3.5 Theme 3: Brisbane's clean and green leading environmental performance

3.5.1 Strategic outcomes

1. The strategic outcomes for clean and green leading environmental performance are:
2. Brisbane is settled in a well-managed landscape which includes and protects a diverse range of natural features of ecological, cultural and regional significance. Residents and visitors to Brisbane continue to value the natural assets, urban footprint and city form determined by previous generations. The city will continue to protect, connect and restore its environmental values.
3. Brisbane's distinctive landscape character and environmental values are essential to the identity, lifestyle, economic and ecological functions of the city. The natural scenery of forested hillsides, the Brisbane River, waterways, coastal wetlands, Moreton Bay and islands are retained and their multiple values are protected.
4. The Brisbane River is reinforced as a major social, transport, ecological, recreational, scenic amenity, waterway health and drainage feature of Brisbane.
5. The Greenspace System serves many functions. It contributes to the city's character and liveability; it supports landscape, recreation and ecological functions, ecosystem services and defines local neighbourhoods and the edge of the city.
6. Ecosystem services are the goods and services provided by natural, modified and urban ecosystems that benefit, sustain and support the wellbeing of people. Ecosystem services are valued, maintained, protected and enhanced.
7. A resilient, robust and well-protected system of habitat areas, connected by ecological corridors provides habitats for our rich diversity of flora and fauna species, including the koala.
8. A strategic and cohesive Greenspace System links the city's major waterways, biodiversity areas, selected rural and recreation lands and ecological corridors.
9. Productive rural industries contribute towards Brisbane's fresh food and produce consumed in the city. Brisbane's natural economic resources are protected and managed responsibly to minimise amenity impacts.
10. Environmental quality is proactively managed, balancing amenity considerations and the location of sensitive uses with the requirements of uses with reverse amenity impacts that are essential to the economic development and function of the city.
11. The release of harmful pollutants is avoided or minimised and the health and safety of residents, business and visitors are protected from exposure to harmful pollutants or industrial hazards.
12. Brisbane's subtropical climate offers an opportunity to improve energy and water security by pursuing generation of energy from renewable sources, stormwater harvesting and passive design options to reduce energy and water consumption.
13. Bayside areas adapt to rising sea levels, and remain safe and well serviced by infrastructure and environmental networks. The selection of appropriate mitigation options for hazard-affected communities is informed by risk-based planning that balances the economic, social and environmental costs and benefits of mitigation on the city.
14. Council has committed to reducing greenhouse gas emissions. Strategies include avoiding emissions, switching fuels, improving efficiency, offsetting remaining emissions, changes to travel behaviour and efficient location of facilities.
15. The clean and green leading environmental performance outcomes comprise the following elements:
16. Element 3.1—Brisbane’s environmental values;
17. Element 3.2—Brisbane's environmental quality and sustainable design;
18. Element 3.3—Brisbane's adaptation approaches.

