

# State code 2: Development in a railway environment

## Purpose statement

The purpose of the code is to protect **railway corridors, future railway corridors, rail transport infrastructure and other rail infrastructure** from adverse impacts of development. The purpose of this code is also to protect the safety of people using, and living and working near, **railways**.

Specifically, this code seeks to ensure development:

1. does not result in an increase in the likelihood or frequency of accidents, fatalities or serious injury for users of a **railway**;
2. does not adversely impact the **structural integrity** or physical condition of **railways, rail transport infrastructure or other rail infrastructure** within a **railway corridor**;
3. does not compromise the operating performance of **railway corridors**;
4. does not adversely impact the state's ability to plan, construct, maintain, upgrade or operate **railway corridors, future railway corridors** and associated **rail transport infrastructure or other rail infrastructure**;
5. does not significantly increase the cost to the state to plan, construct, maintain, upgrade or operate **railway corridors, future railway corridors, rail transport infrastructure or other rail infrastructure**;
6. does not compromise pedestrian or cycle access to **public passenger transport infrastructure or active transport infrastructure** associated with **railways**;
7. protects the community from significant adverse impacts resulting from environmental emissions generated by a **railway**.

### Using this code

The assessment benchmarks for this code comprise:

- a purpose statement which identifies the overall intent of the code;
- performance outcomes which set benchmarks to achieve the purpose statement of the code;
- acceptable outcomes which identify one way to achieve the relevant performance outcome.

Development complies with the code where:

- it complies with the acceptable outcomes for the performance outcome; or
- it complies with all the performance outcomes, where not complying with the acceptable outcomes; or
- development does not meet relevant performance outcome(s) and SARA determines, on balance, that the development complies with the purpose statement.

This code also includes the glossary of terms for definitions relevant to this code and reference documents; including the guideline, **Guide to Development in a Transport Environment: Rail** which provides direction on how to address this code.

## Performance outcomes and acceptable outcomes

Table 2.1 Development in general

Performance outcomes	Acceptable outcomes
<b>Building, structures, infrastructure, services and utilities</b>	
<b>PO1</b> Development does not create a safety hazard within the <b>railway corridor</b> .	No acceptable outcome is prescribed.
<b>PO2</b> Development does not cause damage to the <b>railway corridor, rail transport infrastructure or other rail infrastructure</b> .	No acceptable outcome is prescribed.
<b>PO3</b> Development does not interfere with, or obstruct, the <b>rail transport infrastructure or other rail infrastructure</b> .	No acceptable outcome is prescribed.

Performance outcomes	Acceptable outcomes
<b>PO4</b> Development does not adversely impact the <b>structural integrity</b> or physical condition of the <b>railway, other rail infrastructure</b> or the <b>railway corridor</b> by adding or removing <b>loading</b> .	No acceptable outcome is prescribed.
<b>PO5</b> Development above a <b>railway</b> is designed to enable natural ventilation and smoke dispersion in the event of a fire emergency.	No acceptable outcome is prescribed.
<b>PO6</b> Development does not adversely impact the operating performance of the <b>railway corridor</b> .	No acceptable outcome is prescribed.
<b>PO7</b> Buildings and <b>structures</b> in a <b>railway corridor</b> are designed and constructed to protect persons in the event of a derailed train.	No acceptable outcome is prescribed.
<b>PO8</b> Buildings and <b>structures</b> in <b>high risk locations</b> and where also located within 10 metres of the centreline of the nearest <b>railway</b> track are design and constructed to protect persons in the event of a derailed train.	<b>AO8.1</b> Buildings and <b>structures</b> , in a <b>railway corridor</b> , including foundations, retaining and other support elements, are designed and constructed in accordance with Civil Engineering Technical Requirement CIVIL-SR-012 Collision protection of supporting elements adjacent to <b>railways</b> , Queensland Rail, 2011, AS5100 Bridge design, and AS1170 Structural design actions.
<b>PO9</b> Buildings and <b>structures</b> are designed and constructed to protect people from electrocution.	<b>AO9.1</b> The outermost projection of development is set back horizontally a minimum of 3 metres from the outermost projection of <b>overhead line equipment</b> .
<b>PO10</b> Development in the <b>railway corridor</b> is designed and constructed to prevent projectiles being thrown onto the <b>railway</b> .	No acceptable outcome is prescribed.
<b>PO11</b> Buildings, and <b>structures</b> with publicly accessible or communal areas within 20 metres from the centreline of the nearest <b>railway</b> track are designed and constructed to prevent projectiles from being thrown onto a <b>railway</b> .	<b>AO11.1</b> Publicly accessible areas located within 20 metre from the centreline of the nearest <b>railway</b> do not overlook a <b>railway</b> .  OR  <b>AO11.2</b> Buildings and <b>structures</b> are designed to ensure publicly accessible areas located within 20 metres from the centreline of the nearest <b>railway</b> track and that overlook the <b>railway</b> may include throw protection screens in accordance with the relevant provisions of the Civil Engineering Technical Requirement – CIVIL-SR005 Design of buildings over or near <b>railways</b> , Queensland Rail, 2011, and the Civil Engineering Technical Requirement – CIVIL-SR008 Protection screens, Queensland Rail.
<b>Stormwater and overland flow</b>	
<b>PO12</b> Stormwater run-off or overland flow from the development site does not create or exacerbate a safety hazard in a <b>railway corridor</b> .	No acceptable outcome is prescribed.
<b>PO13</b> Stormwater run-off or overland flow from the development site does not result in a material worsening of operating performance of the <b>railway corridor, rail transport infrastructure</b> or <b>other rail infrastructure</b> .	No acceptable outcome is prescribed.
<b>PO14</b> Stormwater run-off or overland flow from the development site does not interfere with the <b>structural integrity</b> or physical condition of the	No acceptable outcome is prescribed.

