

# State code 27: Battery storage facility development

## Purpose statement

The purpose of this code is to ensure that development of a **battery storage facility**:

1. avoids and/or appropriately integrates risk mitigation strategies and responsive design measures to address potential fire hazards, and other environmental risks, ensuring long-term safety and resilience for people, surrounding land uses and the **environment**.
2. minimises the loss or fragmentation of **high-quality agricultural land**;
3. does not result in unacceptable adverse impacts on individuals, communities, the **environment**, adjacent **sensitive land uses** and **sensitive receptors, landscape values** and infrastructure and services.
4. is **decommissioned** in a timely and efficient manner that reuses, recycles, and/or repurposes materials to the greatest extent possible and **rehabilitates the environment**.

### 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 which must be complied with to achieve the purpose statement of the code.

Development complies with the code where:

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

There are no acceptable outcomes for this code.

This code also includes the glossary of terms for definitions relevant to this code and reference documents; including the guideline – **Planning guideline State code 27: Battery storage facility development**, which provides direction on how to address this code.

## Performance outcomes

Table 27.1: Material change of use

Performance outcomes
<b>Areas of high ecological value and associated wildlife habitats</b>
<b>PO1</b> Development is located, sited and designed to ensure that the following are protected from adverse impacts: <ul style="list-style-type: none"> <li>• <b>protected wildlife</b> and associated habitats; and</li> <li>• areas of <b>high ecological value</b>.</li> </ul>
<b>Risk mitigation</b>
<b>PO2</b> Development is designed, sited and constructed to ensure that risks from physical hazards, chemical hazards and battery failure hazards are avoided and/or mitigated with respect to: <ul style="list-style-type: none"> <li>• <b>human health and safety</b>; and</li> <li>• the built and natural <b>environment</b>.</li> </ul>
<b>PO3</b> Development mitigates the risks of fire, explosion and thermal runaway from battery storage infrastructure.
<b>PO4</b> Development is designed to ensure fire and thermal events can be contained and isolated to prevent escalation and propagation to other developments and uses on and offsite.
<b>Incident response</b>
<b>PO5</b> Development is designed to facilitate effective and efficient emergency service access and response in the event of a fire, bushfire (including cleared fire fighting areas at the interface of hazardous vegetation), explosion, contamination leak or any other incident requiring an emergency service response.
<b>PO6</b> The development: <ul style="list-style-type: none"> <li>• provides appropriate fire detection, monitoring and notification to the site operator; and</li> </ul>

Performance outcomes
<ul style="list-style-type: none"> <li>ensures the electrical safety of the facility, in the event of an incident requiring emergency response.</li> </ul>
<b>PO7</b> Development demonstrates that there is capacity to provide a reliable, sustainable and fit-for-purpose water supply.
Social impacts
<b>PO8</b> Development demonstrates that either: <ul style="list-style-type: none"> <li>a <b>community benefit agreement</b> has been entered into for development requiring social impact assessment; or</li> <li>where a <b>community benefit agreement</b> has not been entered into, <b>social impacts</b> of the development, including workforce accommodation, local business and industry impacts, community health and well-being, are identified, managed, mitigated, counterbalanced and monitored.</li> </ul>
Agricultural land
<b>PO9</b> Development is located and designed to ensure there is no unacceptable loss of <b>high-quality agricultural land</b> .
<b>PO10</b> Development does not fragment <b>high-quality agricultural land</b> in a way that restricts connectivity of agricultural land necessary to ensure its ongoing productivity and operation.
<b>PO11</b> Development is constructed to maintain the fertility and soil attributes of <b>high-quality agricultural land</b> and to enable <b>decommissioning</b> at the end of operations to return the land to pre-construction agricultural land productive value.
<b>PO12</b> Development on or adjacent to the <b>stock route network</b> maintains its operational efficiency and ongoing integrity and function.
Natural hazards
<b>PO13</b> Development is located and sited to avoid <b>natural hazard</b> areas including <b>high erosion risk</b> areas and <b>bushfire prone areas</b> .
<b>PO14</b> Where development cannot be located and sited to avoid <b>natural hazard</b> areas (e.g. <b>Bushfire prone areas</b> , and <b>high erosion risk</b> areas), demonstrate that: <ul style="list-style-type: none"> <li>there is no suitable alternative location;</li> <li>infrastructure can function effectively during and after a <b>natural hazard</b> event; and</li> <li>mitigation measures are implemented to reduce the risk to people, property and the <b>environment</b> to a tolerable level.</li> </ul>
<b>PO15</b> Bushfire hazard is identified and risk is mitigated through strategies for vegetation management, landscape management, water supply, provision of appropriate access, identification of safe assembly or evacuation routes and establishing cleared and maintained asset protection zones around infrastructure that is wholly contained on site.
Protecting water quality and stormwater management
<b>PO16</b> Development: <ul style="list-style-type: none"> <li>minimises the disturbance of <b>high risk soils</b>; and</li> <li>manages the release of soil based contaminants.</li> </ul>
<b>PO17</b> Development maintains the water quality of receiving waters, <b>waterways</b> and wetlands by: <ul style="list-style-type: none"> <li>avoiding locating in <b>waterways</b> and wetlands;</li> <li>minimising crossings of and interference with natural drainage lines, farm drainage and irrigation infrastructure;</li> <li>minimising erosion and sediment run off;</li> <li>managing drainage control; and</li> <li>preserving the bank stability of affected <b>waterways</b> and drainage lines avoiding non-essential hardening or unnatural modification of the <b>waterway</b>.</li> </ul>
<b>PO18</b> Development prevents the release of contaminants to surface water or groundwater in the event of an incident, including a fire or explosion.
<b>PO19</b> Development minimises interference with overland flow paths.
Acoustic amenity and vibration

