4 Environmental Considerations

This section provides information on environmental matters that may need to be addressed in the design of a development. Some of these matters will determine the suitability of a site for a particular development.

4.1 Ecological Impacts

Objectives

- To ensure that development is designed in a manner that avoids, mitigates or offsets negative impacts on biodiversity and the quality and function of the natural environment and responds to relevant ecological constraints and opportunities.

Controls

In considering whether to grant consent to a development, Council will consider biodiversity and ecological matters relevant to the development and the land which is affected by that development. In this regard, Council will consider matters that include, but are not limited to, the following:

(1) the avoidance (where possible) or minimisation of loss and harm to remnant native vegetation and trees and the habitat of wildlife populations, and

(2) the protection of natural biodiversity, including native vegetation and wildlife, their habitats and biological processes and functions, and

(3) the protection of all ecological values of the natural landscape including scenic, recreational, aesthetic and cultural heritage values, and

(4) the design and siting of the development (including the footprints of all built structures, access, services, bushfire asset protection zones, water management structures, and other ancillary features of that development) in the area of the land that is of least ecological or biodiversity constraint and where the siting of that development results in the least possible ecological or biodiversity-related impact, and

(5) the appropriate siting and design of a development (including lot boundaries) with regards to the protection of agricultural sustainability, ecological integrity, topography, landform, native vegetation, wildlife habitat, wetlands and watercourses, and

(6) the adoption of suitable and effective protective safeguards that avoids, minimises or compensates for the clearing of habitat and native vegetation within any development, and

(7) the capability of the land to accommodate the development without impairment or harm to important ecosystem services functions and the condition, ecological value and significance of fauna and flora, and

(8) the avoidance of fragmentation or disturbance of wildlife habitats and the protection, maintenance and (where possible) enhancement of ecological linkages and wildlife corridors in a local, sub-regional and regional context, and

(9) the avoidance (where possible) and minimisation of negative impacts on natural landscapes that provide key ecological services provisions, including but not limited to, rainforests, wetlands, riparian zones, vegetated steep lands, rare, regionally significant or poorly conserved ecological communities, threatened species habitats, endangered ecological communities and protected land, and

(10) the identification and active protection of natural landscapes that provide key ecological services provisions, including but not limited to, rainforests, wetlands, riparian zones, vegetated steep lands, rare, regionally significant or poorly conserved ecological communities, threatened species habitats, endangered ecological communities and protected land, including the need to adopt buffers of adequate width and configuration to such areas to protect them from the overt direct or indirect effects of that development, and

(11) the compensating or offsetting of unavoidable impacts of a development such that the natural environment and native biodiversity is maintained or improved. The provision of any offsets should be located on the development

site or as close as possible to the area of impact, and not beyond the bounds of the Great Lakes Local Government Area, and

(12) where primary koala food tree species occur, the means with which the development would avoid such trees and where, if impacts on such trees are unavoidable, the means with which there would be a long-term net gain in the representation of primary koala food tree species as a consequence of that development, and

(13) where hollow-bearing trees (comprising trees with cavities, hollows, splits or decorticating bark capable of providing roosting, denning or refuge sites for native vertebrate fauna) occur, the means with which the development would avoid such trees and where, if impacts on such trees are unavoidable, the means with which there would be a long-term net gain in the representation of denning opportunities for hollow-dependent native wildlife as a consequence of that development, and

(14) the adequate, effective and active conservation management of areas of high biodiversity conservation value of the land of a development site and/ or a restoration or an offset area through a permanent, executed legal mechanism and the preparation, funding and implementation of a habitat or restoration management plan, and

(15) the management of risks associated with bush fire in a manner that does not unreasonably compromise and minimises or avoids impacts on native vegetation, wildlife and wildlife habitats, and

(16) the containment, within a single lot, of the area of a holding that comprises land that is zoned E2 Environmental Conservation, and

(17) the encouragement of conservation and recovery of populations of threatened biodiversity within a development and/ or any offset areas, and

(18) the adoption of suitable and effective protective safeguards that avoids impacts to areas of high conservation value native vegetation and native wildlife populations and their habitats from any harm or impact associated with the introduction or encouragement of domestic pets, invasive exotic plants and animals and grazing animals, and

(19) the means with which priority invasive environmental weeds would be effectively and actively controlled and suppressed on the development site for the life of the development, and

(20) consideration of the location and style of fencing on the land on the development site to enclose and/ or protect areas of high conservation value native vegetation and native wildlife populations and their habitats.