Performance outcomes	Acceptable outcomes
<b>railway corridor, rail transport infrastructure or other rail infrastructure.</b>	
<b>Flooding</b>	
<b>PO15</b> Development does not result in a material worsening of flooding impacts within a <b>railway corridor</b> .	No acceptable outcome is prescribed.
<b>Drainage Infrastructure</b>	
<b>PO16</b> Drainage infrastructure does not create a safety hazard in a <b>railway corridor</b> .	<p><b>AO16.1</b> Drainage infrastructure is wholly contained within the development site.</p> <p>AND</p> <p><b>AO16.2</b> Drainage infrastructure can be maintained without requiring access to a <b>railway corridor</b>.</p>
<b>Construction Impacts</b>	
<b>PO17</b> Construction activities do not cause ground movement or vibration impacts in a <b>railway corridor</b> .	No acceptable outcome is prescribed.
<b>Access</b>	
<b>PO18</b> Development prevents unauthorised access to the <b>railway corridor</b> .	<p><b>AO18.1</b> Development abutting the <b>railway corridor</b> incorporates fencing along the property boundary with the <b>railway corridor</b> in accordance with the <b>railway manager's</b> standards.</p> <p>AND</p> <p><b>AO18.2</b> A road barrier designed in accordance with Queensland Rail Civil Engineering Technical Requirement CIVIL-SR-007 – Design Criteria for Road Rail Barriers.</p> <p>AND</p> <p><b>AO18.3</b> Vehicle manoeuvring areas, driveways, <b>loading</b> areas and carparks abutting the <b>railway corridor</b> incorporate <b>rail interface barriers</b> along the boundary to the <b>railway corridor</b>.</p>
<b>PO19</b> Development maintains existing maintenance and authorised access to the <b>railway corridor</b> .	<b>AO19.1</b> Development does not obstruct existing authorised access points and access routes for maintenance and emergency works to the <b>railway corridor</b> at all times.
<b>PO20</b> Development does not impede the maintenance of a <b>railway bridge</b> or authorised access to a <b>railway bridge</b> .	<p><b>AO20.1</b> Buildings and other <b>structures</b> are set back horizontally a minimum of 3 metres from a <b>railway bridge</b>.</p> <p>AND</p> <p><b>AO20.2</b> Permanent <b>structures</b> are not located below or abutting a <b>railway bridge</b>.</p> <p>AND</p> <p><b>AO20.3</b> Temporary activities below or abutting a <b>railway bridge</b> do not impede access to a <b>railway corridor</b>.</p>
<b>Public passenger transport and active transport</b>	

Performance outcomes	Acceptable outcomes
<b>PO21</b> Development does not compromise the safety of <b>public passenger transport infrastructure</b> and <b>active transport infrastructure</b> .	No acceptable outcome is prescribed.
<b>PO22</b> Development maintains pedestrian and cycle access to a <b>railway</b> station or other <b>public passenger transport infrastructure</b> and <b>active transport infrastructure</b> associated with the <b>railway</b> .	No acceptable outcome is prescribed.
<b>PO23</b> Development does not adversely impact the <b>structural integrity</b> or physical condition of <b>public passenger transport infrastructure</b> and <b>active transport infrastructure</b> .	No acceptable outcome is prescribed.
<b>PO24</b> Development does not adversely impact the operating performance of <b>public passenger transport infrastructure</b> , <b>public passenger services</b> and <b>active transport infrastructure</b> .	No acceptable outcome is prescribed.
<b>Planned upgrades</b>	
<b>PO25</b> Development does not impede delivery of <b>planned upgrades</b> of <b>rail transport infrastructure</b> .	No acceptable outcome is prescribed.
<b>Network safety</b>	
<b>PO26</b> Development involving <b>dangerous goods</b> does not adversely impact on the safety or operations of the <b>railway</b> and <b>rail transport infrastructure</b> .	<b>AO26.1</b> Development does not involve handling or storage of hazardous chemicals above the threshold quantities listed in table 5.2 of the Model Planning Scheme Development Code for Hazardous Industries and Chemicals, Office of Industrial Relations, Department of Justice and Attorney-General, 2016.