Performance outcomes
<b>PO20</b> Construction, operation, maintenance and <b>decommissioning</b> meets the <b>acoustic quality objectives</b> for <b>sensitive receptors</b> on or adjacent to the site identified in the Environmental Protection (Noise) Policy 2019.
<b>PO21</b> Construction, operation, maintenance and <b>decommissioning</b> does not cause vibration impacts that adversely affect the operational performance or <b>sensitive receptors</b> within or adjacent to the site.
Visual impact
<b>PO22</b> Development is sited and designed to: <ul style="list-style-type: none"> <li>• minimise visual impacts on <b>sensitive receptors</b>;</li> <li>• protect the <b>landscape values</b> and <b>scenic amenity</b> of the surrounding landscape; and</li> <li>• provide screening and buffering to <b>sensitive receptors</b> the greatest extent feasible.</li> </ul>
Lighting
<b>PO23</b> Lighting associated with the development provides safe and effective illumination for site operations and maintenance, whilst minimising environmental impacts and visual impacts on <b>sensitive receptors</b> .
Transport networks
<b>PO24</b> Construction, operation, maintenance and <b>decommissioning</b> activities associated with the development do not adversely impact the efficiency and condition of <b>transport networks</b> and infrastructure.
<b>PO25</b> Construction, operation, maintenance and <b>decommissioning</b> activities associated with the development do not compromise the safety of users of the <b>transport network</b> .
<b>PO26</b> Development delivers necessary upgrades to the <b>transport network</b> to ensure construction activities and ongoing maintenance do not adversely impact <b>transport networks</b> and infrastructure.
<b>PO27</b> Development demonstrates that a safe, viable and practical haulage route can be secured to accommodate the movement of <b>oversize/overmass</b> vehicles during construction and ongoing maintenance activities.
<b>PO28</b> Development provides safe, efficient, and sustainable vehicular access to the site for all vehicle types anticipated through construction, operation, maintenance and <b>decommissioning</b> .
Infrastructure
<b>PO29</b> Development is located and designed to avoid unacceptable impacts resulting from proximity to current or approved <b>resource activity</b> or <b>pipeline</b> near or on the site.
<b>PO30</b> Development is serviced by all relevant infrastructure commensurate with its scale and operational requirements.
Decommissioning
<b>PO31</b> Relevant components of development, both after completion of construction and at cessation of operations, are <b>decommissioned</b> in a timely and efficient manner.
<b>PO32</b> Development <b>decommissioning</b> ensures that: <ul style="list-style-type: none"> <li>• materials removed from site are minimised;</li> <li>• materials that are removed from the site are disposed of at approved disposal facilities capable of receiving the materials; and</li> <li>• opportunities to reuse, recycle and/or repurpose the materials are deployed to the greatest extent feasible.</li> </ul>
<b>PO33</b> <b>Decommissioning</b> at end of operations ensures disturbance footprints are <b>rehabilitated</b> , and <b>waterways</b> and drainage patterns are reinstated.
<b>PO34</b> <b>Decommissioning</b> incorporates design features that enable reuse, recycling, and recovery of battery components and associated infrastructure at end-of-life.
<b>PO35</b> <b>Decommissioning</b> plans are secured by bonds or financial guarantees or other mechanism/s to safeguard compliance.

