

# NSW Coastal Design Guidelines 2023



## Appendix 2: Assessment checklist for urban design

Hierarchy of coastal management areas:

1. CWLRA = coastal wetlands and littoral rainforests area
2. CVA = coastal vulnerability area
3. CEA = coastal environment area
4. CUA = coastal use area

**Note:** Requirements relating to coastal hazards must be considered for all coastal hazard and risk areas, regardless of which relevant coastal management area(s) these fall within. 'Coastal hazard and risk areas' mean any mapped coastal vulnerability areas and/or areas affected by (or projected to be affected by) coastal hazards that have been identified in a state environmental planning policy, local environmental plan, development control plan, coastal management program, coastal hazard policy or study adopted by council.

4.2 Design guidance for the natural environment			
Design objective	Relevant coastal management area(s)	Applicable to design (Y/N)	The design is consistent with guidelines (Y/N) If 'No', justify this
<b>4.2.1 Base considerations on a hierarchy of landform, then landscape, then built form</b>			
<b>4.2.1a</b> Site and orientate structures to reinforce natural coastal landform.	CWLRA, CVA, CEA, CUA		
<b>4.2.1b</b> Account for dynamic coastal processes and the changing nature of the landform under projected climate change scenarios and effects.	CWLRA, CVA, CUA, CEA		
<b>4.2.1c</b> Integrate public spaces and infrastructure with coastal landforms and systems.	CEA, CUA		
<b>4.2.1d</b> Create block and lot patterns responsive to topography, water flow, natural coastal assets and cultural landscapes.	CEA, CUA		
<b>4.2.1e</b> Maintain the ecological integrity of the foreshore and headlands, and retain public views of these coastal landscapes. Prioritise this over creating views and outlooks from private properties.	CVA, CEA, CUA		
<b>4.2.2 Protect and enhance water quality, hydrological systems and coastal processes</b>			
<b>4.2.2a</b> Support and incorporate water-sensitive urban design approaches.	CWLRA, CVA, CEA, CUA		
<b>4.2.2b</b> Identify and protect sensitive downstream environments such as marine parks, aquatic reserves, coastal wetlands, coastal lakes and national parks from adverse effects on water quality and quantity, and hydrological flows.	CWLRA, CVA, CEA, CUA		

## 4.2 Design guidance for the natural environment

Design objective	Relevant coastal management area(s)	Applicable to design (Y/N)	The design is consistent with guidelines (Y/N) If 'No', justify this
<b>4.2.2c</b> Consider opportunities to re-naturalise and engineer hydrology, hydraulics and flow regimes to support natural coastal and floodplain processes (for example, floodplain inundation, saltmarsh inundation, longshore drift).	CWLRA, CVA, CEA, CUA		
<b>4.2.2d</b> Remediate or remove legacy infrastructure that may be harming coastal environments and waterways.	CWLRA, CVA, CEA, CUA		
<b>4.2.3 Identify, protect and enhance sensitive coastal ecosystems and threatened ecological communities</b>			
<b>4.2.3a</b> Minimise disturbance to sensitive coastal ecosystems by grouping structures and providing common access points (such as walkways). Avoid vehicular access within sensitive coastal ecosystems.	CWLRA, CVA, CEA, CUA		
<b>4.2.3b</b> Avoid and minimise effects on areas of high biodiversity value.	CWLRA, CVA, CEA, CUA		
<b>4.2.3c</b> Restore, protect and improve sensitive coastal ecosystems –such as intertidal foreshores, coastal wetlands, littoral rainforests and riparian habitats –and increase connectivity between remnant areas where possible.	CWLRA, CVA, CEA, CUA		
<b>4.2.3d</b> Restore the natural characteristics of foreshore areas wherever possible.	CVA, CEA		
<b>4.2.3e</b> Provide vegetated setbacks to protect coastal ecosystems.	CWLRA, CVA, CEA, CUA		
<b>4.2.3f</b> Identify and plan for landward migration pathways for coastal wetlands to respond to climate change.	CWLRA, CEA		
<b>4.2.3g</b> Consider connectivity between the land and waterways holistically, including the effects of the development on ecological connectivity and ecosystem functions.	CWLRA, CEA		
<b>4.2.3h</b> Adopt lighting design that reduces light pollution to minimise effects on wildlife –refer to the <i>National Light Pollution Guidelines for Wildlife Including Marine Turtles, Seabirds and Migratory Shorebirds</i> .	CWLRA, CVA, CEA, CUA		
<b>4.2.3i</b> Adopt acoustic design that minimises effects of construction and operational noise on wildlife.	CWLRA, CVA, CEA, CUA		
<b>4.2.3j</b> Naturalise drainage patterns and channels to manage overland flow, increase civic amenity, improve ecological connectivity and restore ecosystems.	CWLRA, CEA, CUA		

