## State code 3: Development in a busway environment

## Table 3.2.1: Development in a busway environment

| **Performance outcomes** | **Acceptable outcomes** | **Response** |
| --- | --- | --- |
| Buildings and structures | | |
| **PO1** The location of buildings, structures, infrastructure, services and utilities does not create a safety hazard in a busway corridor or cause damage to, or obstruct busway transport infrastructure.  Note: Section 3.1 of the Interim Guide to Development in a Transport Environment: Busway, Department of Transport and Main Roads 2017, provides further guidance on how to comply with this performance outcome. | **AO1.1** Buildings, structures, infrastructure, services and utilities are not located in a busway corridor.  AND | Complies with PO# / AO#  *Use this column to indicate whether compliance is achieved with the relevant PO or AO (or if they do not apply), and explain why* |
| **AO1.2** Buildings, structures, infrastructure, services and utilities can be maintained without requiring access to a busway corridor. |  |
| **PO2** Development does not add or remove loading that will cause damage to bus transport infrastructure or a busway corridor.  Note: To demonstrate compliance with this performance outcome, it is recommended a RPEQ certified geotechnical assessment is provided.  Section 3.1 of the Interim Guide to Development in a Transport Environment: Busway, Department of Transport and Main Roads 2017, provides further guidance on how to comply with this performance outcome. | No acceptable outcome is prescribed. |  |
| **PO3** Road, pedestrian and bikeway bridges over a busway corridor are designed and constructed to prevent projectiles from being thrown onto a busway.  Note: Section 3.1 of the Interim Guide to Development in a Transport Environment: Busway, Department of Transport and Main Roads 2017, provides further guidance on how to comply with this performance outcome. | **AO3.1** Road, pedestrian and bikeway bridges include throw protection screens in accordance with section 4.9.3 of the Design Criteria for Bridges and Other Structures Manual, Department of Transport and Main Roads, 2018. |  |
| **PO4** Construction activities do not cause ground movement or vibration impacts in a busway corridor.  Note: To demonstrate compliance with this performance outcome, it is recommended a RPEQ certified geotechnical assessment is provided.  Section 3.2 of the Interim Guide to Development in a Transport Environment: Busway, Department of Transport and Main Roads 2017, provides further guidance on how to comply with this performance outcome. | No acceptable outcome is prescribed. |  |
| Filling, excavation and retaining structures | | |
| **PO5** Filling, excavation and retaining structures do not interfere with, or result in damage to, infrastructure or services in a busway corridor.  Note: Information on the location of services and public utilities in a busway can be obtained from the ‘Dial Before You Dig’ service. Where development will impact on a service or public utility plant in a busway corridor, such that the service or public utility plant will need to be relocated, an applicant should contact the relevant service or public utility plant provider for standards and design specifications for the alternative alignment. Any costs of relocation are to be borne by the developer.  Section 3.2 of the Interim Guide to Development in a Transport Environment: Busway, Department of Transport and Main Roads 2017, provides further guidance on how to comply with this performance outcome. | No acceptable outcome is prescribed. |  |
| **PO6** Filling, excavation, building foundations and retaining structures do not undermine or cause subsidence of, a busway corridor.  Note: To demonstrate compliance with this performance outcome, it is recommended a RPEQ certified geotechnical assessment is provided.  Section 3.2 of the Interim Guide to Development in a Transport Environment: Busway, Department of Transport and Main Roads 2017, provides further guidance on how to comply with this performance outcome. | No acceptable outcome is prescribed. |  |
| **PO7** Filling, excavation, building foundations and retaining structures do not cause ground water disturbance in a busway corridor.  Note: To demonstrate compliance with this performance outcome, it is recommended an RPEQ certified geotechnical assessment is provided.  Section 3.2 of the Interim Guide to Development in a Transport Environment: Busway, Department of Transport and Main Roads 2017, provides further guidance on how to comply with this performance outcome. | No acceptable outcome is prescribed. |  |