## Reference documents

Department of State Development, Infrastructure and Planning, [Planning guideline State code 27: Battery storage facility development](#).

# Glossary of terms

**Acoustic quality objective** see the Environmental Protection (Noise) Policy 2019.

Note: **Acoustic quality objective**, for a **sensitive receptor**, means the maximum level of noise that should be experienced in the acoustic environment of the sensitive receptor.

**Battery storage device** see schedule 24 of the Planning Regulation 2017.

Note: **Battery storage device**-

- (a) means plant that –
  - (i) converts electricity into stored energy; and
  - (ii) releases stored energy as electricity; and
- (b) includes any equipment necessary for the operation of the plant.

**Bushfire prone area** see Part F: Glossary of the State Planning Policy 2017

Note: a bushfire prone area is land that is potentially affected by significant bushfires, including vegetation likely to support a significant bushfire; adjacent land that could be subject to impacts from a significant bushfire (i.e. potential impact buffer) and is:

- (a) identified by a local government in a local planning instrument as a bushfire prone area, based on a localised bushfire study, prepared by a suitably qualified person; or
- (b) if the local government has not identified bushfire prone areas in a local planning instrument in accordance with (a) above, shown on the SPP IMS as a bushfire prone area.

**Battery storage facility** see schedule 24 of the Planning Regulation 2017.

Note: **Battery storage facility** means the use of premises for the operation of 1 or more battery storage devices.

**Community benefit agreement** see the *Planning Act 2016*.

Note: A **community benefit agreement** is an agreement, entered into under this division, about providing a benefit to a community in the locality of development requiring social impact assessment the subject of a development application or change application, including, for example—

- (a) providing or contributing towards infrastructure or another thing for the community; or
- (b) making a financial contribution to the community.

**Decommissioning/decommissioned** means the removal, rehabilitation and remediation of the battery storage facility in part, after finalisation of construction, then in entirety at cessation of operations. Decommissioning will be in accordance with strategies prepared by proponents and all decommissioning activities undertaken at full cost to proponents/operators.

**Environment** see the *Environmental Protection Act 1994*, section 8.

Note: **Environment** includes—

- (a) ecosystems and their constituent parts, including people and communities; and
- (b) all natural and physical resources; and
- (c) the physical characteristics of locations, places and areas, however large or small; and
- (d) the physical surroundings of people, including the land, waters, atmosphere, climate, sound, odours and tastes; and
- (e) the social, economic, aesthetic and cultural conditions that affect, or are affected by, things mentioned in paragraphs (a) to (d).

**High ecological value** means Matters of State Environmental Significance (MSES) as defined under Schedule 2 of the Queensland Environmental Offsets Regulation 2014.

Note: These matters can exist on publicly available resources such as Queensland Globe or be identified by a suitably qualified ecologist during a flora and/or fauna survey. Examples of MSES include, but are not limited to, threatened wildlife habitat and/or known populations under the *Nature Conservation Act 1992* (e.g. wildlife habitat for threatened or Special Least Concern (SLC) species, essential habitat, koala habitat etc.), protected areas such as National Parks and Endangered or Of Concern remnant regional ecosystems.

**High erosion risk** see glossary of terms in IECA Best Practice Erosion and Sediment Control.

Note: A high likelihood of soil erosion resulting from rain, wind or flowing water relative to a given risk rating (such as the various erosion risk ratings presented in Section 4.4 or Chapter 4 of IECA Best Practice Erosion and Sediment Control).

**High risk soils** means areas with erosive, dispersive, sodic, saline and/or acid sulfate soils.

**High quality agricultural land**, means strategic cropping land, and priority agricultural areas, or Agricultural Land Classification (ALC) Class A and Class B land identified on the SPP interactive mapping system, Development assessment mapping system (DAMs) or local planning instruments.

**Landscape values** means areas protected under a regional plan and/or local government planning scheme, such as biodiversity networks, natural economic resource areas (including rural production), **scenic amenity**

areas and landscape heritage areas.

**Natural hazards** see Part F: Glossary of the State Planning Policy 2017.

**Note:** **Natural hazard** means a naturally occurring situation or condition, such as a flood, bushfire, landslide, coastal erosion or storm-tide inundation, with the potential for loss or harm to the community, property or environment.