## 4.2 Design guidance for the natural environment

Design objective	Relevant coastal management area(s)	Applicable to design (Y/N)	The design is consistent with guidelines (Y/N) If 'No', justify this
<b>4.2.4 Ensure that the natural coastal environment is integrated into built coastal environments</b>			
<b>4.2.4a</b> Maintain the presence of beaches, dune systems, undeveloped headlands and other natural features of foreshores.	CVA, CEA		
<b>4.2.4b</b> Encourage filtered views throughout the built environment to reinforce the presence of coastal landforms.	CEA, CUA		
<b>4.2.4c</b> Use landscaping and planting of locally endemic species to connect habitat, water systems and settlements.	CWLRA, CVA, CEA, CUA		
<b>4.2.4d</b> Use planting of locally endemic species and landscape design to screen built structures that may be viewed from the foreshore or coastal waterways.	CEA, CUA		
<b>4.2.4e</b> Mitigate urban heat island and climate change effects in built coastal environments by preserving and expanding tree canopy cover, riparian vegetation, wildlife corridors and habitat.	CWLRA, CEA, CUA		
<b>4.2.5 Use nature-based solutions as the first option to address environmental challenges, avoiding hard engineering solutions where possible</b>			
<b>4.2.5a</b> Naturalise riparian corridors to support coastal processes and mitigate the effect of weather events, including on coastal floodplains.	CWLRA, CVA, CEA, CUA		
<b>4.2.5b</b> Site infrastructure and structures (for example, foreshore facilities) to minimise environmental impact and enable natural tidal flows, propagation of marine life and longshore drift.	CWLRA, CVA, CEA, CUA		
<b>4.2.5c</b> Encourage locally endemic planting and control weeds to promote and restore the functions and resilience of coastal dune systems.	CVA, CEA		
<b>4.2.5d</b> Improve the capacity of soils to absorb and filter water (for example, encourage vegetated swales and pervious surfaces).	CWLRA, CEA, CUA		
<b>4.2.5e</b> Avoid reclaiming land or constructing hard barriers. Instead, create re-naturalised zones to allow adaptation to coastal processes.	CWLRA, CVA, CEA, CUA		
<b>4.2.5f</b> When natural solutions are not possible, consider using techniques to reduce the environmental effect of engineering solutions, such as those described in the <i>Environmentally Friendly Seawall Guideline</i> .	CWLRA, CVA, CEA, CUA		