4.2 Flooding

Objectives

- The risk of impacts from flooding on people and assets are avoided or otherwise minimised.
- Development is located in response to the identified flood hazard and designed to accommodate flood conveyance and storage.
- Environmental impacts of development on flood prone land are avoided or otherwise minimised.
- Development on flood prone land does not adversely impact neighbouring properties or visual amenity.
- The potential for financial loss or cost to the community as a result of development on flood prone land is limited.

Flood Planning Area explanatory diagram incorporating freeboard and sea level rise

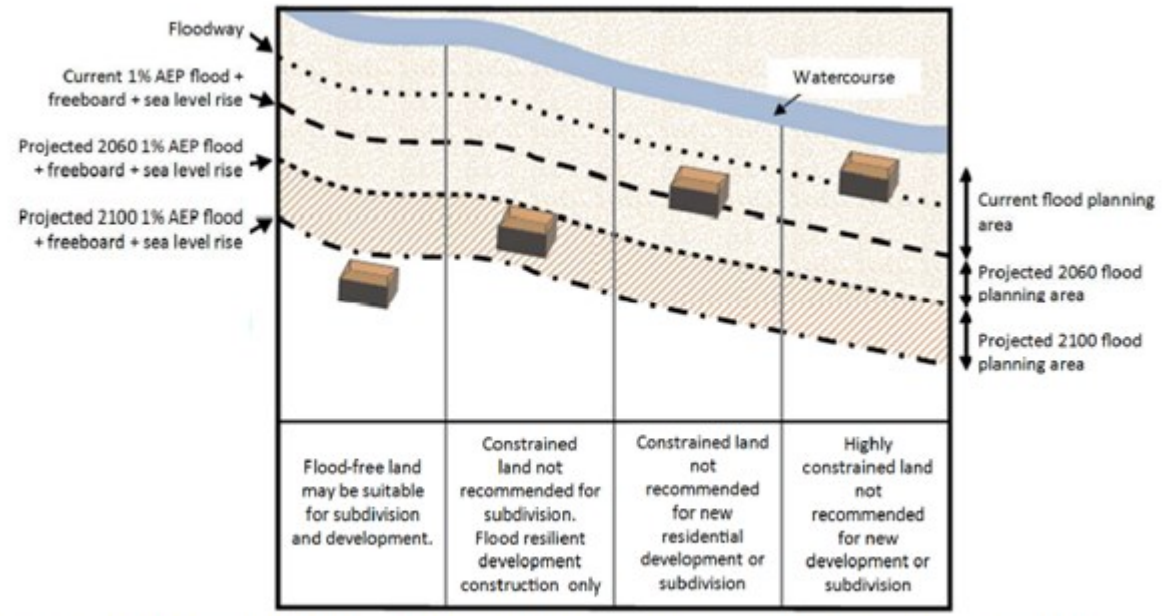

Diagram adapted from NSW Planning *NSW Coastal Planning Guideline: Adapting to Sea Level Rise* (2010)

Flood Studies

Applications to subdivide or develop within the Great Lakes LEP 2014 Flood Planning Area may be required to submit a flood study to establish:

- site specific flood planning levels including allowances for sea level rise;
- how any alterations in flood behaviour caused by the development may impact on surrounding properties;
- appropriate habitable floor levels for development; and
- the impact of the development on flood conveyance and storage.

Subdivision Controls

(1) New allotments are to be designed to ensure that all proposed building envelopes are located outside the 2100 flood planning area.

