

An aerial photograph of Lake Macquarie, Australia, showing a residential area on the left with numerous houses and a marina on the right with many sailboats. The background features rolling hills under a clear sky. The entire image is overlaid with a semi-transparent blue filter.

Lake Macquarie Development Control Plan 2014

Part 7 – Development in Environment Protection Zones

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1 INTRODUCTION

Part 7 - Development in Environment Protection Zones applies to all development in the C2 Environmental Conservation, C3 Environmental Management, and C4 Environmental Living zones.

This part is to be read in conjunction with Part 1 (Introduction) of DCP 2014, which outlines Council's general requirements for all developments and provides advice on the lodgement requirements for a Development Application. Part 1 also contains requirements for when an application seeks to vary a development control. Additionally, controls for specific land uses may apply depending on the type of development proposed. These controls can be found within Part 9 of this DCP.

Furthermore, an Area Plan may apply depending on the location of the development. Area Plans contain area specific controls that need to be considered. They can be found in Parts 10, 11 and 12 of this DCP.

1.1 HOW TO USE THIS PLAN

LMDCP 2014 is the primary document used by Council's development assessment staff to assess development applications. Proponents of development will need to:

1. Determine the land use zone that applies to the development site (refer to LM LEP 2014);
2. Refer to the Part of LMDCP 2014 that contains controls for the zone where the development is proposed (Parts 2 to 8);
3. Check if specific land use provisions apply to the proposed development (Part 9); and
4. Check if an Area Plan applies to the proposed development site (Parts 10, 11 or 12).

The development controls contained within each part and section, seek to achieve desired land use, conservation and/or built outcomes consistent with corresponding LMLEP 2014 zone objectives, and the aims in each part of LMDCP 2014.

Each part of LMDCP 2014 is structured to promote a development process where the site and context analysis informs the design of the development. Parts 2 to 8 of this DCP generally have the following main headings:

- **Introduction** – provides information about the particular part of the DCP, how to use the DCP and aims for development within the particular zone group.
- **Context and Setting** – outlines the site issues and environmental opportunities and constraints that need to be addressed in the development application.
- **Development Design** – provides Council's detailed design related requirements.
- **Operational Requirements** – provides Council's detailed requirements associated with the construction and ongoing operation of the development.

The detailed provisions of each subsection in each part of LMDCP 2014 are presented as follows:

- **Objectives** – state what outcomes Lake Macquarie City Council is seeking new development to achieve along with the intent behind the controls, and
- **Controls** – advise the requirements for achieving outcomes and the desired future character identified by the aims and objectives.

Additionally, Parts 2 to 8 contain the specific aims that LMDCP 2014 seeks to achieve. Where specific controls are not provided, the aims of each part will be used to provide direction for a merits based assessment of a development application.

For more information on how to use this document, please consult Part 1 – Introduction.

1.2 ADDITIONAL CONTROLS FOR SPECIFIC LAND USES

If the development application relates to any of the following land uses, additional specific development controls must be considered in conjunction with controls in this part of the DCP. The detailed controls for these uses can be found in Part 9 of this DCP. Where a conflict exists between the controls within this part and a specific land use, the specific land use section prevails.

| | |
|--|----------------------------|
| Bed and Breakfast / Farm Stay Accommodation | Health Consulting Rooms |
| Dual Occupancy | Home Business and Industry |
| Dwelling House in Rural and Conservation Zones | Places of Public Worship |
| Foreshore and Waterway Development | |

1.3 AIMS FOR DEVELOPMENT IN ENVIRONMENT PROTECTION ZONES

Where controls are not provided for a particular circumstance, the following aims will be used to provide direction for a merits based assessment of a development application.

The aims of LMDCP 2014 for development in environment protection zones are:

1. To ensure that the amenity of natural landscapes is maintained.
2. To ensure that lifestyle development in environmental areas is effectively integrated with environmental and conservation uses.
3. To ensure that development occurs in an ecologically sustainable manner, and is energy efficient in terms of design and layout, consumption and materials.
4. To maintain the amenity and integrity of conservation and other environmentally valuable areas, and to maintain the natural character of the landscape.