**Table 2.2 Filling, excavation, building foundations and retaining structures**

Performance outcomes	Acceptable outcomes
<b>PO27</b> Development does not create a safety hazard for users of the <b>railway</b> or <b>other rail infrastructure</b> .	No acceptable outcome is prescribed.
<b>PO28</b> Development does not adversely impact on the operating performance of the <b>railway</b> or <b>other rail infrastructure</b> within the <b>railway corridor</b> .	No acceptable outcome is prescribed.
<b>PO29</b> Development does not undermine, damage, or cause subsidence of, the <b>railway corridor</b> .	No acceptable outcome is prescribed.
<b>PO30</b> Development does not adversely impact the <b>structural integrity</b> or physical condition of the <b>railway</b> , <b>other rail infrastructure</b> or the <b>railway corridor</b> by adding or removing <b>loading</b> .	No acceptable outcome is prescribed.
<b>PO31</b> Development does not cause ground water disturbance in the <b>railway corridor</b> .	No acceptable outcome is prescribed.
<b>PO32</b> Development does not adversely impact the <b>railway</b> or <b>other rail infrastructure</b> within the <b>railway corridor</b> .	No acceptable outcome is prescribed.
<b>PO33</b> Excavation, boring, piling, blasting, drilling, fill compaction or similar activities does not adversely impact the operating performance of the <b>railway</b> or <b>other rail infrastructure</b> within the <b>railway corridor</b> .	No acceptable outcome is prescribed.
<b>PO34</b> Filling and excavation material does not cause an obstruction or nuisance in the <b>railway corridor</b> .	<b>AO34.1</b> Fill, spoil or any other material is not stored in, or adjacent to, the <b>railway corridor</b> .

**Table 2.3 Railway crossings**

Performance outcomes	Acceptable outcomes
<b>PO35</b> Development does not require a new level <b>railway crossing</b> .	No acceptable outcome is prescribed.
<b>PO36</b> Development does not adversely impact on the operating performance of an existing <b>railway crossing</b> .	No acceptable outcome is prescribed.
<b>PO37</b> Development does not adversely impact on the safety of an existing <b>railway crossing</b> .	No acceptable outcome is prescribed.
<b>PO38</b> Development is designed and constructed to allow for on-site circulation to ensure vehicles do not queue in a <b>railway crossing</b> .	No acceptable outcome is prescribed.

**Table 2.4 Environmental emissions**

Statutory note: Where development is adjacent to a **railway** with 15 or fewer passing trains per day, compliance with table 2.4 is not required.

Performance outcomes	Acceptable outcomes
<b>Reconfiguring a Lot</b>	
<b>Involving the creation of 5 or fewer new residential lots adjacent to a railway or type 2 multi-modal corridor</b>	
<b>PO39</b> Development minimises free field noise intrusion from a <b>railway</b> .	<p><b>AO39.1</b> Development provides a noise barrier or earth mound which is designed, sited and constructed:</p> <ol style="list-style-type: none"> <li>1. to achieve the maximum free field acoustic levels in reference table 2 (item 2.1);</li> <li>2. in accordance with:                             <ol style="list-style-type: none"> <li>a. Civil Engineering Standard Specification QR-CTS-Part 41 – Part 41, Design and Construction of Noise Fences/Barriers, Queensland Rail, 2018;</li> <li>b. Technical Specification-MRTS15 Noise Fences, Transport and Main Roads, 2019;</li> <li>c. Technical Specification-MRTS04 General Earthworks, Transport and Main Roads, 2020.</li> </ol> </li> </ol> <p>OR</p> <p><b>AO39.2</b> Development achieves the maximum free field acoustic levels in reference table 2 (item 2.1) by <b>alternative noise attenuation measures</b> where it is not practical to provide a noise barrier or earth mound.</p> <p>OR</p> <p><b>AO39.3</b> Development provides a <b>solid gap-free fence</b> or other <b>solid gap-free structure</b> along the full extent of the boundary closest to a <b>railway</b>.</p>
<b>Involving the creation of 6 or more new residential lots adjacent to a railway or type 2 multi-modal corridor</b>	
<b>PO40</b> Reconfiguring a lot minimises free field noise intrusion from a <b>railway</b> .	<p><b>AO40.1</b> Development provides a noise barrier or earth mound which is designed, sited and constructed:</p> <ol style="list-style-type: none"> <li>1. to achieve the maximum free field acoustic levels in reference table 2 (item 2.1);</li> <li>2. in accordance with:</li> </ol>

	<ul style="list-style-type: none"> <li>a. Civil Engineering Standard Specification QR-CTS-Part 41 – Part 41, Design and Construction of Noise Fences/Barriers;</li> <li>b. Technical Specification-MRTS15 Noise Fences, Transport and Main Roads, 2019;</li> <li>c. Technical Specification-MRTS04 General Earthworks, Transport and Main Roads, 2020.</li> </ul> <p>OR</p> <p><b>AO40.2</b> Development achieves the maximum free field acoustic levels in reference table 2 (item 2.1) by <b>alternative noise attenuation measures</b> where it is not practical to provide a noise barrier or earth mound.</p>
<b>Material change of use (accommodation activity)</b>	
<b>Ground floor level requirements adjacent to a railway or type 2 multi-modal corridor</b>	
<p><b>PO41</b> Development minimises noise intrusion from a <b>railway in private open space</b> at the ground floor.</p>	<p><b>AO41.1</b> Development provides a noise barrier or earth mound which is designed, sited and constructed:</p> <ul style="list-style-type: none"> <li>1. to achieve the maximum free field acoustic levels in reference table 2 (item 2.2) for <b>private open space</b> at the ground floor level;</li> <li>2. in accordance with: <ul style="list-style-type: none"> <li>a. Civil Engineering Standard Specification QR-CTS-Part 41 – Part 41, Design and Construction of Noise Fences/Barriers, Queensland Rail, 2018;</li> <li>b. Technical Specification-MRTS15 Noise Fences, Transport and Main Roads, 2019;</li> <li>c. Technical Specification-MRTS04 General Earthworks, Transport and Main Roads, 2020.</li> </ul> </li> </ul> <p>OR</p> <p><b>AO41.2</b> Development achieves the maximum free field acoustic level in reference table 2 (item 2.2) for <b>private open space</b> at the ground floor level by <b>alternative noise attenuation measures</b> where it is not practical to provide a noise barrier or earth mound.</p>
<p><b>PO42</b> Development (excluding a <b>relevant residential building</b> or <b>relocated building</b>) minimises noise intrusion from the <b>railway in habitable rooms</b> at the facade of the ground floor level.</p>	<p><b>AO42.1</b> Development (excluding a <b>relevant residential building</b> or <b>relocated building</b>) provides a noise barrier or earth mound which is designed, sited and constructed:</p> <ul style="list-style-type: none"> <li>1. to achieve the maximum building facade acoustic level in reference table 1 (item 1.1) for <b>habitable rooms</b> at the ground floor level;</li> <li>2. in accordance with: <ul style="list-style-type: none"> <li>a. Civil Engineering Standard Specification QR-CTS-Part 41 – Part 41, Design and Construction of Noise Fences/Barriers, Queensland Rail, 2018;</li> <li>b. Technical Specification-MRTS15 Noise Fences, Transport and Main Roads, 2019;</li> </ul> </li> </ul>

