**State code 3: Development in a busway environment**

[Interim Guide to Development in a Transport Environment: Busway](https://www.tmr.qld.gov.au/business-industry/Technical-standards-publications/Guide-to-development-in-a-transport-environment-Busway) provides direction on how to address this code.

**Table 3.1 Development in a busway environment**

| **Performance outcomes** | **Acceptable outcomes** | **Response** |
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| **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**. | **AO1.1** Buildings, **structures**, infrastructure, services and utilities are not located in a **busway corridor**.  AND  **AO1.2** Buildings, **structures**, infrastructure, services and utilities can be maintained without requiring access to a **busway corridor**. | 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 |
| **PO2** Development does not add or remove **loading** that will cause damage to **bus transport infrastructure** or a **busway corridor**. | 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**. | **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**. | 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**. | No acceptable outcome is prescribed. |  |
| **PO6** Filling, excavation, building foundations and **retaining structures** do not undermine or cause subsidence of a **busway corridor**. | No acceptable outcome is prescribed. |  |
| **PO7** Filling, excavation, building foundations and **retaining structures** do not cause ground water disturbance in a **busway corridor**. | 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**. | No acceptable outcome is prescribed. |  |
| **PO9** Filling and excavation material does not cause an obstruction or nuisance in a **busway corridor**. | **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**. | 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**. | **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**. | **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**. | 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**. | **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 **public passenger 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**. | **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**.  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 Environmental emissions**

Statutory note: Where a **busway** is co-located in the same transport corridor as a state-controlled road, development should instead comply with Environmental emissions of State code 1: Development in a state-controlled road environment.

Where a **busway** is co-located in the same transport corridor as a railway, development should instead comply with Environmental emissions of State code 2: Development in a railway environment.

| **Performance outcomes** | **Acceptable outcomes** | **Response** |
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| **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) facade corrected (maximum hour between 6 am and 10 pm); 3. ≤50 dB(A) Leq (1 hour) facade corrected (maximum hour between 10 pm and 6 am); 4. ≤64 dB(A) Lmax facade 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.   OR all of the following acceptable outcomes apply:  **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). | 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 |
| **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 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.   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:  to meet the following external noise criteria at the building envelope:   1. ≤55 dB(A) Leq (1 hour) facade corrected (maximum hour during normal opening hours); 2. 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.   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). |  |
| **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.   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). |  |
| **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. |  |
| **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 3.3 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**. | **AO26.1** Development is not located in a **future busway corridor**.  OR  **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. | 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 |
| **PO27** Filling, excavation, building foundations and **retaining structures** do not undermine or cause subsidence of a **future busway corridor**. | No acceptable outcome is prescribed. |  |
| **PO28** Fill material from a development site does not result in contamination of land for a **future busway corridor.** | **AO28.1** Fill material is free of contaminants including acid sulfate content.  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 **actionable nuisance**, or worsening of, stormwater, flooding or drainage impacts in a **future busway corridor**. | No acceptable outcome is prescribed. |  |