2 CONTEXT AND SETTING

2.1 SITE ANALYSIS

Objectives

- a. To encourage good site planning, built form and landscape outcomes informed by an understanding of the site and its context.
- b. To illustrate how a development responds to a site and its relationship with the locality.
- c. To identify the opportunities and constraints of sites, and the prevailing characteristics of a locality.

Controls

1. A Site Analysis Plan must be submitted that identifies the existing conditions relating to the subject site, and the surrounding land that may influence the design process.
2. The Site Analysis Plan must address:
 - i. All relevant items as set out in the [Site Analysis Guidelines](#); and
 - ii. All relevant matters outlined below in section 2.2 to 2.18.
3. The Site Analysis Plan must provide a comprehensive view of the constraints and opportunities of the development site that will guide the design process.
4. The development application must clearly show that the constraints and opportunities identified in the Site Analysis Plan have been used to inform and resolve the development design.
5. An electronic 3D block model must be submitted for any development that is three or more storeys, or that has a Gross Floor Area of 2000m² or more. The model must clearly show the scale and form of the proposed development and its setting, from viewing points along the street, and from public open space, waterways and other significant vantage points.
6. Council may require an electronic model for smaller developments on sites with potentially high visual or physical impacts on the public realm.

Note: The detail of the Site Analysis Plan should be tailored to the site, and the complexity of the proposed development.

2.2 SCENIC VALUES

The **Landscape Settings and Significant Natural Landscape Features Maps** identify the Landscape Setting boundaries and the relevant Scenic Management Zone for each Landscape Setting. The maps are a guide to the scenic quality associated with lands within the City of Lake Macquarie and are contained within the *Scenic Management Guidelines*. The *Scenic Management Guidelines* provide supporting documentation to this DCP.

Objectives

- a. To ensure that the scenic values of the City are protected and enhanced.
- b. To ensure that developments visible or adjoining the coastline, Lake Macquarie or ridgelines maintain and enhance the scenic value of these features.

Controls

1. A landscape and visual impact assessment is required for development identified in Table 1 unless specified by Council. A landscape and visual impact assessment must be prepared in accordance with section 7.3 of the Scenic Management Guidelines.

Table 1 - Development requiring a landscape and visual impact assessment

| |
|--|
| <p><u>Type, category or impact of development:</u></p> <ul style="list-style-type: none"> • Any designated development • Any new development or alterations and additions resulting in a building or structure equivalent to 4 storeys or more (in any zone), or a car park of 2 or more storeys (in any zone) • Telecommunication towers • Substantial loss of native tree cover (land parcels of one hectare or greater) • Subdivisions (in any zone with 10 or more lots proposed) • Tourist and visitor accommodation • Eco-tourist facilities • Removal of any tree on the Significant Tree Register • Seniors living developments • Educational facilities |
| <p><u>Location of development:</u></p> <ul style="list-style-type: none"> • Any development that is; within 300m of the Mean High Water Mark of the lake or coastal edge, or on a ridgeline and involves two or more of the following: <ul style="list-style-type: none"> ○ height equivalent to 3 or more storeys, or ○ sloping site (10% or more), or ○ requiring a combined cut and fill exceeding 2 metres, or ○ a development footprint exceeding 2000m². • Any building or structure in a public reserve having a footprint exceeding 100m² or being over 10 metres high. • Any development on a heritage item and/or development within a heritage conservation area (apart from alterations and additions to existing houses or new complying development houses) • Any development within 300m of the Sydney-Newcastle Freeway (apart from alterations and additions to existing houses or new complying development houses) |

2. Developments must be designed and sited to complement their location through:
 - i. the retention of existing vegetation,
 - ii. incorporating appropriate landscaping,
 - iii. minimising cut and fill,
 - iv. building design and articulation compatible with natural context, and
 - v. colour and material selection,
3. For developments visible from the coastline, Lake Macquarie, and adjacent waterways, or from significant ridgelines, external finishes should be non-reflective and muted in tone.

2.3 GEOTECHNICAL

Objectives

- a. To minimise potential damage to buildings/structures resulting from land movement.
- b. To provide guidance on the preparation of geotechnical reports required to support a development application.