(2) In circumstances where the location of a building envelope beyond the 2100 flood planning area is not possible a variation may be sought. If supported by Council, building envelopes are to be located at or above the 2100 1% AEP flood level.

(3) All lots are to have a continuous and rising vehicle evacuation route.

(4) The filling of land is to limit the impact on adjoining properties and the visual amenity of the location.

(5) Landscaping and vegetated buffers located in flood prone areas must be designed and located to reduce the impacts of flood waters on soil stability and adjoining buildings and structures.

(6) Subdivisions in non-urban zones e.g. large lot residential, rural and environmental zones that create an additional dwelling entitlement, are to provide:

(a) storage of vehicles, machinery and the installation of septic tanks within the building envelope; and

(b) an on-site sewage disposal area above the 2100 5% AEP flood level.

Building Controls

Any building partly or wholly constructed below the 2100 flood planning level, must be certified by a structural engineer to demonstrate that the building and associated structures have been designed to withstand flood forces exerted by the 2100 1% AEP flood.

New Buildings

(1) New buildings are to be designed and located entirely outside of the 2100 flood planning area wherever possible.

(2) New buildings are to be designed with habitable floor levels above the 2100 1% AEP flood planning level.

(3) In circumstances where construction of a new building at the 2100 1% flood planning level is likely to have an adverse impact on the adjoining property or the visual amenity of the location, a variation may be sought. If supported by Council, the new building may be designed with habitable floor levels above the 2060 1% AEP flood planning level.

(4) Vehicle access to new buildings is to be designed to so that ingress and egress from the site is provided above the 2100 1% AEP flood planning level.

Alterations and Additions

(1) Additions and alterations having a gross floor area of 30sqm or less may be constructed at the existing floor level of the building.

(2) Additions and alterations having a gross floor area greater than 30sqm are to be designed and located so that any new habitable areas have floor levels located above the 2060 1% AEP flood planning level.
Note: Any replacement or refurbishment of existing floor areas where structural changes are proposed will be considered as part of the 30sqm addition or alteration gross floor area calculation.

(3) In circumstances where construction of new habitable areas at the 2060 1% AEP flood planning level is likely to have an adverse impact on adjoining properties or the visual amenity of the location, a variation may be sought. If supported by Council, the habitable areas may be located 500mm below the 2060 1% AEP flood planning level.

Note: Habitable areas generally include any of the following: bedrooms, living room, lounge room, music room, television room, kitchen, dining room, sewing room, study, playroom, family room, home theatre and sunrooms. Please refer to the Building Code of Australia for more information.

Fencing

(1) Fences within a floodway are to be of an open-style design to minimise impacts on flood conveyance.

Additional Resources

State Emergency Services Subdivision Guidelines
State Emergency Services Building Guidelines
Office of Environment & Heritage Floodplain Development Manual

4.3 Coastal Planning Areas

This section of the DCP applies to land identified as being within a Coastal Risk Planning Area on the Coastal Risk Planning Maps of Great Lakes Local Environmental Plan (LEP) 2014, where the provisions of Clause 7.4 Coastal Risk Planning of the LEP also apply. This section also provides guidance on how to meet the requirements of clause 7.4 of Great Lakes LEP 2014. Within this development control plan this is referred to as the 'coastal planning area'.

Note: For the purposes of assessment, the design life of any building or structure is taken to be 50 years, in accordance with the Building Code of Australia and Australian Standard 2870-2011.

Objectives

- To ensure that development is designed and located in response to potential coastal hazards and does not adversely impact neighbouring properties or public land.
- To ensure that development, where possible, avoids the need for physical structures to protect the development from potential damage caused by coastal hazards.

Within this development control plan certain applications for development within the coastal planning area must be accompanied by a report from a coastal engineer certifying the structure. A 'coastal engineer' is a suitably qualified and registered engineer with specialist experience in geotechnical and/or coastal marine processes.

