



Environment,
Climate Change
& Water



**Code of Practice under the
*Coastal Protection Act 1979***

Cover photographs (clockwise from main photograph):

Lennox Head, Lake Ainsworth in the foreground (DECCW); sandbags at Byron Bay (M. Sharpin/DECCW); sandbags at Byron Bay (M. Sharpin/DECCW); and coastal revegetation (Bruce Coates/DECCW).

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Explanatory notes

Note: These explanatory notes do not form part of the Code of Practice and are provided for guidance only.

The primary purpose of this document is to detail requirements related to the following sections of the *Coastal Protection Act 1979*:

- placement of material that forms part of emergency coastal protection works under the provisions of section 55P(2)(f)
- maintenance of emergency coastal protection works under the provisions of section 55R(1)(d)
- removal of emergency coastal protection works under the provisions of section 55Y(1)(b)
- removal of certain material and structures unlawfully placed on beaches under the provisions of section 55ZA(3)(b)
- restoration of land, including public land, under certain circumstances under the provisions of section 55ZC(5)(b).

These requirements are to be read in conjunction the *Coastal Protection Act 1979* and the Coastal Protection Regulation 2011, which are available at www.legislation.nsw.gov.au.

Definitions

The following is a list of definitions for terms used in this Code of Practice.

AS: Australian Standard

Beach, coastal protection works, emergency action subplan, emergency coastal protection works and **public land:** have the same meaning as in the *Coastal Protection Act 1979*

Escarpment: the vertical or near-vertical drop in the profile of a beach caused by tidal or storm erosion

Professional engineer: a person belonging to a class of persons recognised as being qualified to be registered or registered as a professional engineer in the civil engineering area of practice by the National Engineering Registration Board, or under the Queensland *Professional Engineers Act 2002*, with expertise in coastal engineering

Sandbag: a fabric bag that can be filled with sand which meets the requirements under the *Coastal Protection Act 1979*, including the Coastal Protection Regulation 2011 and this Code

Storm conditions: a period during which a severe weather warning for large waves or damaging surf issued by the Bureau of Meteorology applies

The Act: the *Coastal Protection Act 1979*

Works: emergency coastal protection works.

1 Safety requirements for placing, maintaining and removing works

These requirements relate to sections 55P(2)(f), 55R(1)(d) and 55Y(1)(b) of the *Coastal Protection Act 1979*.

1.1 General requirements

- (i) Before any works are placed, maintained or removed, a temporary safety fence must be erected around the area where works are to be placed or are located and any additional area used by earthmoving equipment or other vehicles for the purpose of placing, maintaining or removing the works. The safety fence is to be removed after the placement, maintenance or removal of the works is completed.
- (ii) In addition to the requirements under (i), if the escarpment concerned exceeds 1 metre in height, an additional temporary safety fence must be erected before any works are placed, maintained or removed. The safety fence must be erected on the landward side of the escarpment at a distance of at least 2.5 times the greatest height of the escarpment. For example, if the escarpment is 2 metres high at its highest point, then a safety fence must be erected 5 metres from the escarpment on its landward side. The area between the safety fence and the escarpment must not be used during the placement, maintenance or removal of the works. The safety fence is to be removed after the placement, maintenance or removal of the works is completed.
- (iii) Sand or sandbags comprising the works must be placed and maintained in a manner that minimises the likelihood of the collapse of the escarpment. Should a collapse of the escarpment occur, an authorised officer may require the landowner to obtain, before continuing with placing the works, a written opinion from a professional engineer that the placement of the works does not present a significant safety risk. This opinion must be kept by the landowner until the works are removed.
- (iv) Subject to item 2.4 below, excavation of the escarpment for the placement of the works is not permitted.
- (v) Routine maintenance or removal of the works or restoration of land following removal of works is not to be undertaken during storm conditions. Emergency repairs to the works may be undertaken where the landowner has obtained a written opinion from a professional engineer that the repairs to the works do not present a significant safety risk. This opinion must be kept by the landowner until the works are removed.