Controls

1. The following development types do not require submission of a Slope Stability Assessment with a development application:
 - i. Minor development such as garages, carports, decks and the like, pergolas, fiberglass swimming pools and cut/fill not exceeding 1 metre high/deep.
 - ii. Development in Geo_4, Geo_5 or Geo_6 zone that consists of less than 3 storeys and less than 1000m² gross floor area and are not sensitive use facilities as defined by the Geotechnical Slope Stability Guidelines.
 - iii. Subdivision consisting of:
 - 4 or less lots; and
 - Not including any new public road; and
 - Within a Geo_4, Geo_5 or Geo_6 zone.
2. A geotechnical report prepared by a geotechnical engineer must accompany an application for all other development as specified in Council's *Geotechnical Slope Stability Guidelines*. The report must be prepared in accordance with these Guidelines.

Note: After lodgement of a development application, Council may still require the submission of Geotechnical Report for the development types identified at (1) following a site inspection.

2.4 MINE SUBSIDENCE

Objectives

- a. To minimise risks to buildings and structures associated with potential mine subsidence.

Controls

1. Where an application is made for the construction of a structure or building within a Mine Subsidence District, written concurrence must be obtained from the Mine Subsidence Board. Written concurrence should be obtained prior to the application being submitted to Council.
2. Written concurrence from the Mine Subsidence Board is not required for certain works that have deemed approval under the Mine Subsidence Board's publication 'A Guide for Council Staff'.

Note: Please refer to the Mine Subsidence Board's ['Surface Development Guidelines'](#) for important information.

2.5 CONTAMINATED LAND

Objectives:

- a. To ensure that contaminated land is identified through appropriate investigations
- b. To ensure that contaminated land at a site is appropriately and effectively remediated prior to development taking place.
- c. To ensure that changes to land use will not increase the risks to public health or the environment as a result of contaminated land on site, or adjacent to the site.

Controls:

1. Where development is proposed on land identified as being potentially contaminated, a Preliminary Site Investigation Report must be prepared and submitted with the application for development. Refer to Council's [Policy for Managing Contaminated or Potentially Contaminated Land](#) for further information.
2. Where contaminants are found within the site, a Detailed Site Investigation Report must be prepared and lodged with the development application.
3. Where a Detailed Site Investigation Report identifies the need for remediation, a Remedial Action Plan must be prepared and submitted with the application.

4. The site must be validated as suitable for its intended use prior to the issue of an occupation certificate.

Note: At discretion, Council may request a formal audit of contamination documentation by a site auditor accredited with the NSW Environment Protection Authority under the *Contaminated Land Management Act 1997*.

Note: Refer to Resilience and Hazards SEPP and the NSW State Governments '*Managing Land Contamination: Planning Guidelines*' for more information.

2.6 ACID SULFATE SOILS

Objectives

- a. To ensure that disturbance of Acid Sulfate Soils or Potential Acid Sulfate Soils is minimised, to prevent adverse environmental impact on soil conditions.
- b. To ensure that water quality and associated receiving waters are not detrimentally affected by the effects of Acid Sulfate Soils.
- c. To ensure that habitat is not detrimentally affected by the effects of Acid Sulfate Soils.
- d. To ensure that built structures and infrastructure are not detrimentally affected by Acid Sulfate Soils.

Controls

1. Development should be sited or designed to avoid the disturbance of Acid Sulfate Soils or potential Acid Sulfate Soils.
2. Where the disturbance of Acid Sulfate Soils is unavoidable, a Preliminary Acid Sulfate Soil Assessment report must be submitted with the development application, in accordance with the [NSW Acid Sulfate Soils Planning Guidelines](#).
3. Where a Preliminary Acid Sulfate Soil Assessment report identifies potential adverse impacts, a detailed assessment report and management plan must be submitted, in accordance with the [NSW Acid Sulfate Soils Planning Guidelines](#).
4. Any Acid Sulfate Soils must be identified on the site analysis plan.