	<p>c. Technical Specification-MRTS04 General Earthworks, Transport and Main Roads, 2020.</p> <p>OR</p> <p><b>AO42.2</b> Development (excluding a <b>relevant residential building</b> or <b>relocated building</b>) achieves the maximum building facade acoustic level in reference table 1 (item 1.1) for <b>habitable rooms</b> at the ground floor level by <b>alternative noise attenuation measures</b> where it is not practical to provide a noise barrier or earth mound.</p>
<p><b>PO43 Habitable rooms</b> (excluding a <b>relevant residential building</b> or <b>relocated building</b>) are designed and constructed using materials to achieve the maximum internal acoustic level in Table 3 (item 3.1).</p>	No acceptable outcome is prescribed.
<p><b>Above ground floor level requirements (accommodation activity) adjacent to a railway or type 2 multi-modal corridor</b></p>	
<p><b>PO44</b> Balconies, podiums and roof decks include:</p> <ol style="list-style-type: none"> <li>1. a continuous <b>solid gap-free structure</b> or balustrade (excluding gaps required for drainage purposes to comply with the Building Code of Australia);</li> <li>2. highly acoustically absorbent material treatment for the total area of the soffit above balconies, podiums and roof decks</li> </ol>	No acceptable outcome is prescribed.
<p><b>PO45 Habitable rooms</b> (excluding a <b>relevant residential building</b> or <b>relocated building</b>) are designed and constructed using materials to achieve the maximum internal acoustic level in reference table 3 (item 3.1).</p>	No acceptable outcome is prescribed.
<p><b>Material change of use (other uses)</b></p>	
<p><b>Ground floor level requirements (childcare centre, educational establishment, hospital) adjacent to a railway or type 2 multi-modal corridor</b></p>	
<p><b>PO46</b> Development:</p> <ol style="list-style-type: none"> <li>1. provides a noise barrier or earth mound that is designed, sited and constructed: <ol style="list-style-type: none"> <li>a. to achieve the maximum free field acoustic level in reference table 2 (item 2.3) for all <b>outdoor education areas</b> and <b>outdoor play areas</b>;</li> <li>b. in accordance with: <ol style="list-style-type: none"> <li>i. Civil Engineering Standard Specification QR-CTS-Part 41 – Part 41, Design and Construction of Noise Fences/Barriers, Queensland Rail, 2018;</li> <li>ii. Technical Specification-MRTS15 Noise Fences, Transport and Main Roads, 2019;</li> <li>iii. Technical Specification-MRTS04 General Earthworks, Transport and Main Roads, 2020; or</li> </ol> </li> </ol> </li> <li>2. achieves the maximum free field acoustic level in reference table (item 2.3) for all <b>outdoor</b></li> </ol>	No acceptable outcome is prescribed.