1.2 Safety requirements under storm conditions

Works are not to be placed during storm conditions unless the landowner obtains a written opinion from a professional engineer that the placement of the works under these conditions does not present a significant safety risk. This opinion must be kept by the landowner until the works are removed.

2 Placement of works

These requirements relate to section 55P(2)(f) of the *Coastal Protection Act 1979*.

2.1 Permitted locations for placement of works

Material for works may only be placed at a location specified in the schedule. Any associated vehicular access to a beach at this location must be by the access points nominated in the schedule.

2.2 Requirements for placement of works

2.2.1 General requirement

Works may only be placed where the most landward part of an escarpment is within 20 metres of the most seaward wall of a building. Note that section 55P(2) of the Act specifies the requirements of a building in relation to placing works.

2.2.2 Placement and maintenance of sandbag works

Works comprising the placement of sandbags must meet the following requirements:

- (a) the height of the works must not exceed 1.5 metres from the base (or toe) of the escarpment
- (b) the works must be placed against the seaward side of the escarpment and be within 4 metres of the escarpment
- (c) the slope of the face of the works must not exceed 34 degrees from the horizontal plane
- (d) no voids on any exposed faces of the works, or between the works and the escarpment, of a size that may present a public safety risk.

2.2.3 Placement and maintenance of sand works

Emergency coastal protection works comprising the placement of sand must meet the following requirements:

- (a) the sand must be placed against the escarpment on the seaward side
- (b) the slope of the face of the works must not exceed 34 degrees from the horizontal plane.

2.2.4 Placement of works when other coastal protection works exist

Emergency coastal protection works must not be placed at any location where other coastal protection works (whether lawfully placed or not) exist. This restriction does not apply if a professional engineer has provided a written opinion that the proposed emergency coastal protection works together with the existing coastal protection works will not provide greater erosion protection than the protection that would be provided solely by emergency coastal protection works placed on the land. This opinion must be kept by the landowner until the works are removed.

2.3 Material requirements

2.3.1 Sand requirements

- (i) The sand used in the works is to comply with the following requirements:
 - (a) the sand must not contain a proportion of heavy metals or other toxic contaminants that exceeds the criteria set out in the *National Environment Protection (Assessment of Site Contamination) Measure 1999*. This requirement does not apply to quarried sand.
 - (b) the main constituent of the sand is to be silica (in the form of quartz)
 - (c) the median sieve size (d₅₀) of the sand is to be 0.15 to 0.5 millimetres to AS 2758
 - (d) the fines content of the sand (<75 µm) is to be 5% or less to AS 2758
 - (e) the colour of the sand is to be similar to the colour of the sand of existing dunes within the vicinity of the works.
- (ii) If sand used in the works is obtained from a sand supplier, the landowner must obtain and keep (for the life of the works) a written statement from the supplier certifying that the sand meets these requirements.

2.3.2 Sandbag and geotextile fabric requirements

- (i) Sandbags used in the works are to be manufactured from geotextiles or woven polypropylene fabric and have a maximum volume of 0.75 cubic metres when filled.
- (ii) Geotextiles used for these sandbags is to be non-woven, staple fibre and needle-punched. The geotextile is to have a minimum tensile strength of 21 kN/m (tested to Australian Standard 3706.2) and a minimum California bearing ratio burst strength of 5400 N (tested to Australian Standard 3706.4). Woven polypropylene fabric is to have a minimum tensile strength of 3 kN/m (tested to Australian Standard 3706.2). The landowner must obtain and keep for the life of the works a written statement from the supplier of the sandbags certifying that the fabric meets these requirements.

2.4 Additional construction requirements

- (i) An exception to item 1.1(iv), when placing works comprising sandbags, limited excavation of the beach (other than the escarpment) may be undertaken to enable the bottom layer of sandbags to be placed approximately horizontally. Any excavated sand is to be placed elsewhere on the beach.
- (ii) All sandbags used in the works are to be sewn or tied closed before placement.

3 Maintenance of works

These requirements relate to section 55R(1)(d) of the *Coastal Protection Act 1979*.