Note: Refer to Lake Macquarie Council's Acid Sulfate Soil planning maps showing classes of land containing potential or actual Acid Sulfate Soils. These maps are available at Council's Customer Service Centre, Speers Point.

2.7 STORMWATER MANAGEMENT

Objectives

- a. To ensure that development does not adversely affect water quality or availability, including ground water.
- b. To ensure that watercourses and associated riparian vegetation are maintained so as to contribute to water quality, and to mitigate sedimentation of the Lake Macquarie waterway.
- c. To minimise any adverse impacts on downstream built or natural environments, or on nearby land due to increased development.
- d. To incorporate Water Sensitive Urban Design techniques into all new developments.
- e. To minimise the volume and rate of stormwater leaving a development site.

Controls

1. A *Water Cycle Management Plan* must be submitted for all development except single dwelling houses and dual-occupancy developments. The *Water Cycle Management Plan* must provide details of the management of stormwater, and the measures proposed to mitigate the effects of stormwater on adjoining or downstream sites in accordance with Council's *Water Cycle Management Guidelines*.
2. A *Site Stormwater Drainage Plan* must be submitted for all single dwelling houses and dual-occupancy development proposals. The *Site Stormwater Drainage Plan* must be prepared in accordance with Council's *Water Cycle Management Guidelines*.
3. On-site measures must be implemented to maintain water quality, and to minimise the volume of stormwater run-off and the rate at which stormwater leaves the site.
4. A maximum of 10% of run-off from built impermeable surfaces may be discharged directly to the drainage system. The remaining 90% of run-off must be captured for reuse, or managed through infiltration and retention measures prior to being discharged to the drainage system.
5. Stormwater management systems should be visually unobtrusive and integrated within site landscaping, car parks or building structures.
6. All developments (except dwelling house or dual occupancy) that involve the re-use of stormwater or the use of recycled water must demonstrate compliance with the Australian Guidelines for Water Recycling and the licensing requirements of the *Water industry Competition Act 2006*.
7. Stormwater management systems must be designed in accordance with the [Water Cycle Management Guidelines](#).

2.8 CATCHMENT FLOOD MANAGEMENT

This section applies to land in the various creek catchments in Lake Macquarie City that are within the flood planning area. This section also applies to sensitive use development on land affected by the Probable Maximum Flood.

Information on flood risk and flood planning levels (floor levels) for particular lots can be obtained through the [flood report tool](#) or by applying for a Flood Certificate from Council. Some lots are affected by both catchment flooding and Lake flooding. The development controls that apply to these lots depend on the type of development, and further advice should be sought from Council.

Provisions regarding lake flooding are contained in section 2.9 of this Part of DCP 2014.

Where inconsistencies arise, the controls in area plans prevail over controls in parts 2 to 9 of this DCP..

Objectives

- a. To ensure that development is sited and designed to minimise potentially adverse impacts of flooding on the proposed development, or on other properties.
- b. To ensure that measures are implemented to reduce the impact of flooding and flood liability on owners and occupiers of flood prone property. Such measures must also reduce private and public losses resulting from flooding, and manage risks to property and life from flood events.

Controls

1. Development must be consistent with the current version of the [NSW Floodplain Development Manual](#), and any relevant local flood study, floodplain management study or plan applying to the land that has been endorsed by Council.
2. The proposed development must consider and respond to flooding hazards. It must also mitigate risks to life and/or property through design and positioning of development.
3. Buildings must not be located in an identified floodway.