<p><b>education areas and outdoor play areas by alternative noise attenuation measures</b> where it is not practical to provide a noise barrier or earth mound.</p>	
<p><b>PO47</b> Development involving a <b>childcare centre</b> or <b>educational establishment</b>:</p> <ol style="list-style-type: none"> <li>1. provides a noise barrier or earth mound that is designed, sited and constructed: <ol style="list-style-type: none"> <li>a. to achieve the maximum building facade acoustic level in reference table 1 (item 1.2);</li> <li>b. in accordance with: <ol style="list-style-type: none"> <li>i. Civil Engineering Standard Specification QR-CTS-Part 41 – Part 41, Design and Construction of Noise Fences/Barriers, Queensland Rail, 2018; or</li> </ol> </li> </ol> </li> <li>2. achieves the maximum building facade acoustic level in reference table 1 (item 1.2) by <b>alternative noise attenuation measures</b> where it is not practical to provide a noise barrier or earth mound.</li> </ol>	<p>No acceptable outcome is prescribed.</p>
<p><b>PO48</b> Development involving:</p> <ol style="list-style-type: none"> <li>1. <b>indoor education areas and indoor play areas</b>; or</li> <li>2. sleeping rooms in a <b>childcare centre</b>; or</li> <li>3. <b>patient care areas</b> in a <b>hospital</b>;</li> </ol> <p>achieves the maximum internal acoustic level in reference table 3 (items 3.2, 3.3 and 3.4).</p>	<p>No acceptable outcome is prescribed.</p>
<p><b>Above ground floor level requirements (childcare centre, educational establishment, hospital) adjacent to a railway or type 2 multi-modal corridor</b></p>	
<p><b>PO49</b> Development involving a <b>childcare centre</b>; or <b>educational establishment</b> which have balconies, podiums or elevated <b>outdoor play areas</b> predicted to exceed the maximum free field acoustic level in reference table 2 (item 2.3) due to noise from the <b>railway</b> are provided with:</p> <ol style="list-style-type: none"> <li>1. a continuous <b>solid gap-free structure</b> or balustrade (excluding gaps required for drainage purposes to comply with the Building Code of Australia); and</li> <li>2. highly acoustically absorbent material treatment for the total area of the soffit above balconies, podiums and elevated <b>outdoor play areas</b>.</li> </ol>	<p>No acceptable outcome is prescribed.</p>
<p><b>PO50</b> Development including:</p> <ol style="list-style-type: none"> <li>1. <b>indoor education areas and indoor play areas</b> in a <b>childcare centre</b> or <b>educational establishment</b>; or</li> <li>2. sleeping rooms in a <b>childcare centre</b>; or</li> <li>3. <b>patient care areas</b> in a <b>hospital</b> located above ground level, is designed and constructed to achieve the maximum internal acoustic level in reference table 3 (items 3.2-3.4).</li> </ol>	<p>No acceptable outcome is prescribed.</p>
<p><b>Air, light and vibration</b></p>	



<p><b>PO51 Private open space, outdoor education areas and outdoor play areas</b> are protected from air quality impacts from a <b>railway</b>.</p>	<p><b>AO51.1</b> Each dwelling or unit has access to a <b>private open space</b> which is shielded from a <b>railway</b> by a building, noise barrier, <b>solid gap-free fence</b>, or other <b>solid gap-free structure</b>.</p> <p>OR</p> <p><b>AO51.2</b> Each <b>outdoor education area</b> and <b>outdoor play area</b> is shielded from a <b>railway</b> by a building, noise barrier, <b>solid gap-free fence</b>, or other <b>solid gap-free structure</b>.</p>
<p><b>PO52 Patient care areas</b> within <b>hospitals</b> are protected from vibration impacts from a <b>railway</b>.</p>	<p><b>AO52.1 Hospitals</b> are designed and constructed to ensure vibration in the patient treatment area does not exceed a vibration dose value of 0.1m/s<sup>1.75</sup>.</p> <p>AND</p> <p><b>AO52.2 Hospitals</b> are designed and constructed to ensure vibration in the ward of a <b>patient care area</b> does not exceed a vibration dose value of 0.4m/s<sup>1.75</sup>.</p>
<p><b>PO53</b> Development is designed and sited to ensure light from infrastructure within, and use of, a <b>railway</b> does not:</p> <ol style="list-style-type: none"> <li>1. intrude into buildings during night hours (10pm to 6am); and</li> <li>2. create unreasonable disturbance during evening hours (6pm to 10pm).</li> </ol>	<p>No acceptable outcomes are prescribed.</p>

**Table 2.5 Development in a future railway corridor**

Performance outcomes	Acceptable outcomes
<p><b>PO54</b> Development does not impede the planning, design and delivery of <b>rail transport infrastructure</b> in a <b>future railway corridor</b>.</p>	<p><b>AO54.1</b> Development is not located in a <b>future railway corridor</b>.</p> <p>OR both of the following acceptable outcomes apply:</p> <p><b>AO54.2</b> The intensification of lots does not occur within a <b>future railway corridor</b>.</p> <p>AND</p> <p><b>AO54.3</b> Development does not result in the landlocking of parcels once a <b>future railway corridor</b> is delivered.</p>
<p><b>PO55</b> Development, including filling, excavation, building foundations and <b>retaining structures</b> do not undermine or cause subsidence of a <b>future railway corridor</b>.</p>	<p>No acceptable outcome is prescribed.</p>
<p><b>PO56</b> Development does not result in a material worsening of stormwater, flooding, overland flow or drainage impacts in a <b>future railway corridor</b>.</p>	<p>No acceptable outcome is prescribed.</p>

# Reference tables

**Table 1: Maximum building facade acoustic levels**

Applicable use	Acoustic levels
<b>1.1: Accommodation activity</b>	a. $\leq 65$ dB(A) Leq (24 hour) facade corrected  AND  b. $\leq 87$ dB(A) (single event maximum sound pressure level) facade corrected
<b>1.2: Childcare centre or educational establishment</b>	a. $\leq 65$ dB(A) Leq (1 hour) facade corrected (maximum hour during opening hours)  AND  b. $\leq 87$ dB(A) (single event maximum sound pressure level) facade corrected

