recent information has not been consulted when developing the supporting Soil Salinity & Aggressivity Assessment.

NOISE

The supporting noise report refers to the Industrial Noise Policy (INP) instead of the Noise Policy for Industry (NPfI). The NPfI superseded the INP by the time this report was published. The report should be updated to reflect contemporary noise policy so that the appropriate project noise trigger

levels are established. Predicted noise levels from (relevant operational should then be compared to these updated trigger levels to identify noise impacts and feasible and reasonable mitigation.

The report (4.2) refers to the *Protection of the Environment Operations (Noise Control) Regulation 2000* (sic) and restrictions on the use of air conditioner on residential premises during specific hours. This interpretation is incorrect and the context in which it is implied (as a means to manage impacts) is not appropriate. Plant, including air conditioners, which will form part of the development should be designed to meet project noise trigger levels derived in accordance with the NPfI. This could be done during the detailed design/approval stage.

Consideration of road traffic noise on future encroaching development should also be updated. The I-SEPP, and the advice in the DPE's *Development in Rail Corridors and Busy Roads – Interim Guideline* is now applicable where the average daily traffic volume is 20,000 (and not 40,000 prior to 31 August 2018). This will need to be considered in future detailed noise assessment(s) to ensure that residential development encroaching on road infrastructure are adequately designed for acoustic amenity. Roads such as Schofields, Garfield and Townson Roads are predicted to become sub-arterial roads which will have 10,000 – 35,000 AADT. It appears the SEPP will only be activated once the above traffic volumes are triggered. Development may have already passed near these key roads and housing may not have been appropriately designed for traffic noise related impacts. Consideration should be provided in the Masterplan on how development can be appropriately planned along these roadways in response to future predicted volumes. The potential to address noise issues retrospectively following development can be challenging and expensive and lead to community complaint.

The EPA considers that implementing noise control at a strategic planning level provides the most effective means of minimising noise impacts on communities. 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.
- 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.

Sustainable land use planning and careful design and location of development offers the greatest opportunity to manage noise. Noise generating activities and noise sensitive areas should be separated where practicable. 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.

Guidelines including the NSW Road Noise Policy (DECCW, 2011) and the Rail Infrastructure Noise Guideline (EPA, 2013) provide approaches in relation to land use planning to manage road and rail noise respectively. These compliment the Development Near Rail Corridors and Busy Roads—Interim Guideline (Department of Planning, 2008). This guideline recognises the need for judicious land use planning, architectural design, building orientation and good internal layout to achieve acceptable acoustic amenity for residential development in proximity of busy transport corridors. Further advice is provided in Noise Guide for Local Government (EPA, 2013).

The above 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. A range of noise mitigation strategies can also be implemented at the subdivision design stage to manage unavoidable noise impacts. This can include the application of noise control measures into the building design to ensure internal noise levels are acceptable.

CONTAMINATED LAND MANAGEMENT

The Masterplan was provided with several site investigation reports in relation to the management of contaminated land. In general, further information, including additional assessment, is required to understand the level of risks associated with site contamination, and similarly, inform the approaches to mitigate such risks. This is important as the proposal involves a change in land use to sensitive uses, including residential purposes.

The EPA proves the following comments for DPE's consideration in their assessment of the proposal.