| **PO8** Excavation, boring, piling, blasting or fill compaction during construction of a development does not result in ground movement or vibration impacts that would cause damage or nuisance to busway transport infrastructure or busway transport infrastructure works.  Note: To demonstrate compliance with this performance outcome, it is recommended a RPEQ certified geotechnical assessment is provided.  Section 3.2 of the Interim Guide to Development in a Transport Environment: Busway, Department of Transport and Main Roads 2017, provides further guidance on how to comply with this performance outcome. | No acceptable outcome is prescribed. |  |
| **PO9** Filling and excavation material does not cause an obstruction or nuisance in a busway corridor.  Note: Section 3.2 of the Interim Guide to Development in a Transport Environment: Busway, Department of Transport and Main Roads 2017, provides further guidance on how to comply with this performance outcome. | **AO9.1** Development does not store fill, spoil or any other material in, or adjacent to, a busway corridor. |  |
| **PO10** Filling and excavation does not cause wind-blown dust nuisance in a busway corridor. | **AO10.1** Compaction of fill is carried out in accordance with the requirements of AS1289.0 2000 – Methods of testing soils for engineering purposes.  AND |  |
| **AO10.2** Dust suppression measures are used during filling and excavation activities such as wind breaks or barriers and dampening of ground surfaces. |  |
| Stormwater and drainage | | |
| **PO11** Development does not result in an actionable nuisance or worsening of stormwater, flooding or drainage impacts in a busway corridor.  Note: Section 3.3 of the Interim Guide to Development in a Transport Environment: Busway, Department of Transport and Main Roads, 2017, provides further guidance on how to comply with this performance outcome. | No acceptable outcome is prescribed. |  |
| **PO12** Run-off from the development site during construction of development does not cause siltation of stormwater infrastructure affecting a busway.  Note: Section 3.3 of the Interim Guide to Development in a Transport Environment: Busway, Department of Transport and Main Roads, 2017, provides further guidance on how to comply with this performance outcome. | **AO12.1** Run-off from the development site during construction of development is not discharged to stormwater infrastructure for a busway. |  |
| Access | | |
| **PO13** Development prevents unauthorised access to a busway corridor.  Note: Section 3.4 of the Interim Guide to Development in a Transport Environment: Busway, Department of Transport and Main Roads, 2017, provides further guidance on how to comply with this performance outcome. | **AO13.1** Where development is abutting a busway corridor, a fence is provided along the property boundary in accordance with clause 4.1.6 of the Guide to Road Design Part 6B, Austroads 2015 and Part 6B of the Road Planning and Design Manual, 2nd edition, Department of Transport and Main Roads, 2016. |  |
| **PO14** Vehicular access for a development does not create a safety hazard or result in worsening of operating conditions on busways.  Note: Section 3.4 of the Interim Guide to Development in a Transport Environment: Busway, Department of Transport and Main Roads, 2017, provides further guidance on how to comply with this performance outcome. | No acceptable outcome is prescribed. |  |
| **PO15** Development does not damage or interfere with public passenger transport infrastructure, public passenger services or pedestrian and cycle access to public passenger transport infrastructure and public passenger services.  Note: Section 3.5 of the Interim Guide to Development in a Transport Environment: Busway, Department of Transport and Main Roads, 2017, provides further guidance on how to comply with this performance outcome. | **AO15.1** Vehicular access and associated road access works are not located within 5 metres of public passenger transport infrastructure.  AND |  |
| **AO15.2** Development does not necessitate the relocation of existing public passenger transport infrastructure.  AND |  |
| **AO15.3** On-site vehicle circulation is designed to give priority to entering vehicles at all times so vehicles using a vehicular access do not obstruct publicpassenger transport infrastructure and public passenger services or obstruct pedestrian or cycle access to public passenger transport infrastructure and public passenger services.  AND |  |
| **AO15.4** The normal operation of public passenger transport infrastructure or public passenger services is not interrupted during construction of the development. |  |
| Planned upgrades | | |