**Table 2: Maximum free field acoustic levels**

Applicable use	Acoustic levels
<b>2.1: Private open space for residential lots</b>	a. $\leq 62$ dB(A) Leq (24 hour) free field
<b>2.2: Private open space for an accommodation activity</b> (including allotments created for a <b>future accommodation activity</b> )	AND  b. $\leq 84$ dB(A) (single event maximum sound pressure level) free field
<b>2.3: Outdoor education areas and outdoor play areas</b> in a <b>childcare centre</b> or <b>educational establishment</b>	a. $\leq 62$ dB(A) Leq (12 hour) free field (between 6am and 6pm)  AND  b. $\leq 84$ dB(A) (single event maximum sound pressure level) free field

**Table 3: Maximum internal acoustic levels**

Applicable use	Acoustic levels
<b>3.1: Habitable rooms in an accommodation activity</b> (excluding uses addressed in QDC MP4.4)	$\leq 45$ dB(A) single event maximum sound pressure level
<b>3.2: Indoor education areas and indoor play areas</b> in a <b>childcare centre</b> or <b>education establishment</b>	$\leq 50$ dB(A) single event maximum sound pressure level
<b>3.3: Sleeping rooms in a childcare centre</b>	$\leq 45$ dB(A) single event maximum sound pressure level
<b>3.4: Patient care areas in a hospital</b>	

# Reference documents

Department of Transport and Main Roads, Guide to Development in a Transport Environment: Rail

Department of Transport and Main Roads 2016, Road Planning and Design Manual 2nd edition: Volume 3

Department of Transport and Main Roads 2016, Transport Noise Management Code of Practice Volume 2: Construction noise and vibration

Department of Transport and Main Roads 2019, Technical Specification MRTS15 Noise Fences

Department of Transport and Main Roads 2020, Technical Specification MRTS04 General Earthworks

Institute of Public Works Engineering Australasia (Queensland Division) 2016, Queensland Urban Drainage Manual, Fourth edition.

Standards Australia 2000, AS1289.0-2000 – Methods of testing soils for engineering purposes

Standards Australia 2010, AS2436-2010 – Guide to noise and vibration control on construction, demolition and maintenance sites

Standards Australia 2005, AS4133.0-2005 – Methods of testing rocks for engineering purposes

Department of Infrastructure, Local Government and Planning 2016, State Planning Policy – state interest guideline: Emissions and hazardous activities

Department of Justice and Attorney-General (Office of Industrial Relations) 2016, Model Planning Scheme Development Code for Hazardous Industries and Chemicals

International Erosion Control Association Australasia (IECA), Best Practice Erosion and Sediment Control document 2008

## Glossary of terms

**Accommodation activity** means any of the following:

1. caretaker's accommodation;
2. community residence;
3. dual occupancy;
4. dwelling house;
5. dwelling unit;
6. multiple dwelling;
7. relocatable home park;
8. residential care facility;
9. resort complex;
10. retirement facility;
11. rooming accommodation;
12. short-term accommodation;
13. tourist park;
14. a development with a combination of uses 1 to 13.

**Active transport infrastructure** means infrastructure for use in connection with active transport, including, for example, a path or walkway for use by pedestrians; a path, lane or other infrastructure for use by cyclists; or a device or facility designed and constructed for parking bicycles.

**Alternative noise attenuation measures** means a design outcome that:

1. meets the relevant acoustic requirements within reference tables 1, 2 and 3 as demonstrated by a Noise Assessment Report, prepared by an appropriately qualified acoustic consultant and certified by a Registered Professional Engineer of Queensland (RPEQ);
2. is in accordance with the applicable structural, engineering and design requirements.

**Childcare centre** see schedule 24 of the Planning Regulation 2017.

Note: **Childcare centre** means the use of premises for the care, education and minding, but not residence, of children.

**DA mapping system** means the mapping system containing the Geographic Information System mapping layers kept, prepared or sourced by the state that relate to development assessment and matters of interest to the state in assessing development applications.

Note: The **DA mapping system** is available on the department's website.

**Dangerous goods** see schedule 1 of the *Work Health and Safety Act 2011*.

Note: **Dangerous goods** means:

1. asbestos; or
2. anything defined under the ADG Code as:
  - a. **dangerous goods**; or
  - b. goods too dangerous to be transported.

**Educational establishment** see schedule 24 of the Planning Regulation 2017.

Note: **Educational establishment** means the use of premises for:

1. training and instruction to impart knowledge and develop skills; or
2. student accommodation, before or after school care, or vacation care, if the use is ancillary to the use in paragraph 1.

**Future railway corridor** see schedule 24 of the Planning Regulation 2017.

Note: **Future railway corridor** means:

1. land identified in a guideline made under the *Transport Planning Act*, section 8E as a future transport corridor for:
  - a. **rail transport infrastructure**; or
  - b. **other rail infrastructure**; or
  - c. **railway works**; or
2. **future railway land**.

See the **DA mapping system**.

**Future railway land** see section 242 of the *Transport Infrastructure Act 1994*.

Note: Land becomes **future railway land** when the chief executive [TIA], by written notice to the relevant local government and in the gazette, indicates that the land is intended to be used for a **railway**. **Future railway land** ceases to be **future railway land** when it is subleased to a **railway manager** under section 240(4) of the *Transport Infrastructure Act 1994*. If the chief executive [TIA] decides that **future railway land** is no longer to be used for the **railway**, the chief executive [TIA] must give written notice of that fact to the relevant local government and in the gazette.

