

Benchmark for a Green Climate Adaptive Built Environment



Biodiversity and nature-inclusive development

Blue-green networks and area-specific biodiversity will be strengthened at every level

Guidelines

Create valuable habitats and ensure the basic quality for natural areas standard is met

Green solutions based on natural processes and structures are preferable to technical solutions: green over grey

Connected to themes::



Increase or maintain vegetation at neighbourhood level

Connected to themes:



Drought

Prolonged drought does not cause permanent damage to buildings, foundations, roads, vegetation, water bodies or critical and vulnerable functions

Subnational standard

Groundwater table and availability of fresh water are lead considerations in selecting spatial function, system and design

Guidelines

Increase infiltration and minimise impermeable surfaces

Connected to themes:



Reuse of water, limit use of drinking water and improvement of water quality

Hierarchy of measures

- Consumption and savings
- Water retention and infiltration
- Storage
- Discharge



Soil subsidence

Dealing with soil subsidence and its consequences in the built environment is manageable and affordable, now and in the future

Subnational standard

Bearing capacity of soil is a lead consideration in selecting spatial function, system and design

Area-specific choices about groundwater, subsidence norm, the set of measures and materials are based on most cost-effective investment given the development's intended lifespan



Heat

The built environment remains healthy and comfortable during a heatwave

Guidelines

Private or public outdoor spaces are not heated directly by buildings or building services

Provide shade in parks and squares and for footpaths, cycle paths and water features

Green areas where people can cool off are nearby

Connected to theme:



Heat repellent surfaces

Critical and vulnerable functions and green spaces have good heat resilience

Hierarchy of measures

OSKA's 'cooling ladder':

- Cool environment
- Deflect heat
- Passive cooling
- Active cooling



Reduce fluvial flood impact

Impact reduction measures ensure the built environment is prepared to deal with flooding in both embanked and unembanked areas

Guidelines

Consider flood risks consisting of probability, flood depth and evacuation time and flood impact, with specific attention to critical and vulnerable functions

Hierarchy of measures

For example:
Basic safety standards,
Amsterdam Metropolitan Area



Pluvial flooding

Extreme rainfall does not cause damage to buildings and facilities, and infrastructure above and below the surface. Critical and vulnerable functions and facilities remain functioning

National standard

A once-in-100-year rainfall event causes no damage, critical and vulnerable functions remain available

20cm flood depth at street level causes no damage

Connected to theme:



Subnational standard

Precipitation on private property should be dealt with on the area of the property or by designated facilities in the development area or within the boundaries of the water system

Development prevents problems from being passed on to surrounding areas

Guidelines

Where possible, the area should have natural drainage above ground

Hierarchy of measures

- Consumption and savings
- Water retention and infiltration
- Storage
- Discharge