A report from a coastal engineer is a Coastal Risk Management Report that addresses the Coastal Risk Management Guide - Incorporating sea level rise benchmarks in coastal risk assessments (2010), produced by the Office of Environment and Heritage and available at:
www.environment.nsw.gov.au/resources/water/coasts/10760CoastRiskManGde.pdf

Subdivision Controls

1. All proposed allotments are to include a nominated building envelope that is located outside of the coastal planning area.
2. Public services and infrastructure including sewer, water, drainage, electricity and roads are to be located outside of the coastal planning area and landward of any building envelope.

New Buildings

Checklist - what do I need to address in the Coastal Risk Management Report for my new building?

Key Question:	**No**	Yes
Is the new building proposed in the coastal planning area	A report is not required for the new building - see item 1 below	A report certifying the building is required - see item 2 below
Is the primary road access located in the coastal planning area	A report is not required for the road access	A report may be required on the road access - see item 3 below
Are the service connection points located in the coastal planning area	A report is not required for the service connection points	A report may be required on the service connections - see item 4 below

1. New buildings are to be located entirely outside of the coastal planning area wherever possible. If this can be achieved, a report by a coastal engineer certifying the structure is not required.
2. New buildings within the coastal planning area (in whole or part) must be accompanied by a report from a coastal engineer to certify that:
    a) the foundations and footings of the building are designed to achieve safe bearing into the stable foundation zone; and
    b) the building has been designed with a minimum habitable floor level that provides adequate protection from inundation by ocean wave run-up.
3. New buildings on properties where the primary road access is located within the coastal planning area (in whole or part) are to be designed so that that driveway access to the building:
    a) is provided outside of the coastal planning area wherever possible;
    b) access is not located between the building and the coastal planning area if an alternative location is available;
    c) is provided from the secondary road frontage on a corner allotment;

    Where access cannot be designed to meet one of these requirements, evidence is to be submitted that the occupants of the dwelling can evacuate the property if the road access or driveway is damaged as a result of a coastal hazard.

4. New buildings are to be designed so that new connections to public services and infrastructure such as sewer, water, drainage and electricity:
   a) are located outside of the coastal planning area wherever possible;
   b) not located between the building and the coastal planning area if an alternative connection point is available.

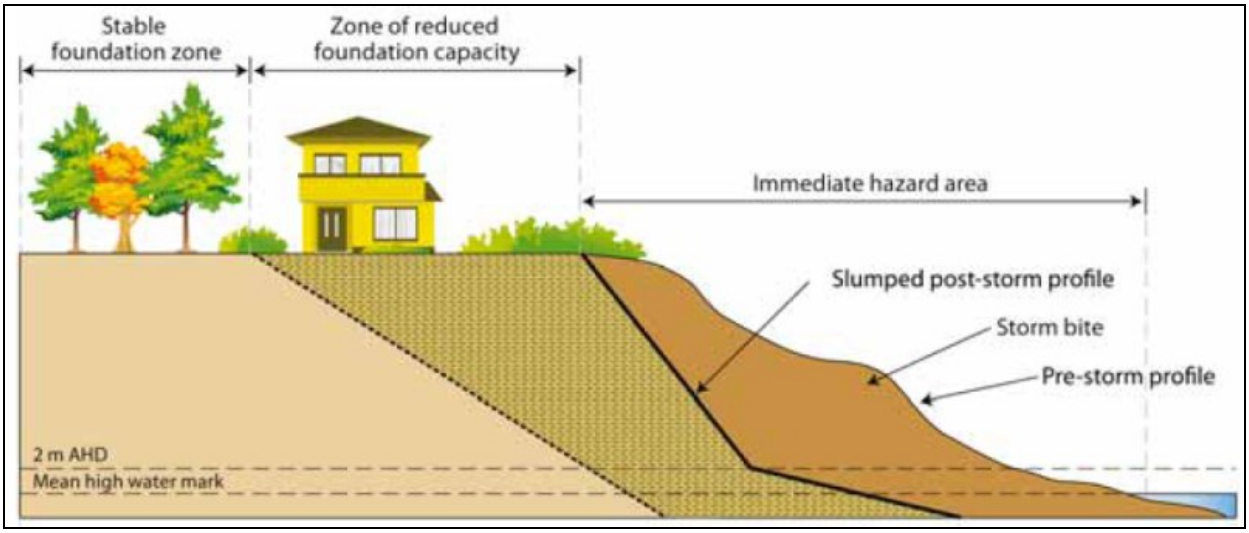

Diagram from the NSW Office of Environment & Heritage *Coastal Risk Management Guide* (2010)