## 4.3 Design guidance for the built environment

Design objective	Relevant coastal management area(s)	Applicable to design (Y/N)	The design is consistent with guidelines (Y/N) If 'No', justify this
<b>4.3.1 Use built form to reinforce the beauty and character of coastal places</b>			
<b>4.3.1a</b> Use building type, scale, height and aspect to ensure development integrates with, and does not dominate, coastal landforms and other elements of the coastal environment (for example, keep building mass below tree canopy and ridge lines).	CWLRA, CVA, CEA, CUA		
<b>4.3.1b</b> Orient streets and structures towards significant features of the coast and to capture sea breezes for passive cooling.	CUA		
<b>4.3.1c</b> Protect and enhance view corridors to and from the foreshore, water bodies and natural features.	CEA, CUA		
<b>4.3.1d</b> Locate and design development to limit the visual intrusion of buildings when viewed from public spaces, and the overshadowing of beaches, foreshores and the public domain before 4 pm (midwinter) and 7 pm (Eastern Daylight Saving Time)	CEA, CUA		
<b>4.3.1e</b> Create built form that responds to, connects with and celebrates the cultural heritage of coastal Aboriginal peoples.	CWLRA, CVA, CEA, CUA		
<b>4.3.1f</b> Use materials that are resilient, sustainable and that weather well in coastal environments.	CWLRA, CVA, CEA, CUA		
<b>4.3.1g</b> Respond to the natural form of coastal landscapes and minimise cut and fill wherever possible.	CEA, CUA		
<b>4.3.1h</b> Avoid materials that are highly reflective. Use materials, finishes and colours that complement the coastal landscape.	CEA, CUA		
<b>4.3.1i</b> Provide green infrastructure to meet local needs for green space and tree canopy, in keeping with the principles of the <i>Greener Places Design Guide</i> .	CEA, CUA		

## 4.3 Design guidance for the built environment

Design objective	Relevant coastal management area(s)	Applicable to design (Y/N)	The design is consistent with guidelines (Y/N) If 'No', justify this
<b>4.3.2 Ensure connectivity through and between coastal places</b>			
<b>4.3.2a</b> Create continuous coastal connectivity (for example, by using natural pathways and boardwalks).	CWLRA, CVA, CEA, CUA		
<b>4.3.2b</b> Ensure local connectivity networks link transport nodes, settlement centres and significant coastal features.	CWLRA, CEA, CUA		
<b>4.3.2c</b> Design walkable access ways and road networks in response to significant coastal landforms and foreshore areas.	CWLRA, CVA, CEA		
<b>4.3.2d</b> Use open spaces to link significant natural, cultural and heritage features (for example, coastal walks, songlines, heritage trails).	CWLRA, CVA, CEA, CUA		
<b>4.3.3 Ensure civic amenity and appropriate access to the coastal environment</b>			
<b>4.3.3a</b> Prioritise walking (including all forms of equitable access), cycling and public transport over movement and parking for private vehicles along coastal foreshores.	CWLRA, CVA, CEA, CUA		
<b>4.3.3b</b> Provide clear and limited entry points to coastal environments to protect coastal vegetation, sensitive coastal ecosystems and important habitat, such as for migratory species.	CWLRA, CVA, CEA		
<b>4.3.3c</b> Restrict vehicular entries and encourage non-vehicular access to, and within, the coastal environment.	CWLRA, CVA, CEA, CUA		
<b>4.3.3d</b> Minimise and elevate roads, crossings and walkways over waterways and water bodies.	CWLRA, CVA, CEA, CUA		
<b>4.3.3e</b> In high-use areas such as foreshores, if space allows, create distinct pedestrian walks and cycle paths, separated from busy roads. In areas with more limited space, separate roads from combined pedestrian and cycle paths.	CWLRA, CVA, CEA, CUA		
<b>4.3.3f</b> Protect the character of town centre and foreshore access roads by ensuring development fronting onto these roads is consistent with the existing or desired local character.	CEA, CUA		
<b>4.3.3g</b> Where vehicular traffic ends, ensure pedestrian and cycle movement can continue to provide access to the coastal environment.	CWLRA, CVA, CEA, CUA		
<b>4.3.3h</b> With permission and guidance from local Traditional Custodians, protect sacred and significant areas through siting and consolidating access points appropriately.	CWLRA, CVA, CEA, CUA		