**Habitable room** see the Building Code of Australia.

Note: **Habitable room** means a room used for normal domestic activities, and includes a bedroom, living room, lounge room, music room, television room, kitchen, dining room, sewing room, study, playroom, family room, home theatre and sunroom but excludes a bathroom, laundry, water closet, pantry, walk-in wardrobe, corridor, hallway, lobby, photographic darkroom, clothes-drying room, and other spaces of a specialised nature occupied neither frequently nor for extended periods.

**High risk location** means properties adjacent to the **railway corridor** where the risk of train derailment warrants a risk assessment and consideration of possible structural responses incorporated into adjacent development.

Note: See the **DA mapping system**.

**Hospital** see schedule 24 of the Planning Regulation 2017.

Note: **Hospital** means the use of premises for:

1. the medical or surgical care or treatment of patients, whether or not the care or treatment requires overnight accommodation; or
2. providing accommodation for patients; or
3. providing accommodation for employees, or any other use, if the use is ancillary to the use in paragraphs 1 or 2.

**Indoor education area** means an enclosed area within a **childcare centre** or **educational establishment** intended for use for the training or teaching of people including a classroom, lecture hall/theatre and library.

**Indoor play area** means an enclosed area within a **childcare centre** or **educational establishment** intended for use for children's play. This term excludes functional areas such as bathrooms, food preparation areas, washing facilities and other spaces of a specialised nature.

**Loading** means pressure or force exerted on land or infrastructure.

**Other rail infrastructure** see schedule 6 of the *Transport Infrastructure Act 1994*.

Note: **Other rail infrastructure** means:

1. freight centres or depots;
2. maintenance depots;
3. office buildings or housing;
4. rolling stock or other vehicles that operate on a **railway**;

5. workshops;
6. any **railway** track, works or other thing that is part of anything mentioned in paragraphs 1 to 5.

**Outdoor education area** means outdoor areas intended for use for the training or teaching of persons. This term does not include playgrounds or outdoor sport and recreational areas.

**Outdoor play area** see the Queensland Development Code.

Note: **Outdoor play area** means an unenclosed area located outside the external walls of the building. This term only includes playgrounds/play areas in a **childcare centre** or **educational establishment**.

**Overhead line equipment** means overhead lines, cabling and associated **structures** used to provide power to electric trains.

**Patient care area** see the Building Code of Australia.

Note: **Patient care area** means a part of a health-care building normally used for the treatment, care, accommodation, recreation, dining and holding of patients including a ward area and treatment area. A ward area means that part of a **patient care area** for resident patients and may contain areas for accommodation, sleeping, associated living and nursing facilities. A treatment area means an area within a **patient care area** such as an operating theatre and rooms used for recovery, minor procedures, resuscitation, intensive care and coronary care from which a patient may not be readily moved.

**Planned upgrade** means an extension, upgrade, or duplication of state transport infrastructure or transport networks for which affected land has been identified:

1. in a publicly available government document; or
2. in written advice to affected land owners.

Note: Government documents are Commonwealth, state or local government documents that include a statement of intent for, or a commitment to, a planning outcome or infrastructure provision. See the **DA mapping system**.

**Private open space** means an outdoor space for the exclusive use of occupants of a dwelling.

**Public passenger service** see the *Transport Operations (Passenger Transport) Act 1994*.

Note: **Public passenger service** means a service for the carriage of passengers if:

1. the service is provided for fare or other consideration; or
2. the service is provided in the course of a trade or business (but not if it is provided by an employer solely for employees); or
3. the service is a courtesy or community transport service; and
4. includes a driver service and a service for the administration of taxi services, but does not include a service excluded from the *Transport Operations (Passenger Transport) Act 1994* by a regulation.

**Public passenger transport infrastructure** see the *Transport Planning and Coordination Act 1994*.

Note: **Public passenger transport infrastructure** means infrastructure for, or associated with, the provision of public passenger transport, including, but not limited to:

1. a transit terminal for **public passenger services** (for example, an airport terminal, a coach terminal, a cruise ship terminal), or
2. a ferry terminal, jetty, pontoon or landing for ferry services; or
3. a bus stop, bus shelter, bus station or bus lay-by; or
4. a busway station; or
5. a light rail station; or
6. a taxi rank, limousine rank or limousine standing area; or
7. a **railway** station; or
8. vehicle parking and set-down facilities; or
9. pedestrian and bicycle paths and bicycle facilities; or
10. a road on which a public passenger transport service operates.

**Rail transport infrastructure** see schedule 6 of the *Transport Infrastructure Act 1994*.

Note: **Rail transport infrastructure** means facilities necessary for operating a **railway**, including:

1. **railway** track and works built for the **railway**, including, for example:
  - a. cuttings;
  - b. drainage works;
  - c. excavations;
  - d. land fill;
  - e. track support earthworks; and
2. any of the following things that are associated with the **railway's** operation:
  - a. bridges;
  - b. communication systems;
  - c. machinery and other equipment;
  - d. marshalling yards;
  - e. noticeboards, notice markers and signs;
  - f. overhead electrical power supply systems;
  - g. over-track **structures**;

- h. platforms;
  - i. power and communication cables;
  - j. service roads;
  - k. signalling facilities and equipment;
  - l. stations;
  - m. survey stations, pegs and marks;
  - n. train operation control facilities;
  - o. tunnels;
  - p. under-track **structures**; and
3. vehicle parking and set down facilities for intending passengers for a **railway** that are controlled or owned by a **railway manager** or the chief executive [TIA]; and
  4. pedestrian facilities, including footpath paving, for the **railway** that are controlled or owned by a **railway manager** or the chief executive [TIA];
- but does not include **other rail infrastructure**.