| **PO16** Development does not impede delivery of planned upgrades of busway transport infrastructure.  Note: Section 3.6 of the Interim Guide to Development in a Transport Environment: Busway, Department of Transport and Main Roads, 2017, provides further guidance on how to comply with this performance outcome. | **AO16.1** Development is not located on land identified by Department of Transport and Main Roads as land required for the planned upgrade of busway transport infrastructure.  Note: Land required for the planned upgrade of busway transport infrastructure is identified in the [DA mapping system](http://dams.dsdip.esriaustraliaonline.com.au/damappingsystem/).  OR |  |
| **AO16.2** Development is sited and designed so that permanent buildings, structures, infrastructure, services or utilities are not located on land identified by the Department of Transport and Main Roads as land required for the planned upgrade of busway transport infrastructure.  OR all of the following acceptable outcomes apply: |  |
| **AO16.3** Structures and infrastructure located on land identified by the Department of Transport and Main Roads as land required for the planned upgrade of a busway transport infrastructure are able to be readily relocated or removed without materially affecting the viability or functionality of the development.  AND |  |
| **AO16.4** Development does not involve filling and excavation of, or material changes to, land required for a planned upgrade to busway transport infrastructure.  AND |  |
| **AO16.5** Land is able to be reinstated to the pre-development condition at the completion of the use. |  |

## Table 3.2.2: Environmental emissions

| **Performance outcomes** | **Acceptable outcomes** | **Response** |
| --- | --- | --- |
| Noise | | |
| Accommodation activities | | |
| **PO17** Development involving:   1. an accommodation activity; or 2. land for a future accommodation activity   minimises noise intrusion from a busway in habitable rooms. | **AO17.1** A noise barrier or earth mound is provided which is design, sited and constructed:   1. to meet the following external noise criteria at all facades of the building envelope: 2. ≤55 dB(A) Leq (1 hour) façade corrected (maximum hour between 6 am and 10 pm) 3. ≤50 dB(A) Leq (1 hour) façade corrected (maximum hour between 10 pm and 6 am) 4. ≤64 dB(A) Lmax façade corrected (between 10pm and 6am) 5. in accordance with chapter 7 – Integrated noise barrier design of the Transport Noise Management Code of Practice – Volume 1 Road Traffic Noise, Department of Transport and Main Roads, 2013.   Note: To demonstrate compliance with the acceptable outcome, it is recommended that a RPEQ certified noise assessment is provided, prepared in accordance with section 3.7 of the Interim Guide to Development in a Transport Environment: Busway, Department of Transport and Main Roads, 2017.  If the building envelope is unknown, the deemed-to-comply setback distances for buildings stipulated by the local planning instrument or relevant building regulations should be used.  In some instances, the design of noise barriers and mounds to achieve the noise criteria above the ground floor may not be reasonable or practicable. In these instances, any relaxation of the criteria is at the discretion of the Department of Transport and Main Roads.  OR all of the following acceptable outcomes apply: | Complies with PO# / AO#  *Use this column to indicate whether compliance is achieved with the relevant PO or AO (or if they do not apply), and explain why* |
| **AO17.2** Buildings which include a habitable room are setback the maximum distance possible from a busway.  AND |  |
| **AO17.3** Buildings are designed and oriented so that habitable rooms are located furthest from a busway.  AND |  |
| **AO17.4** Buildings are designed and constructed using materials which ensure that habitable rooms meet the following internal noise criteria:   1. ≤35 dB(A) Leq (1 hour) (maximum hour over 24 hours).   Note: Noise levels from a busway are to be measured in accordance with AS1055.1–1997 Acoustics – Description and measurement of environmental noise.  To demonstrate compliance with the acceptable outcome, it is recommended that a RPEQ certified noise assessment report is provided, prepared in accordance with section 3.7 of the Interim Guide to Development in a Transport Environment: Busway, Department of Transport and Main Roads, 2017. |  |
| **PO18** Development involving an accommodation activity minimises noise intrusion from a busway in outdoor spaces for passive recreation. | **AO18.1** A noise barrier or earth mound is provided which is design, sited and constructed:   1. to meet the following external noise criteria in outdoor spaces for passive recreation: 2. ≤52 dB(A) Leq (1 hour) free field (maximum hour between 6 am and 10 pm) 3. ≤66 dB(A) Lmax free field 4. in accordance with chapter 7 – Integrated noise barrier design of the Transport Noise Management Code of Practice – Volume 1 Road Traffic Noise, Department of Transport and Main Roads, 2013.   Note: To demonstrate compliance with the acceptable outcome, it is recommended that a RPEQ certified noise assessment is provided, prepared in accordance with section 3.7 of the Interim Guide to Development in a Transport Environment: Busway, Department of Transport and Main Roads, 2017.  OR |  |