**Oversize/overmass vehicle** means a heavy vehicle or combination which alone, or together with its load, exceeds prescribed mass or dimension requirements, and is a heavy vehicle carrying, or designed for the purpose of carrying, a large indivisible item.

**Pipeline** see the *Petroleum and Gas (Production and Safety) Act 2004*, chapter 1, section 16.

**Note:** A **pipeline** is a pipe, or system of pipes, for transporting—

- (a) generally—petroleum, fuel gas, produced water, prescribed storage gases or regulated hydrogen; and
- (b) GHG streams; and
- (c) substances prescribed under section 402 of the *Petroleum and Gas (Production and Safety) Act 2004*.

**Protected wildlife** means native wildlife that is prescribed under the *Nature Conservation Act 1992* as extinct wildlife, extinct in the wild wildlife, critically endangered wildlife, endangered wildlife, vulnerable wildlife, near threatened wildlife, least concern wildlife and special least concern plants or animals under the Nature Conservation (Animals) Regulation 2020 and Nature Conservation (Plants) Regulation 2020.

**Rehabilitate/Rehabilitated** means restoration of areas of disturbance created for the construction of and operations of a battery storage facility. Rehabilitate means the act of undertaking a range of activities that collectively endeavor to return the landscape (over time) back to its condition prior to the battery storage facility land use. These activities aim to achieve a safe, stable, non-polluting and sustainable landform (over time) through methods including, but not limited to:

1. **decommissioning** and removal of infrastructure;
2. remodifying some areas of civil works;
3. replanting with native vegetation species;
4. installation of habitat elements (e.g. fallen woody debris);
5. watering to enhance planting survival rates;
6. weed and pest management;
7. monitoring and reporting.

**Resource activity** see the *Regional Planning Interests Act 2014*, Part 1, Division 3, Subdivision 3, Section 12.

**Note:** **Resource Act** and **Resource Activity** includes—

(1) A **resource Act** is any of the following—

- (a) *Geothermal Energy Act 2010*;
- (b) *Greenhouse Gas Storage Act 2009*;
- (c) *Mineral Resources Act 1989*;
- (d) *Petroleum Act 1923*;
- (e) *Petroleum and Gas (Production and Safety) Act 2004*.

(2) A **resource activity** is—

- (a) an activity for which a resource authority is required to lawfully carry out; or
- (b) for a provision about a resource authority or proposed resource authority—an authorised activity for the authority or proposed authority (if granted) under the relevant resource Act.

**Scenic amenity** means a measure of the relative contribution of each place in the landscape to the collective appreciation of open space as viewed from places that are important to the public.

**Sensitive land uses** see schedule 24 of the Planning Regulation 2017.

**Note:** **Sensitive land use** means any of the following as defined in the Planning Regulation 2017:

1. caretakers accommodation
2. child care centre
3. community care centre
4. community residence
5. detention facility
6. dual occupancy
7. dwelling house
8. dwelling unit
9. educational establishment
10. health care services
11. hospital
12. hotel
13. multiple dwelling
14. non-resident workforce accommodation

15. relocatable home park
16. residential care facility
17. resort complex
18. retirement facility
19. rooming accommodation
20. rural workers' accommodation
21. short-term accommodation
22. tourist park
23. workforce accommodation.

**Sensitive receptor** means an area or place where noise is measured as defined by schedule 1 of the Environmental Protection (Noise) Policy 2019.

**Social impact** see the *Planning Act 2016*.

Note: **Social impact**, in relation to development requiring social impact assessment, means the potential impact of the development on the social environment of a community in the locality of the development, including the potential impact of the development on—

- (a) the physical or mental wellbeing of members of the community; and
- (b) the livelihood of members of the community and
- (c) the values of the community; and
- (d) the provision of services to the community, including, for example, educational services, emergency services or health services.

**Stock route network** see the *Stock Route Management Act 2002*, schedule 3.

Note: **Stock route network** means the network of stock routes and reserves for travelling stock in the State.

**Transport networks** mean the series of connected routes, corridors and transport facilities required to move goods and passengers and includes roads, railways, public transport routes (for example, bus routes), active transport routes (for example, cycle ways), freight routes and local, state and privately owned infrastructure.

**Waterway** see the *Fisheries Act 1994*.

Note: **Waterway** includes a river, creek, stream, watercourse, drainage feature or inlet of the sea.