- (i) Works comprising sandbags that do not meet the requirements under the Act (note this includes requirements under the Coastal Protection Regulation 2011 and this Code) are to be relocated to the correct location or removed from the beach as soon as practicable. This includes sandbags located elsewhere on the beach which were originally placed as part of the works.
- (ii) Works damaged by tides or waves during a storm are to be repaired or removed as soon as practicable after the storm conditions cease.

4 Removal of works and restoration of land

These requirements relate to sections 55Y(1)(b) and 55ZC(5)(b) of the *Coastal Protection Act 1979*.

4.1 Removal of sandbag works

Sandbags used in the works are to be opened and the sand distributed on the beach, resulting in a reasonably even beach terrain. Emptied sandbags are to be removed from the beach.

4.2 Restoration of land

- (i) In relation to the removal of works (whether in accordance with section 55Y of the Act or an order under section 55ZC), areas disturbed during the placement, maintenance and removal of the works are to be restored to a condition as close as is reasonable to the condition that existed before the works were placed. Sand that has fallen from the escarpment to the beach is to be distributed on the beach, resulting in a reasonably even beach terrain.
- (ii) In relation to the alteration or repair of emergency coastal protection works in accordance with an order under section 55ZC of the Act, if any area that was disturbed during the placement or maintenance of the works is no longer covered by or under the works, that area is to be restored to a condition as close as is reasonable to the condition that existed before that part of the works was placed.
- (iii) Restoration of damaged dunes is to be carried out in accordance with the document entitled *Coastal Dune Management: A manual of coastal dune management and rehabilitation techniques*, published by the NSW Department of Land and Water Conservation in 2001. Dune escarpments should be restored in accordance with this document to the extent to which this is reasonable for the particular escarpment.

5 Restoration of land after order to remove illegal material or structure

These requirements relate to section 55ZA(3)(b) of the *Coastal Protection Act 1979*.

- (i) Areas disturbed by the deposit of the material or the erection of the structure concerned are to be restored to a condition as close as is reasonable to the condition that existed before the material was deposited or structure was erected. Sand that has fallen from a dune escarpment to the beach is to be distributed on the beach, resulting in a reasonably even beach terrain.
- (ii) Restoration of damaged dunes is to be carried out in accordance with the document entitled *Coastal Dune Management: A manual of coastal dune management and rehabilitation techniques*, published by the NSW Department of Land and Water Conservation in 2001. The dune escarpment should be restored in accordance with this document to the extent to which this is reasonable for the particular escarpment.

Schedule – Authorised locations for placing works and associated beach access

Authorised locations for placing works	Authorised beach access
Basin Beach, Mona Vale	Beach access track from corner of Surfview Road and Basset Street (alternate access – adjacent to Mona Vale Surf Life Saving Club, Seabeach Avenue)
Belongil Beach, Byron Bay	Childe Street; Manfred Street; Don Street
Bilgola Beach, Bilgola	From north end of Allen Avenue (alternate access – Bilgola Avenue at Allen Avenue)
North of outlet from Cakora Lagoon and east of Ocean Street, Brooms Head	Track from Ocean Street (south of bridge)
Collaroy Beach, Collaroy	Collaroy Beach carpark (opposite Jenkins Street), Frazer or Stuart Streets
Hargraves Beach, Noraville	Elizabeth Drive (north end)
Narrabeen Beach, Narrabeen	Wetherill or Mactier Streets, adjacent to Narrabeen or South Narrabeen Surf Life Saving Clubs, Birdwood Park carpark or Clarke Street
North Entrance Beach, The Entrance (North)	Curtis Parade
Mollymook Beach, Mollymook (between Donlan Road and Mollymook Creek)	Mitchell Parade
Cabbage Tree Harbour Beach, Norah Head	Bald Street boat ramp area
Old Bar Beach, Old Bar	Pacific Parade at Rose Street or adjacent to the Taree Old Bar Surf Club, Ungala Road
Pearl Beach, Pearl Beach	Coral Crescent; Pearl Parade; Gem Road
Wamberal Beach, Wamberal	Adjacent to Wamberal Surf Life Saving Club, Dover Road
Wooli Beach, Wooli	Wooli Road (South Terrace)

