

Glossary of Key Terms

Nature-Based Urban Drainage Solutions for Climate Adaptation

Glossary of Key Terms

- **ABCB (Australian Building Codes Board):** A national body that develops and maintains the National Construction Code (NCC) and provides guidance for building and plumbing practices, including stormwater drainage compliance.
- **Alternative Solutions:** A compliance pathway under the NCC that allows for innovative or non-standard building and drainage designs, including nature-based solutions, provided they demonstrate equivalent performance to prescribed standards.
- **Bioswales:** Shallow, vegetated channels with permeable bases designed to convey, slow down, and treat stormwater runoff through infiltration and filtration.
- **Blue Infrastructure:** Water-based systems within nature-based drainage solutions that manage runoff through storage, treatment, and slow release. Examples include wetlands and retention basins.
- **Bioretention Systems:** Engineered systems using soil, vegetation, and a filter media to treat stormwater runoff by filtering pollutants and promoting infiltration, often used in flood-prone areas.
- **Constructed Wetlands:** Engineered ecosystems that mimic natural wetlands, using plants and microbes to filter pollutants from stormwater runoff, improving water quality and supporting biodiversity.
- **CPD (Continuing Professional Development):** Ongoing learning and training that professionals undertake to maintain and enhance their skills and knowledge, often a requirement for various professional bodies.

- **Deemed-to-Satisfy (DTS) Provisions:** Pre-approved standard solutions or specifications within the NCC that, if followed, are presumed to meet the performance requirements without further assessment.
- **Evapotranspiration:** The process by which water is transferred from the land to the atmosphere by evaporation from the soil and other surfaces, and by transpiration from plants.
- **Green Infrastructure:** Vegetation-based systems within nature-based drainage solutions that manage stormwater through infiltration and evapotranspiration. Examples include rain gardens, green roofs, and urban forests.
- **Green Roofs:** Vegetated rooftops consisting of layers of vegetation, soil media, and drainage membranes, designed to absorb rainfall, reduce runoff, and provide insulation.
- **Groundwater Recharge:** The process by which surface water infiltrates the ground and replenishes underground aquifers, supporting the natural water cycle and enhancing drought resilience.
- **Impervious Surfaces:** Artificial surfaces like roads, pavements, and buildings that prevent rainwater from soaking into the ground, leading to increased surface runoff.
- **Infiltration:** The process by which water on the ground surface enters the soil, a key mechanism in nature-based drainage for reducing runoff.
- **National Construction Code (NCC 2022):** Australia's national building code, which sets out performance-based requirements for various aspects of construction, including stormwater management.
- **Nature-Based Drainage Solutions (NBDS):** Sustainable water management practices that mimic natural hydrological processes to manage stormwater within urban environments.
- **Performance-Based Compliance:** A regulatory approach that sets out the required outcomes or performance standards that must be achieved, allowing flexibility in how those outcomes are met, as opposed to prescribing specific solutions.
- **Permeable Pavements:** Paving systems designed with porous materials that allow water to infiltrate through them into the ground, reducing surface runoff.
- **Rain Gardens:** Landscaped depressions designed to temporarily hold and treat stormwater runoff from impervious surfaces using vegetation and engineered soil.

- **Retention Basins:** Basins designed to temporarily store excess stormwater runoff during heavy rainfall events and gradually release it to prevent downstream flooding.
- **River Restoration:** Projects aimed at reintroducing natural flow paths, stabilizing banks, and improving the ecological health of urban waterways to better manage stormwater and support aquatic ecosystems.
- **Stormwater Management:** The process of controlling and directing rainwater runoff in urban areas to prevent flooding, pollution, and erosion.
- **Sustainable Urban Drainage Systems (SUDS):** A broader approach to urban drainage that aims to manage stormwater in a way that replicates natural processes, delivering environmental, social, and economic benefits.
- **Swales:** Shallow, vegetated drainage channels used to slow down and convey stormwater runoff, promoting infiltration and filtering pollutants.
- **Urban Forests:** Clusters of trees and vegetation integrated into city environments, contributing to stormwater management through canopy interception and root system infiltration, as well as mitigating urban heat.
- **Urban Heat Island Effect:** A phenomenon where urban areas experience higher temperatures than surrounding rural areas due to human activities and the presence of heat-absorbing surfaces.
- **Water-Sensitive Urban Design (WSUD):** A holistic planning and design approach that integrates water management into the built environment to reduce reliance on traditional drainage infrastructure, improve water quality, and enhance urban liveability.