Click here for original image.
Note: For the purposes of this DCP the stable foundation zone is to be regarded as natural dune material occurring landward and/or below the zone of reduced foundation capacity as defined in the Coastal Risk Management Guide. A copy of the Guide is available at: www.environment.nsw.gov.au/resources/water/coasts/10760CoastRiskManGde.pdf

Additions and Alterations

Checklist - do I need to provide a Coastal Risk Management Report with my additions and alterations?

Key Question	No	Yes
Is my addition within the coastal planning area	A report is not required - see item 1 below	A report is required - see item 2 below
Are my building alterations within the coastal planning area?	A report is not required - see item 1 below	A report is required - see item 3 below

1. Additions and alterations are to be located entirely outside of the coastal planning area wherever possible. If this can be achieved, a report by a coastal engineer certifying the structure is not required.
2. Additions that are proposed within the coastal planning area (in whole or part), are to be accompanied by a report from a coastal engineer to certify that the foundations are designed to ensure safe bearing into the stable foundation zone.
3. Alterations to an existing building within the coastal planning area (in whole or part), other than those permitted as exempt development, are to be accompanied by a report from a coastal engineer to certify that:
   a) the alterations do not place any additional load on the existing footings of the building; or
   b) the existing foundations are capable of carrying the additional load and provide safe bearing into the stable foundation zone; or
   c) additional foundations have been designed to carry the additional load and will ensure safe bearing into the stable foundation zone.

Ancillary Structures

Checklist - do I need to provide a Coastal Risk Management Report with my ancillary structures?

Key Question:	No	Yes
Are ancillary structures proposed in the coastal planning area?	A report is not required - see item 1 below	A report is not required - see item 1 below
Are lightweight structures proposed in the coastal planning area?	A report is not required - see item 2 below	A report is not required - see item 2 below
Are masonry structures proposed in the coastal planning area?	A report is not required - see item 1 below	A report is required - see item 3 below
Are coastal protection works proposed in the coastal planning area?	Not applicable	A report is required - see item 4 below

(1) Ancillary structures are to be located entirely outside of the coastal planning area wherever possible. If this can be achieved, a report by a coastal engineer certifying the structure is not required.

(2) Light weight structures such as sheet metal garden sheds and detached timber pergolas do not require a report from a coastal engineer certifying the structure.

(3) Masonry structures such as swimming pools and retaining walls are permitted within the coastal planning area if they are accompanied by a report from a coastal engineer to certify that the structure is designed:

(a) so that it is structurally separate from existing building/s; and

(b) to ensure safe bearing into the stable foundation zone.

(4) Any proposed coastal erosion protection structures must be accompanied by a report from a coastal engineer to certify that the structure is designed and located wholly on private land and must not cause damage to, or otherwise adversely impact, an adjacent, neighbouring or public property.

Additional Information

www.environment.nsw.gov.au/resources/water/coasts/10760CoastRiskManGde.pdf
www.planning.nsw.gov.au/~/media/Files/DPE/Plans-and-policies/nsw-coastal-planning-guideline-adapting-to-sea-level-rise-2010-08.ashx
www.environment.gov.au/archive/coasts/publications/nswmanual/index.html
www.legislation.nsw.gov.au/maintop/view/inforce/epi+572+2008+cd+0+N

4.4 Effluent Disposal

Objectives

- To ensure that new developments have adequate facilities for the management of onsite sewage
- To ensure that new development does not result in adverse impacts on the health of the public or the environment from sewage.