**Railway** see schedule 6 of the *Transport Infrastructure Act 1994*.

Note: **Railway** means a guided system, or proposed guided system, designed for the movement of rolling stock that is capable of transporting passengers or freight, or both, on a **railway** track and:

1. includes:
  - a. **rail transport infrastructure**;
  - b. a **railway** being or proposed to be built on **future railway land** ;
2. but does not include:
  - a. rolling stock;
  - b. a **railway** mentioned in section 107(2) of the *Transport Infrastructure Act 1994*.

**Railway bridge** means a **structure** which crosses a watercourse, land, road or other obstacle, on which **rail transport infrastructure** or **other rail infrastructure** is located.

**Railway corridor** see schedule 24 of the Planning Regulation 2017.

Note: **Railway corridor** means:

1. land on which **rail transport infrastructure** or **other rail infrastructure** is situated; or
  2. land on which **railway works** are carried out if the works relate to **rail transport infrastructure** or **other rail infrastructure**; or
  3. land on which services for the maintenance or operation of **rail transport infrastructure** or **other rail infrastructure** are situated.
- See the **DA mapping system**.

**Railway crossing** see schedule 6 of the *Transport Infrastructure Act 1994*.

Note: **Railway crossing** means a level crossing, bridge or another **structure** used to cross over or under a **railway**.

**Railway manager** see schedule 6 of the *Transport Infrastructure Act 1994*.

Note: **Railway manager** means:

1. for a **railway** – the person who is an accredited rail infrastructure manager in relation to **railway** operations relating to the **railway**; or
2. for **rail corridor** land – the person who is an accredited rail infrastructure manager in relation to **railway** operations relating to the **railway** or proposed **railway** on or proposed to be on the **rail corridor** land.

**Railway works** see schedule 6 of the *Transport Infrastructure Act 1994*.

Note: **Railway works** means:

1. works for constructing, maintaining, altering or operating a **railway** or rolling stock; or
2. works for establishing, constructing or maintaining transport infrastructure, other than **rail transport infrastructure**, that are:
  - a. directly related to paragraph 1; and
  - b. necessary for the safety, efficiency and operational integrity of transport infrastructure; or
3. other works declared under a regulation to be **railway works**.

**Relevant residential building** see section 6 of the Queensland Development Code Mandatory Part 4.4: Buildings in a Transport Noise Corridor.

Note: A building is a **relevant residential building** if:

1. a building development application for the construction of the building is made after 31 August 2010
2. the building:
  - a. is a class 1, 2, 3 or building;
  - b. is located in a **transport noise corridor**;
  - c. is not a **relocated building**;
3. the building development approval for the construction of the building was not given under the building assessment provisions in force immediately before 1 September 2010, under section 37 of the *Building Act 1975*.

**Relocated building** see section 7 of Queensland Development Code Mandatory Part 4.4: Buildings in a Transport Noise Corridor.

Note: A building is a **relocated building** if the building:

1. is a class 1, 2, 3 or 4 building;
2. was constructed on an allotment (the first allotment) where it was used as a residence;

3. is relocated from:
  - a. the first allotment to another allotment; or
  - b. a site on the first allotment to another site on the first allotment.

**Retaining structures** means **structures** and systems such as walls, batters, anchors, bolts, soil nails, shoring, piles, piers, beams and similar **structures** used to retain fill or excavation.

**Solid gap-free fence** means a noise reducing fence that:

1. is a structurally fit for purpose fence;
2. a minimum of 1.8m in height;
3. built along the boundary with a state transport corridor;
4. made from materials with sound attenuating properties, limited to concrete blocks, or bricks, or fibre cement sheeting;
5. has no clearance gap at panel junctions, connections and under the fence (excluding gaps required for drainage purposes to comply with the Building Code of Australia);
6. has a return where the fence is not adjoining a **solid gap-free fence** or **solid gap-free structure**.

**Solid gap-free structure** means a noise reducing **structure** that:

1. is structurally fit for purpose **structure**;
2. a minimum of 1.8 metres in height for a **structure** at ground level;
3. built along the boundary with a state transport corridor for a **structure** at ground level;
4. made from materials with sound attenuating properties, limited to concrete blocks, or bricks, or fibre cement sheeting has no clearance gap at panel junctions, connections and under the **structure** (excluding gaps required for drainage purposes to comply with the Building Code of Australia);
5. has a return where the fence is not adjoining a **solid gap-free fence** or **solid gap-free structure**.

**Structure** means any built **structure** as well as **retaining structures**.

**Structural integrity** means **structural integrity** is retention of the infrastructure's physical condition over time. This avoids an element of the **structure** breaking or malfunctioning causing the **structure** itself to fail, sooner than expected.

**Transport noise corridor** means land designated under chapter 8B of the *Building Act 1975* as a transport noise corridor.

**Type 2 multi-modal corridor** means a transport corridor that includes a **railway** (with 15 or more passing trains per day) and at least one of the following:

1. a state-controlled road; or
2. a busway; or
3. light rail.