EPA 270-213

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Dear Ms Smith  

Integrated Movement Systems Policy Discussion Paper

Thank you for the opportunity to comment on the Integrated Movement Systems Policy Discussion Paper.

In responding to the discussion paper, the EPA has drawn heavily from our recently released ‘Interface between land uses’ position statement. This position statement sets out:

- the general principles for managing air and noise emissions, and
- matters for consideration for different types of interfaces between land uses (including mixed use zones and transport corridors).

The EPA’s ‘Interface between land uses’ position statement could be converted into a Practice Guideline under the Planning, Development and Infrastructure Act 2016 (PDI Act) to assist in the evaluation of Code-assessed development.

Specific comments on the discussion themes and questions, where relevant, are outlined below.

1. Aligning South Australia’s growth with transport infrastructure

The introduction to the Integrated Movement Systems discussion paper states that “planning plays a significant role in balancing competing priorities and resolving tensions”.

In this regard:

- the 2018 State of the Environment report shows vehicle emissions represent a major component of metropolitan Adelaide’s total air pollutant emissions, including fine particles, nitrogen oxides and volatile organic compounds. Acute air quality impacts arise as a result of direct exposure to transport corridors, particularly major roadways that carry large volumes of traffic. Separation¹ between emission sources and sensitive receivers (i.e. humans) is a simple means of reducing the impact, but other considerations, including traffic flow and consistency of speeds, can also have a major influence

¹ 100m separation distance is recommended.
the impacts of transport corridors are not only felt by residents, because the main pollutants of concern are nitrogen oxides, which have an acute effect, particularly amongst children, meaning the impacts occur in shorter periods, where schools and business premises are also impacted,

the freight movement task will continue to increase, and

the air quality impact from vehicle emissions is likely to diminish as the transport fleet changes to electric vehicles over time (less so for the heavy vehicle freight task which may not transition to electricity for the foreseeable future).

We don't know how increasing net residential densities immediately adjacent to transport corridors will influence travel behaviour - if we already know that Adelaide currently has one in three homes within 400 metres of frequently serviced public transport (better than the national average) and the lowest public transport usage in the nation.

On the basis of this information, how do you then balance a certain public health impact against an objective of travel behavioural change in the future that may not be realised?

It is the EPA's strong view that planning policy should prioritise the function of a strategic transport corridor and facilities and separate incompatible land uses.

Current planning practice typically results in a back-end consideration of air quality and noise through the application of the Noise and Air Emission Overlay and Minister's Specification SA 78B - Construction Requirements for the Control of External Sound. When applied, this approach sees responsive building design to mitigate adverse health effects arising from exposure to road traffic in particular (the potential onset of sleep disturbance from excessive noise and exposure to particulates, oxides of nitrogen and volatile organic carbons from unburnt vehicle fuel). Mixed use zones also present other noise sources requiring design responses through use of the Overlay.

The EPA maintains that urban renewal can be enhanced by encouraging residential development away from major transport corridors to achieve healthy neighbourhoods. The graphic below shows how this could be achieved (see Figure 1). The EPA's strong view is that air and noise impacts from corridors should be avoided through better urban design rather than reactive and limited mitigation through building design (noting building design is typically only effective for internal noise levels and not air quality).

Figure 1: Example of a centre developing near a transport corridor not on top of it
(Source: NSW Department of Planning, Development near Rail Corridors and Busy Roads – Interim Guidelines, Dec 2008)
2. Capitalising on strategic transport infrastructure

2.1 Strategic Transport Facilities

The EPA supports the concept of protecting strategic transport facilities (such as sea ports, major airports, intermodal facilities etc.) from encroachment.

Discussion question – How should planning policy balance the need for airports in strategic locations against the impact of these facilities on adjacent land owners?

The Australian Noise Exposure Forecast (ANEF) system shows the amount of total noise energy received by locations on the ground near an airport on an annual average day. Australian Standard 2021–2015 Acoustics – Aircraft noise intrusion – building siting and construction provides guidance on the siting and construction of buildings in the vicinity of airports to minimise aircraft noise intrusion. Using ANEF contours, where relevant, and the Australian Standard to inform planning policy would be advisable.

2.2 Strategic Transport Corridors

Discussion question – How can the Code work to protect the operation of major transport facilities whilst managing the impacts on adjacent development opportunities?

The creation of strategic transport facility overlays or similar mechanisms may be appropriate to elevate the importance of these facilities within the Code framework. The overlay purpose would be to protect the strategic facility from incompatible land uses. Where the overlay relates to an EPA-licensed activity, such as railway operations or a bulk shipping facility, overlay performance outcomes could be prepared with EPA support to achieve the desired outcome of maintaining the efficient function of the strategic transport facility.

Conversely, because the EPA licenses many strategic transport facilities such as railway operations, bulk shipping facilities, and aerodromes (with more than 20,000 flight movements per year) our ongoing oversight through the provisions of the Environment Protection Act 1993 provides a formal mechanism to manage air and noise impacts on nearby premises. Such that, the Code does not need to be all things, but it must recognise and link with other laws of the State.

Discussion question – How can planning policy better manage and minimise the impacts of transport corridors on surrounding development (i.e. noise and air pollution for residents)?

Design techniques to protect sensitive development from air and noise emissions are contained in ‘Reducing noise and air impacts from road, rail and mixed land use – A guide for builders, designers and the community’ and ‘Minister's Specification SA 788 Construction requirements for the control of external sound’. Currently the Minister’s Specification is called up in areas affected by the Noise and Air Emissions Overlay. Whilst the EPA sees benefit in continuing use of the Noise and Air Emissions Overlay, the Minister’s Specification should not be seen as the solution to poor urban design.

Development involving a sensitive receiver within 100 metres of a major road (i.e. a road with an estimated traffic volume greater than 20,001 vehicles per day) should evaluate the potential air and noise impacts arising from that corridor.

In contrast to the Minister’s Specification, the EPA’s ‘Guidelines for the assessment of noise from rail infrastructure’ (2013) (Rail noise guidelines) can be applied to railway lines in areas that are outside noise and air emission overlays, and to external recreation areas, not just internal living areas. The Rail noise guidelines identify evaluation distances within which the impact of noise and vibration on internal living areas and external recreation areas should be predicted and considered in the design of sensitive land uses. It aims to provide guidance on whether investigation of potential impacts will
be required. In practice, rail infrastructure and residential areas can be brought closer than the stated evaluation distance by effective mitigation of noise at the source, between the source and the sensitive development, or at the sensitive development itself.

The Rail noise guidelines apply to interfaces between new or upgraded railway lines and existing sensitive land uses, and between existing railway lines and encroaching sensitive land uses. The Rail noise guidelines and the Minister’s Specification play a complementary role in addressing noise impacts from railways.

Once again, these policy matters are dealt with through the EPA’s ‘Interface between land uses’ position statement. This position statement would appear to be a prime candidate for conversion to a Practice Guideline under the PDI Act to assist in the evaluation of Code-assessed development.

For further information on this matter, please contact James Cother on or

Yours sincerely

Kathryn Bellette

DIRECTOR, STRATEGY AND ASSESSMENT
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Date: 4/12/18