## 4.3 Design guidance for the built environment

Design objective	Relevant coastal management area(s)	Applicable to design (Y/N)	The design is consistent with guidelines (Y/N) If 'No', justify this
<b>4.3.4 Create spatial frameworks that are resilient to coastal hazards</b>			
<b>4.3.4a</b> Locate development, essential services and infrastructure away from coastal hazard and risk areas wherever possible.	CVA, CEA, CUA		
<b>4.3.4b</b> Accommodation, services and facilities for vulnerable communities must be located landward of coastal hazard and risk areas.	CVA, CEA, CUA		
<b>4.3.4c</b> Ensure that the location and design of development reduces exposure to risks from coastal hazards over the life of the development.	CVA, CEA, CUA		
<b>4.3.4d</b> Ensure service and infrastructure design considers risk to life, evacuation of public property and safety from coastal hazards, without relying on emergency responses, particularly during periods of peak demand.	CVA, CEA, CUA		
<b>4.3.4e</b> If development to reduce exposure to coastal hazards will increase erosion of the beach and/or adjacent land, provide for the restoration of the beach and/or adjacent land.	CVA, CEA, CUA		
<b>4.3.4f</b> Allow for temporary, seasonal and low-impact uses in coastal hazard and risk areas, maintaining the land in public ownership.	CVA, CEA, CUA		
<b>4.3.4g</b> Prioritise actions that support the continued functionality of essential infrastructure during and immediately after a coastal hazard emergency.	CVA, CEA, CUA		
<b>4.3.5 If the proposal will locate structures in areas affected by coastal and other natural hazards, ensure that they can be adapted, relocated and transformed.</b>			
<b>4.3.5a</b> Locate development appropriately in relation to projected hazard timelines. Refer to applicable coastal management programs, policies and hazard studies adopted by council.	CVA, CEA, CUA		
<b>4.3.5b</b> Development must not increase the risk or effect of coastal hazards, either by intensifying land use or by altering coastal processes in a way that harms the natural environment or other land.	CVA, CEA, CUA		
<b>4.3.5c</b> In areas at immediate or short-term risk of coastal hazard impact, retrofit, upgrade, relocate or remove structures to protect life and property, and to improve resilience to climate change.	CVA, CEA, CUA		
<b>4.3.5d</b> Encourage design of buildings and structures that are modular, detachable and relocatable.	CVA, CEA, CUA		

## 4.3 Design guidance for the built environment

Design objective	Relevant coastal management area(s)	Applicable to design (Y/N)	The design is consistent with guidelines (Y/N) If 'No', justify this
<b>4.3.5e</b> In coastal hazard and risk areas, ensure that buildings, structures and works are engineered to withstand or accommodate coastal hazards for their design life.	CVA, CEA, CUA		
<b>4.3.5f</b> Ensure that infrastructure design and construction use appropriate climate-resilient materials and treatments, such as those described in the <i>Institute of Public Works Engineering Australia Practice Notes 12.1 and 12.2</i> (as modified from time to time).	CVA, CEA, CUA		
<b>4.4.1 Encourage sustainable, productive use of the natural coastal environment</b>			
<b>4.4.1a</b> Maintain and improve, where possible, sustainable access for recreational and commercial fishing, including boat maintenance facilities.	CEA, CUA		
<b>4.4.1b</b> Support adaptive re-use of redundant maritime or industrial infrastructure.	CEA, CUA		
<b>4.4.1c</b> Support the changing demographics and economics of coastal areas by providing diverse commercial and retail spaces.	CUA		
<b>4.4.1d</b> Provide tourism and education opportunities associated with iconic local industries, such as aquaculture.	CUA		
<b>4.4.1e</b> Incorporate local environmental and cultural skills into built outcomes (for example, murals by local artists or a living breakwater propagated with oysters from local farmers).	CUA		
<b>4.4.1f</b> Deliver social infrastructure (such as public toilets and litter bins) to support the sustainable use of and visitation to natural assets.	CEA, CUA		
<b>4.4.1g</b> Provide all-weather access to amenities such as boat ramps, watercraft storage racks, showers and changing facilities to promote year-round visitation.	CEA, CUA		
<b>4.4.1h</b> Use environmental remediation as a local attraction – for example, by providing boardwalks across remediated land converted into coastal wetlands.	CWLRA, CEA, CUA		