4. Buildings and other structures, including fences, must be designed so as not to impede the flow of floodwaters or entrap debris.
5. Habitable rooms must have a finished floor height at least 500mm above the 100 year probable ARI (1% AEP) event. Where probability flood levels are not available, habitable rooms must have a finished floor height at least 500mm above the highest observed flood level for the development site.
6. Non-habitable rooms must have a finished floor height at or above the 20 year probable ARI (5% AEP) event. Where probability flood levels are not available, non-habitable rooms must have a finished floor height at or above the highest observed flood level for the site, except where this would result in a floor level more than 500mm above the existing ground level. In this case, a floor level of at least 500mm above existing ground level must be achieved.
7. Fill is not permitted within core riparian zones, within the Lakefront Development Area or the Foreshore Development Area, or within the extent of the 100 year probable ARI (1% AEP) flood event.
8. Lesser provisions may be acceptable where the applicant can demonstrate that the type of development or the proposed use poses no significant risk to life or property by flooding.
9. Any use of fill associated with development must not substantially impede the flow of floodwater, and must not contribute to flooding or ponding of water on any other property.
10. Additions or alterations to existing development will be assessed on the merits of the situation, having regard to meeting an acceptable level of risk of flood damage.
11. Development on designated flood prone land should incorporate the floodplain risk management measures, as recommended by a local flood study, floodplain management study or plan, which identifies and addresses appropriate actions in the event of flooding.
12. Development on land subject to flooding must use flood compatible materials that will minimise damage by flooding.
13. Development on lots adjoining areas affected by a 100 year probable ARI event will be subject to floor height requirements, even when the site may not be subject to flooding from the 100 year probable ARI event. This requirement is not applicable for land higher than 500mm above the 100 year probable ARI, as calculated for the relevant site.
14. Development where 100 year probable ARI levels are not available, and which could be flood liable, should be designed to meet an acceptable level of risk from flood damage. This may require the preparation of a Local Flood Study that considers cumulative impact issues, and demonstrates negligible impacts on other lands.

Note: Refer to Council's [Flood Management Guideline](#) for further information on the [NSW Floodplain Development Manual](#), completed floodplain management plans, and on Council's requirements for flood studies.

Table 2 - Flood Planning Levels and floor height requirements in areas affected by catchment flooding and covered by a Floodplain Management Study and Plan

| Development Type (including extensions) | Minimum Height Requirements |
|--|---|
| Dwellings | |
| Habitable rooms | 1 in 100 year probable flood level + 500mm freeboard (post and beam rather than slab on ground preferred) |
| Non-habitable rooms and garages | 1 in 20 year probable flood level |
| Carports, boat sheds, garden sheds, and other ancillary structures (excluding garages) | No requirement |
| Unsealed electrical installations | 1 in 100 year probable flood level + 500mm freeboard |
| Medium and High density residential development | |
| Habitable rooms | 1 in 100 year probable flood level + 500mm freeboard |
| Non-habitable rooms and garages | 1 in 20 year probable flood level |
| Carports, boat sheds, garden sheds, and other ancillary structures (excluding garages) | No requirement |
| Basement car parking | Constructed to preclude entry of floodwater at levels up to the 1 in 100 year probable flood level + 500mm freeboard. Additional requirement for basement levels to implement a failsafe means of evacuation, and a pump-out |
| Unsealed electrical installations | 1 in 100 year probable flood level + 500mm freeboard |
| Commercial and Retail | |
| Internal floor height | 1 in 100 year probable flood level + 500mm freeboard |
| Basement car parking | Constructed to preclude entry of floodwater at levels up to the 1 in 100 year probable flood level + 500mm freeboard. Additional requirement for basement levels to implement a failsafe means of evacuation, and a pump-out system to remove flood waters. |
| Also includes Places of Public Worship, restaurants, clubs, entertainment facilities, warehouses, and bulky goods showrooms etc. | |
| Unsealed electrical installations | 1 in 100 year probable flood level + 500mm freeboard |

| Development Type (including extensions) | Minimum Height Requirements |
|---|---|
| Mixed Use development | |
| Internal floor height | 1 in 100 year probable flood level + 500mm freeboard |
| Basement car parking | Constructed to preclude entry of floodwater at levels up to the 1 in 100 year probable flood level + 500mm freeboard. Additional requirement for basement levels to implement a failsafe means of evacuation, and a pump-out system to remove flood waters. |
| Unsealed electrical installations | 1 in 100 year probable flood level + 500mm freeboard |
| Industrial | |
| Internal floor height | 1 in 100 year probable flood level |
| Unsealed electrical installations | 1 in 100 year probable flood level + 500mm freeboard |
| Sensitive Uses (Residential care facilities, hospitals, etc.) | |
| Internal floor height | Probable maximum flood level |
| Unsealed electrical installations | Probable maximum flood level |

2.9 LAKE FLOODING AND TIDAL INUNDATION (INCORPORATING SEA LEVEL RISE)

This section applies to land on and near the Lake Macquarie foreshore that is within the flood planning area. This section also applies to sensitive use developments on land affected by the Probably Maximum Flood.