- The EPA has reviewed the "Landfill Status Letter" (ERM 2018a) for the CSR Townson Road landfill, which has identified high levels of methane gas from the site requiring further investigation. The letter has further identified that the landfill cap does not comply with NSW EPA 2016 Environmental Guidelines: Solid Waste Landfills, Second Editions, However, ERM are reported to be overseeing landfill cap rectification works in accordance with a report (not provided with supporting information), and reportedly as endorsed by a site auditor. It further states that 15 gas wells are installed around the landfill and three installed on the landfill. A summary of landfill gas measurements was provided with reference to former reports (also not provided with supporting information). Concentrations exceeding the NSW EPA 2016 trigger value requiring further investigation and corrective action of 1% v/v methane, were reported for several wells. ERM (2018) has recommended installation of a biofiltration trench to the north and east of the landfill, to remediate the LFG and assist in transformation of CH₄ to CO₂, and it is understood that ERM are in the process of preparing a detailed report. ERM reports the trench would be installed following confirmation of development consent from Council. Further clarification is required on several matters including further action to address potential risks surrounding LFG. The EPA understands that the area within the landfill footprint is proposed to be redeveloped for residential land use, and considering the report findings provided in the Masterplan, residential land use in the current conditions would pose unacceptable risks to future site users.
- Review was undertaken of the "Preliminary Site Investigation for the Northern Portion of the site" (DLA Environmental Services, August 2017). The investigation identified a number of potential contaminating activities and sources on the site, including the Riverstone Landfill and the former Grange Avenue Landfill, market gardens, scrap yards, an organic mulch recycling centre, and former and current dwellings. The report recommended a detailed site assessment be conducted of the site to characterise the magnitude and extent of impacts within each identified Area of Environmental Concern (AECs). The report was only able to review four historical reports concerning the Grange Landfill and none of the other AECs, and the reports were not properly referenced. Several data gaps were identified with respect to the risks and ongoing management of this landfill.
- Review was undertaken of the "Detailed Site Investigation for West Schofields Precinct Northern" (the Northern DSI, ERM 2018b). The Northern DSI was focused on only part of the site to the north of South Road. The DSI included soil sampling from a total of 26 boreholes was conducted on only part of the northern portion measuring 90 hectares where access was permitted, excluding the Grange Avenue Landfill. Based on the information collected in the DSI and on investigation on the accessible properties, the investigation concluded no contamination was present that could preclude proposed future use. However, ERM (2018b) identified several data gaps relating to assessment of contamination on properties on the site that could not be accessed. Further detailed site assessments should be undertaken at the site especially in the properties that have not been accessed before.
- Review was undertaken of the "Landfill Gas Risk Assessment Report for Grange Avenue Reserve" (Biogas Systems, 2018). The report identified that landfill gas continues to be a potential hazard to current and proposed development of the site, with peak concentrations of methane and carbon dioxide occurring on the perimeter of the landfill exceeding relevant NSW EPA criteria. Biogas Systems (2018) undertook a Tier-2 risk assessment for the site involving new landfill gas monitoring (12 new wells and four monitoring events) to confirm previous LFG modelling. The results supported the premise that there is ongoing surface

migration of carbon dioxide, and likely source on the site, that may present a risk to subsurface receptors. Sensitive receptors identified in the assessment include site workers and visitors who may be exposed to LFG and occupiers of subsurface structures (residents and workers) on site and off site. Limitations were identified in the report with respect to insufficient landfill gas and groundwater monitoring in vicinity of the landfill, and the need for background data. The report concluded it was possible to develop the area around the landfill for sensitive uses including residential, public buildings and commercial, provided further works are undertaken to refine the landfill gas risk assessment in order to provide recommendations for remediation of the site. The EPA agrees this site poses a risk in current condition to potential site users (excavations) and also proposed land use and that further assessment is required.

- Review was undertaken of the "Preliminary Environmental Site Assessment With Supplementary Soil and Groundwater Sampling for West Schofields Part Precinct encompassing the southern portion of the precinct" (DLA Environmental Services, 2016). A total of 17 AECs were identified at the site and ten of those AECs were sampled. The investigation identified that the remaining AECs would require detailed or Phase 2 Environmental Site Assessment. The report noted at minimum, three AECs would require remediation comprising removal of surface soils below the footprint of buildings, due to the presence of asbestos. Minor hydrocarbon contamination was also identified in one AEC requiring further assessment and remediation. The EPA recommends further assessment and remediation should be required not only on the southern but northern portions of the precinct.
- Following additional data gap investigations and closure of required remedial works, the applicant should engage a site auditor accredited by the NSW EPA to provide a Section A Site Audit Statement certifying the suitability of the land for the proposed use.

WASTE MANAGEMENT

The NSW Government has a clear waste and resource recovery agenda. These include:

- Waste Avoidance and Resource Recovery (WARR) Strategy 2014–21 sets targets for diverting waste away from landfill and increasing recycling rates.
- In 2017, the NSW Government introduced a new container deposit scheme called "Earn and Return" which allows people to return beverage containers in exchange for 10 cents per container
- The NSW Government has its \$337 Waste Less, Recycle More initiative aimed at investing in the waste and resource recovery sector.

To help transition and meet the WARR strategy targets, it is important waste and recycling services are considered upfront in the design stage. It is also important that waste is properly managed at the construction stage so that materials can be recycled and reused where possible and waste is disposed of correctly. This can be achieved by having in place clear waste and recycling objectives and systems that minimise waste through construction techniques and materials used and through effective onsite storage and separation of materials.

The proposed 4,500 residential dwellings, commercial and retail buildings, primary school and town centre will all generate waste including wastes for recycling during operation which will need to be stored, collected and transported in a safe and efficient manner. The provision of waste and recycling services is considered an essential service and these services need to be planned upfront in both the building design (for multi-unit dwellings and commercial buildings like schools and community centres) and street design and layouts during sub-division.