## 4.4 Design guidance for the social and economic context

Design objective	Relevant coastal management area(s)	Applicable to design (Y/N)	The design is consistent with guidelines (Y/N) If 'No', justify this
<b>4.4.2 Ensure coastal infrastructure delivers civic space and community assets</b>			
<b>4.4.2a</b> Maintain public ownership of foreshores and reserves.	CWLRA, CVA, CEA		
<b>4.4.2b</b> Provide, improve and maintain coastal infrastructure to enable access (for example, upgrade paths along breakwaters and estuary foreshores to enable safe access for all).	CWLRA, CVA, CEA, CUA		
<b>4.4.2c</b> Provide social amenity and educational engagement opportunities in re-naturalised coastal spaces (for example, engineered benched seating merging into natural rock platform or tidal pools for marine habitat).	CEA, CUA		
<b>4.4.2d</b> Create high-quality urban amenity and recreational infrastructure (for example, showers and changing facilities, bicycle and surf craft racks, and seating along coastal walkways).	CWLRA, CVA, CEA, CUA		
<b>4.4.2e</b> Provide management facilities to support and enable community stewardship of coastal places (for example, equipment storage for surf lifesaving, bushcare or community garden groups).	CEA, CUA		
<b>4.4.2f</b> Promote adaptive reuse and integration of heritage items into development where appropriate.	CUA		
<b>4.4.3 Acknowledge and protect coastal Aboriginal peoples' spiritual, social, cultural, customary and economic connection to coastal Country</b>			
<b>4.4.3a</b> Enable Traditional Custodians to carry out traditional Aboriginal land management practices within coastal land and sea Country.	CWLRA, CVA, CEA, CUA		
<b>4.4.3b</b> With permission and guidance from Traditional Custodians, help protect coastal places with cultural significance for local Aboriginal communities (for example, scar trees, middens, tree groves, rock carvings, headlands and beaches).	CWLRA, CVA, CEA, CUA		
<b>4.4.3c</b> Where appropriate, work with Traditional Custodians to identify and emphasise culturally significant coastal places in a way that celebrates and supports ongoing cultural connection and practice.	CWLRA, CVA, CEA, CUA		
<b>4.4.3d</b> Where appropriate, introduce interpretive elements into the public realm to engage and educate the community about local Aboriginal culture and heritage values.	CWLRA, CVA, CEA, CUA		
<b>4.4.3e</b> Ensure built form responds to Country and the Aboriginal cultural landscape.	CWLRA, CVA, CEA, CUA		



## 4.4 Design guidance for the social and economic context

Design objective	Relevant coastal management area(s)	Applicable to design (Y/N)	The design is consistent with guidelines (Y/N) If 'No', justify this
<b>4.4.4 Support community adaptation to, and management of, current and future coastal hazards</b>			
<b>4.4.4a</b> Development in coastal hazard and risk areas must be consistent with any relevant certified coastal management program. Coastal management programs include adaptation strategies that consider a range of options – from hazard avoidance, accommodation and protection, to managed retreat and loss acceptance.	CWLRA, CVA, CEA, CUA		
<b>4.4.4b</b> For existing structures within coastal hazard and risk areas and foreshore setback areas, develop plans for adaptive management that minimise the effect on natural and cultural values, as well as expense to the community (current and future).	CWLRA, CVA, CEA, CUA		
<b>4.4.4c</b> Support greater public awareness, education and understanding of coastal processes and management actions.	CWLRA, CVA, CEA, CUA		
<b>4.4.4d</b> Include community consultation in the design development process, establishing clear opportunities for continued engagement.	CWLRA, CVA, CEA, CUA		