3.5.2 Element 3.1 – Brisbane's environmental values

Table 3.5.2.1—Specific outcomes and land use strategies

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| Specific outcomes | Land use strategies |
| Overall environmental values | |
| SO1  Brisbane’s Greenspace System’s biodiversity, recreational and cultural values and functions are protected, restored and enhanced. | L1  The Greenspace System, the majority of which occurs outside the urban footprint in the SEQ Regional Plan, also extends throughout the urban footprint through a series of district and metropolitan parks, waterway networks, sport and recreation areas and lands supporting biodiversity areas or scenic amenity values. Zones that occur within the Greenspace System are:   1. Conservation; 2. Environmental management; 3. Rural; 4. Rural residential; 5. Open space; 6. Sport and recreation. |
| SO2  Brisbane’s Greenspace System provides an effective network of greenspace links and contributes to a regional network. | L2.1  Development does not fragment environmental management, rural residential or rural lands. |
| L2.2  Development in the Emerging community zone and Industry investigation zone protects the Greenspace System's values of those areas. |
| L2.3  Development protects the inter-urban breaks between Brisbane and the Moreton Bay region, Somerset region, Redland City and Logan City which form part of the regional Greenspace System and provide links to greenspace in other local government areas. |
| SO3  Brisbane's ecosystems provide ecosystem services which are maintained and enhanced. | L3  Development protects identified areas with high levels of ecosystem services which are to be integrated into the Greenspace System and infrastructure network of the city. |
| Biodiversity values | |
| SO4  Brisbane has an ecologically resilient and robust network of well-connected habitats containing a comprehensive, adequate and representative sample of ecosystems and species. | L4.1  Development protects areas of high ecological significance, including koala habitats, in a network of biodiversity areas that also link into biodiversity areas, networks and systems in adjoining local government areas. |
| L4.2  Development for an urban purpose is located outside areas of high ecological significance. |
| L4.3  Roads and other infrastructure corridors avoid areas of significant biodiversity value and if overriding needs result in infrastructure being developed in areas of significant biodiversity value, the development offsets the lost values in locations enabling a net positive biodiversity outcome by providing compensatory habitat that restores degraded areas within the identified network of habitat and ecological corridors. |
| SO5  Brisbane achieves positive biodiversity development outcomes, where interface areas are provided by the development and offsets enable restoration of areas that form part of the Greenspace System and the city's biodiversity values. | L5.1  Development provides an interface area to buffer against edge effects. |
| L5.2  Development which results in the loss of native vegetation provides compensatory habitat that restores degraded areas within the identified network of habitat and ecological corridors. |
| L5.3  Biodiversity areas are identified and incrementally restored, including through the use of environmental offsets. |
| SO6  Brisbane has safe movement routes and corridors for wildlife that are suited to species and benefit multiple species. | L6  Development for urban infrastructure provides for wildlife movement solutions at strategic locations as identified in the Streetscape hierarchy overlay. |
| River, waterways, wetlands and bay values | |
| SO7  Brisbane's waterways, wetlands and foreshores are protected, in particular their natural drainage, stormwater conveyance, visual amenity, landscape character, recreational, cultural and biodiversity values. | L7.1  Development along the Brisbane River corridor is managed on section by section, responding to the diverse local characteristics and values along its length. |
| L7.2  Development continues to contribute towards an extended public open space network along the river. |
| L7.3  Development in identified waterway corridors, wetlands and the Brisbane foreshore is sited, designed and managed to retain and enhance the performance of these locations for drainage, amenity, recreational, cultural and biodiversity values. |
| Natural economic resources and rural lands | |
| SO8  Brisbane's natural resource assets, including extractive resources such as quarries, are identified and protected from encroachment by incompatible development, including sensitive uses. | L8  Brisbane's natural economic resource areas for extractive resources and agricultural lands are identified and protected from fragmentation and inappropriate use. |
| SO9  Brisbane's agricultural production, scenic amenity and environmental values of rural lands are protected. | L9  Development of Brisbane's rural areas balances the demands for use of rural lands for a broad range of rural industries and food production with the biodiversity, scenic amenity, outdoor recreation, landscape character and rural lifestyle values of those rural areas. |
| SO10  Brisbane's aquatic habitats and fisheries are protected. | L10  Development incorporates site measures that protect water habitats, aquatic quality, fish passages and downstream fisheries from water pollution and sedimentation. |
| SO11  Water quality is protected from adverse impacts of development. | L11  Waterway corridors wetlands, drinking water catchments including receiving waters, water supply buffer areas, water resource catchments and high ecological value water areas as indicated on the State Planning Policy Interactive Mapping System, and areas of potential and actual acid sulfate soil are managed to contribute to protecting water quality by:   1. overlays; 2. siting and design; 3. specification management. |