| **AO18.2** Each dwelling has access to an outdoor space for passive recreation which is shielded from a busway by a building, a solid gap-free fence, or other solid gap-free structure.  AND |  |
| **AO18.3** Each dwelling with a balcony directly exposed to noise from a busway has a continuous solid gap-free balustrade (other than gaps required for drainage purposes to comply with the Building Code of Australia). |  |
| Childcare centres and educational establishments | | |
| **PO19** Development involving a:   1. childcare centre; or 2. educational establishment   minimises noise intrusion from a busway in indoor education areas and indoor play areas. | **AO19.1** A noise barrier or earth mound is provided which is designed, sited and constructed:   1. to meet the following external noise criteria at the building envelope: 2. ≤55 dB(A) Leq (1 hour) façade corrected (maximum hour during normal opening hours) 3. in accordance with chapter 7 – Integrated noise barrier design of the Transport Noise Management Code of Practice – Volume 1 Road Traffic Noise, Department of Transport and Main Roads, 2013.   Note: To demonstrate compliance with the acceptable outcome, it is recommended that a RPEQ certified noise assessment report is provided, prepared in accordance with section 3.7 of the Interim Guide to Development in a Transport Environment: Busway, Department of Transport and Main Roads, 2017  If the building envelope is unknown, the deemed-to-comply setback distances for buildings stipulated by the local planning instrument or relevant building regulations should be used.  OR all of the following acceptable outcomes apply: |  |
| **AO19.2** Buildings which include indoor education areas and indoor play areas are setback the maximum distance possible from a busway.  AND |  |
| **AO19.3** Buildings are designed and oriented so that indoor education areas and indoor play areas are located furthest from the busway.  AND |  |
| **AO19.4** Buildings are designed and constructed using materials which ensure indoor education areas and indoor play areas meet the following internal noise criteria:   1. ≤35 dB(A) Leq (1 hour) (maximum hour during opening hours).   Note: Noise levels from a busway are to be measured in accordance with AS1055.1–1997 Acoustics – Description and measurement of environmental noise.  To demonstrate compliance with the acceptable outcome, it is recommended that a RPEQ certified noise assessment report is provided, prepared in accordance with section 3.7 of the Interim Guide to Development in a Transport Environment: Busway, Department of Transport and Main Roads, 2017. |  |
| **PO20** Development involving a:   1. childcare centre; or 2. educational establishment   minimises noise intrusion from a busway in outdoor education areas and outdoor play areas. | **AO20.1** A noise barrier or earth mound is provided which is design, sited and constructed:   1. to meet the following external noise criteria in outdoor education areas and outdoor play areas: 2. ≤52 dB(A) Leq (1 hour) free field (maximum hour during normal opening hours) 3. ≤66 dB(A) Lmax free field (during normal opening hours) 4. in accordance with chapter 7 – Integrated noise barrier design of the Transport Noise Management Code of Practice – Volume 1 Road Traffic Noise, Department of Transport and Main Roads, 2013.   Note: To demonstrate compliance with the acceptable outcome, it is recommended that a RPEQ certified noise assessment is provided, prepared in accordance with section 3.7 of the Interim Guide to Development in a Transport Environment: Busway, Department of Transport and Main Roads, 2017.  OR |  |
| **AO20.2** Each outdoor education area and outdoor play area is shielded from noise generated from a busway by a building, a solid gap-free fence, or other solid gap-free structure. |  |
| Hospitals | | |
| **PO21** Development involving a hospital minimises noise intrusion from a busway in patient care areas. | **AO21.1** Hospitals are designed and constructed using materials which ensure patient care areas meet the following internal noise criteria:   1. ≤35 dB(A) Leq (1 hour) (maximum hour during opening hours).   Note: Noise levels from a busway are to be measured in accordance with AS1055.1–1997 Acoustics – Description and measurement of environmental noise.  To demonstrate compliance with the acceptable outcome, it is recommended that a RPEQ certified noise assessment report is provided, prepared in accordance with section 3.7 of the Interim Guide to Development in a Transport Environment: Busway, Department of Transport and Main Roads, 2017. |  |