Once buildings are complete, if they have poorly designed waste storage and collection areas this can have a negative impact on the occupants' ability to use the systems effectively and cause ongoing problems for the life of the building. Retrofitting development once built can also be challenging and expensive. The principles provided below should be used to help guide the planning and design of waste and resource recovery systems in new residential and mix use developments.

A waste and resource recovery plan should be developed by a specialist in environmental and/or waste management that helps underpin the Masterplan. The Plan should include a vision and strategy for how waste and recycling can be managed in an integrated way across the entire precinct for the new town centre and new residential communities. This includes construction through to the operation stage. The types of issues the plan should address include:

- Precinct-wide waste and recycling infrastructure such as the use of advanced automatic collection systems.
- The type and size of waste collection and storage equipment available to manage the expected quantity of waste and recyclable materials that will be generated by residential multi-unit and commercial buildings such as compactors, or paper balers which need to be considered in the footprint of the building design.
- Opportunities for locating infrastructure within the town centre to help people return unwanted beverage containers under the NSW Governments' container deposit scheme such as reverse vending machines.
- Opportunities for people to manage organic waste on site through the use of home composting units or roof top gardens or community gardens.
- The specifications of the Blacktown City Council's waste and recycling collection fleet and its ability to access and service multi-unit dwelling residential buildings (if basement servicing is an option), and to service bins from the streets and service lanes within the new subdivision areas that is, are the road widths and service lanes wide enough for a heavy ridge vehicle to access safely to perform the services?
- Waste and recycling generated from the new community will need to be processed or recycled and disposed of. This development will add more waste to an already stretched waste and recycling infrastructure network in Sydney. The waste and recycling plan also needs to consider:
 - quantities of different waste streams generated during construction and operation stages
 - the potential location of the facilities that can receive these materials
 - the capacity of these facilities to accept these materials and possible future needs for waste and recycling processing facilities.

The EPA has funded and supported groups of councils to develop regional waste strategies. The proposed development site is located in the Western Sydney Regional Organisation of Councils (WSROC) area and the WSROC Regional Waste Strategy can be viewed on the <u>EPA website</u>. The WSROC regional waste strategy, together with the local council waste management strategy should be consulted when preparing the above Plan and designing waste infrastructure for the proposed development.

<u>Design Principles for waste and resource recovery systems in new residential and mix use</u> developments

The following principles should guide and underpin the planning and design of waste and resource recovery systems in new residential and mix use developments.

Design objective 1: Environmental sustainability and best practice

Developments meet requirements for long-term sustainability and best practice when:

- systems are designed to maximise waste separation and resource recovery
- innovative and best practice waste management collection systems and technologies are considered and supported where appropriate
- flexibility in design allows for future changes in waste generation rates, materials collected and methods of collection.

Design objective 2: Effective waste and resource management

Developments achieve effective waste and resource management when:

- waste services can occur in a seamless and timely manner
- collection points, street widths and street configurations, especially in new subdivisions and precinct developments, allow for waste to be removed safely and conveniently

- the distance residents have to travel to dispose of waste is minimised
- functional and convenient storage spaces are provided for waste and recycling, including temporary storage areas for bulky materials like cardboard boxes and bulky household waste.

Design objective 3: Clean, safe and healthy living environments

Developments protect and enhance the quality of life for the community when:

- negative impacts on amenity for residents, neighbours and the public, such as visually unpleasant waste storage areas, noise from waste collection including traffic noise and bad odours, are minimised
- illegal dumping and litter from bins are minimised through good planning and installation of adequate storage and waste recovery infrastructure
- safe and easy to access waste and recycling storage areas are provided for residents, tenants, building managers and collection contractors.

Design objective 4: Affordability

Developments provide affordable living and working when:

- careful design and construction prevents costly retrofits
- operational waste management is cost-effective for residents and tenants.

Further Guidance

Other supporting documents that should be consulted include:

- The NSW EPA's 'Better Practice Guide for waste management in multi-unit dwellings'. This
 document provides guidance and information on a range of waste management issues that relate
 to the design of new communities and buildings and how waste management services are
 delivered by councils. This guide is currently being updated. Publication of the updated version
 will be in late 2018.
- 2017 updates to the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 supported by the <u>EPA Design Guide</u>. The EPA Design Guide provides a design and operational guidance to ensure the location, design and siting of the recycling equipment and facilities (to support the NSW container Deposit scheme) is appropriate.
- The Waste Avoidance and Resource Recovery Strategy 2014-2012. Please visit: www.epa.nsw.gov.au/wastestrategy/warr.htm.