3.5.3 Element 3.2 – Brisbane's environmental quality and sustainable design

Table 3.5.3.1—Specific outcomes and land use strategies

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| Specific outcomes | Land use strategies |
| Air and noise | |
| SO1  Brisbane's activity centres and Growth Nodes on Selected Transport Corridors experience reasonable indoor noise levels and air quality. | L1.1  Development provides a mix of uses in individual centres and Growth Nodes on Selected Transport Corridors to maximise urban amenity. |
| L1.2  Development in centres and Growth Nodes on Selected Transport Corridors separate incompatible uses and minimise the impacts of non-residential land uses in mixed-use environments. |
| L1.3  New commercial and other non-residential development complies with air and noise pollution emission levels. |
| L1.4  New residential development and other sensitive development such as aged and childcare facilities in centres and Growth Nodes on Selected Transport Corridors is designed, built and landscaped to enable building occupants to have reasonable indoor noise levels and to improve their air quality. |
| L1.5  Special entertainment precincts manage noise issues in specialised precincts. |
| Health and amenity | |
| SO2  Brisbane provides an amenity which is appropriate to the uses and development intensity planned for the different parts of the city. | L2.1  Development accords with the pattern of zones, neighbourhood plans and overlays which provide the basis for managing health and amenity impacts and interfaces between land uses and activities. |
| L2.2  Development in areas of the city affected by transport corridor air quality and noise impacts as identified on the Transport air quality corridor overlay map or Transport noise corridor overlay map, achieve the amenity outcomes described for those overlays. |
| L2.3  Development involving an interface between a residential use and non-residential use achieves the level of residential amenity specified in an applicable overlay and neighbourhood plan and does not otherwise affect reasonable health expectations. |
| SO3  Brisbane's interface areas between industry or major gas, waste and sewerage infrastructure and sensitive uses are effectively managed in terms of industrial hazards and air and noise impacts. | L3.1  Development for new industry is separated from and does not encroach upon existing sensitive zones. |
| L3.2  Development of sensitive uses is prevented from encroaching upon industrial areas. |
| L3.3  Development does not intensify within an area of risk from existing major hazard facilities without demonstrating and implementing measures to mitigate the risk. |
| L3.4  Development manages the transition of industrial areas to residential areas (or vice versa) to prevent conflict between incompatible uses. |
| L3.5  New industrial development incorporates best-practice technology and practices to control hazards and noise and air pollution. |
| Energy security | |
| SO4  Brisbane has reduced reliance on non-renewable energy sources. | L4  Development layout, design, building siting and orientation integrates subtropical design principles and reduces the need to use energy for cooling and heating. |
| SO5  Brisbane is serviced by increased generation and distribution of energy from renewable or low-carbon intense sources. | L5  Development layout, design, building siting and orientation provide opportunities for incorporation of alternative energy technologies. |
| Low carbon city | |
| SO6  Brisbane has reduced greenhouse gas emissions from transport and energy use. | L6.1  Brisbane's urban structure, form and land use mix reduces car dependency. |
| L6.2  High-speed broadband infrastructure is prioritised to facilitate telecommuting to work and leisure to reduce demand for travelling by car. |
| L6.3  Development layout, design, building siting and orientation provide opportunities for energy-efficient design. |
| SO7  Brisbane has increased stored carbon. | L7.1  Existing mature vegetation and bushland is protected and revegetation is promoted via environmental offsets in areas of high ecological significance or koala habitat areas. |
| L7.2  Streetscapes incorporate street tree planting to increase carbon sequestration. |
| Sustainable water management | |
| SO8  Brisbane's development exhibits a diverse mix of alternative water sources and water efficiency measures. | L8  Development incorporates, where appropriate, a range of possible water management features to reduce the demand for reticulated water including water capture, treatment and re-use. |

3.5.4 Element 3.3 – Brisbane's adaptation approaches

Table 3.5.4.1—Specific outcomes and land use strategies

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| Specific outcomes | Land use strategies |
| Coastal adaptation | |
| SO1  Long-term local responses to coastal hazards deliver landowner certainty through engagement with coastal communities. | L1.1  The costs and benefits to the broader community of protecting coastal areas against natural hazards are considered. |
| L1.2  Adaptation plans adopt land uses, development levels and building designs that are able to withstand coastal hazards and account for rising sea levels. |
| L1.3  Coastal adaptation measures are timed to respond to the changing impacts of coastal hazards on the safety and amenity of bayside communities. |
| L1.4  Development contributes to district-wide mitigation of coastal hazards. |
| L1.5  The space required for natural coastal processes to occur is provided. |
| SO2  In the absence of long-term adaptation plans, development avoids or mitigates adverse impacts specific to coastal locations, or relies on existing coastal protection works. | L2.1  New development does not rely on Council undertaking specific coastal hazard mitigation actions to ensure protection of people, property or infrastructure, unless identified through an adaptation strategy. |
| L2.2  Development does not rely on uncommitted future provision of services or infrastructure by Council, distributor-retailers or other public sector entities. |
| Adaptation to other changing climate challenges | |
| SO3  Brisbane's vulnerability to increased temperatures, including heatwaves, and more variable rainfall, including flood and drought, is minimised. | L3.1  Development accords with the evolving transport, water cycle and park infrastructure design standards which provides for the adaptation and mitigation of the impacts of hotter temperatures and more extreme weather events. |
| L3.2  Development incorporates requirements to meet design, siting and operational impacts of increased temperatures and climatic changes including more intense rainfall events and longer, hotter dry periods. |