| Vibration | | |
| Hospitals | | |
| PO22 Development involving a hospital minimises vibration impacts from a busway in patient care areas. | AO22.1 Hospitals are designed and constructed to ensure vibration in the treatment area of a patient care area does not exceed a vibration dose value of 0.1m/s1.75.  AND |  |
| AO22.2 Hospitals are designed and constructed to ensure vibration in the ward area of a patient care area does not exceed a vibration dose value of 0.4m/s1.75.  Note: To demonstrate compliance with the acceptable outcome, it is recommended that a RPEQ certified vibration assessment report is provided. |  |
| Air and light | | |
| **PO23** Development involving an accommodation activity minimises air quality impacts from a busway in outdoor spaces for passive recreation. | **AO23.1** Each dwelling has access to an outdoor space for passive recreation which is shielded from a busway by a building, a solid gap-free fence, or other solid gap-free structure. |  |
| **PO24** Development involving a:   1. childcare centre; or 2. educational establishment   minimises air quality impacts from a busway in outdoor education areas and outdoor play areas. | **AO24.1** Each outdoor education area and outdoor play area is shielded from a busway by a building, solid gap-free fence, or other solid gap-free structure. |  |
| **PO25** Development involving an accommodation activity or hospital minimises lighting impacts from a busway. | **AO25.1** Buildings for an accommodation activity or hospital are designed to minimise the number of windows or transparent/translucent panels facing a busway.  OR |  |
| **AO25.2** Windows facing a busway include treatments to block light from a busway. |  |

## Table 3.2.3: Development in a future busway environment

| **Performance outcomes** | **Acceptable outcomes** | **Response** |
| --- | --- | --- |
| **PO26** Development does not impede delivery of busway transport infrastructure in a future busway corridor.  Note: Section 3.6 of the Interim Guide to Development in a Transport Environment: Busway, Department of Transport and Main Roads, 2017, provides further guidance on how to comply with this performance outcome. | **AO26.1** Development is not located in a future busway corridor.  OR | Complies with PO# / AO#  *Use this column to indicate whether compliance is achieved with the relevant PO or AO (or if they do not apply), and explain why* |
| **AO26.2** Development is sited and designed so that permanent buildings, structures, infrastructure, services or utilities are not located in a future busway corridor.  OR all of the following acceptable outcomes apply: |  |
| **AO26.3** Structures and infrastructure located in a future busway corridor are able to be readily relocated or removed without materially affecting the viability or functionality of the development.  AND |  |
| **AO26.4** Development does not involve filling and excavation of, or material changes to, a future busway corridor.  AND |  |
| **AO26.5** Land is able to be reinstated to the pre-development condition at the completion of the use. |  |
| **PO27** Filling, excavation, building foundations and retaining structures do not undermine or cause subsidence of a future busway corridor.  Note: To demonstrate compliance with this performance outcome, it is recommended that an RPEQ certified geotechnical assessment is provided.  Section 3.2 of the Interim Guide to Development in a Transport Environment: Busway, Department of Transport and Main Roads, 2017, provides further guidance on how to comply with this performance outcome. | No acceptable outcome is prescribed. |  |
| **PO28** Fill material from a development site does not result in contamination of land for a future busway corridor.  Note: Section 3.2 of the Interim Guide to Development in a Transport Environment: Busway, Department of Transport and Main Roads, 2017, provides further guidance on how to comply with this performance outcome. | **AO28.1** Fill material is free of contaminants including acid sulfate content.  Note: Soil and rocks should be tested in accordance with AS1289 – Methods of testing soils for engineering purposes and AS4133 2005 – Methods of testing rocks for engineering purposes.  AND |  |
| **AO28.2** Compaction of fill is carried out in accordance with the requirements of AS 1289.0 2000 – Methods of testing soils for engineering purposes. |
| **PO29** Development does not result in an **a**ctionable nuisance, or worsening of, stormwater, flooding or drainage impacts in a future busway corridor.  Note: Section 3.3 of the Interim Guide to Development in a Transport Environment: Busway, Department of Transport and Main Roads, 2017, provides further guidance on how to comply with this performance outcome. | No acceptable outcome is prescribed. |  |