Controls

(1) The development of vacant land for residential use based on an effluent pump out system (tanker removal) will not be permitted. Approval for the installation of an effluent pump-out system (tanker removal) will only be granted where:

(a) an existing dwelling/building is operating a system of sewage management with on-site disposal that has been determined by Council to be no longer functioning in a manner considered appropriate due to environmental and/or public health related concerns and has limited area available for a replacement on-

site sewage management system; or

(b) an existing residential allotment is less than 3000sqm in size and it has been determined by Council that on-site disposal of effluent is not achievable and/or does not meet appropriate standards or guidelines.

(2) The fundamental design of an On-site Sewage Management System (OSMS) for development where effluent is disposed of by a non-reticulated system and where Council's prescribed buffer distances cannot be achieved, must meet the minimum standards for the relevant On-Site Sewage Management Hazard Class for both the treatment and disposal of the effluent.

(3) Site specific constraints that have the potential to impact on the environmental or public health must be accounted for in the capability of the treatment system and the design of the land application area. Council may refuse to permit development where it is determined that the environmental impacts and/or public health related risks are considered too great.

(4) The design of the OSMS (including land application areas or disposal drains) must meet the requirements of:

(a) Great Lakes *On-site Sewage Management Strategy and Development Assessment Framework* (or as amended) ;

(b) *Australian Standard AS 1547:2000- Onsite Domestic Wastewater Management* (or as amended);

(c) *Environmental Health Protection Guidelines- On-site Sewage Management for Single Households* (or as amended);

(d) Any other guideline deemed relevant by Council officers, and/or published by a recognised department/ organisation.

(5) In accordance with the Local Government Act 1993 (s68C) (or as amended), an application to install, alter or construct a waste treatment device or human waste storage facility must be submitted to Council for determination prior to any works commencing on any part or modification of the on-site sewage management system.

(6) The On-site Sewage Management System disposal area shall not be contained within or form any part of, the private open space or natural landscape areas of the site.

(7) The discharge of any untreated grey-water from any source to a waterway, watercourse (whether intermittent or permanent), stormwater drain, drainage channel or ground surface is not permitted. Council approval is required for all grey-water disposal.

(8) The beneficial reuse of treated effluent within the property confines is encouraged and must be done so in a manner that reflects the objectives of this clause/section.

4.5 Poultry Farms Buffer

Objectives

- To minimise conflict between agricultural uses of land and residential uses of land.

Controls

(1) Proposed development must not place the occupiers of future premises in locations where they may be unreasonably affected by odour, dust, noise or activities associated with existing intensive agricultural development such as poultry farms.

(2) In considering these issues, development applications must have due regard for the provisions of Council's *Commercial Poultry and Surrounding Development Policy* (or as amended) which may require an Odour Impact Assessment to be undertaken in accordance with the Environmental Protection Authority (EPA) Draft Policy *Assessment and Management of Odour from Stationary Sources in NSW* (2001) (or as amended).

4.6 Contaminated Land

Objectives

- To ensure previous land uses do not impact on the health and well-being of the public.

Controls

(1) Land that is identified as potentially contaminated land is subject to the provisions of *State Environmental Planning Policy (SEPP) No.55 – Remediation of Land*.

4.7 Bush Fire

Objectives

- To ensure new development is designed with regard to bush fire hazards.

Controls

(1) All development proposals on land identified as bush fire-prone are to be accompanied by a bush fire hazard assessment report in accordance with the NSW Rural Fire Service *Planning for Bush Fire Protection 2006* (or as amended).

(2) The bush fire hazard assessment report must have regard to the siting of any trees to be retained as recommended within the Arborist's report.

(3) Any bush fire protection measures (i.e. Asset Protection Zones) must not encroach upon any adjoining land.

(4) Selection of materials and methods of construction must have regard to *AS 3959-2009 Construction of buildings in bush fire prone areas* and *Planning for Bush Fire Protection 2006* (or as amended).