Information on flood risk and flood planning levels (floor levels) for particular lots can be obtained through the [flood report tool](#) or by applying for a Flood Certificate from Council.

Some lots are affected by both catchment flooding and lake flooding. The development controls that apply to these lots depend on the type of development, and further advice should be sought from Council.

Provisions regarding catchment flooding are contained in section 2.8 of this Part of DCP 2014.

The floor height requirements in Table 3 below must only be used for development on lots affected by lake flooding.

Council completed the Lake Macquarie Waterway Flood Study and Risk Management Plan in 2012. This flood study and risk management plan incorporated the implications of predicted sea level rise.

Predicted sea level rise is based on expert advice from NSW Government agencies and expert scientific agencies, namely that projections of sea level rise along the NSW coast are for a rise relative to 1990 mean sea levels of 40cm by 2050 and 90cm by 2100.

The controls contained in this section prevail where there is an inconsistency with other development requirements. This is particularly relevant to cut and fill controls.

Objectives

- a. To ensure that development is sited and designed to minimise potentially adverse impacts of flooding on the proposed development, or on other properties.

- b. To ensure that measures are implemented to reduce the impact of flooding and flood liability on owners and occupiers of flood prone property. Such measures must also reduce private and public losses resulting from flooding, and manage risks to property and life from flood events.
- c. To ensure that development adequately considers and responds to sea level rise projections, and the predicted effects on inundation, flooding, coastal and foreshore recession, and on groundwater levels.
- d. To ensure that development on land vulnerable to sea level rise is situated and designed to minimise the risk from future inundation, flooding, coastal and foreshore recession, and from rises in groundwater levels during the expected life of the development.
- e. To ensure that development is designed to enable future adaptation if projections are realised, or that measures are implemented to mitigate any adverse impacts of climate change or sea level rise.
- f. To encourage innovative responses to sea level rise impacts

Controls

- 1. Development must implement measures to mitigate the adverse effects of projected sea level rise and increases in flood levels on the development.
- 2. Development should be designed and situated to reduce the risk from the effects of sea level rise. For example, structures should be located on the highest part of the lot and/or located as far back from the foreshore or coastline as possible, while still meeting other controls and objectives of the DCP.
- 3. Development should not be located in areas predicted to be permanently inundated during the life of the asset. The assumed asset life is 100 years for residential care facilities and seniors housing, hospitals, mixed use development and for medium and high density housing, and 50 years for other developments.
- 4. Notwithstanding the provisions for Cut and Fill in section 3.14, special consideration may be given to increased fill allowances in areas affected by sea level rise provided that:
 - i. Additional fill does not adversely affect stormwater management, drainage, or the flow of water from roads, natural or constructed watercourses, foreshore areas or adjoining properties; and
 - ii. The filled area maintains functional connections to adjoining footpaths, roads, neighbouring blocks and other local features.
- 5. Development identified within Table 3 should comply with the floor height provisions. Where the development proposed is not contained within Table 3, or an alternative to the provisions contained within Table 3 is proposed, a Flood Safety Audit and Management Plan must be submitted with the application, which is to include:
 - i. Current 100 year ARI flood levels and velocity, as well as at 2050 and 2100;
 - ii. Analysis of potential and likely risk of flooding, and/or potential threat to life and/or property now, and at 2050 and 2100;
 - iii. Analysis of the potential effects of permanent inundation, foreshore recession and rising groundwater;
 - iv. Where flood-proof materials are proposed, evidence of the flood-proof characteristics of those materials must be provided;
 - v. Where an innovative or adaptable building design is proposed, it meets the principles and performance criteria set out in the Development Guidelines for Resilient Housing for Lake Macquarie, and
 - vi. Any other alternative adaptive measure must be justified.

6. The assessing officer may determine that the development proposal is of a minor nature, and that there is no need for a Flood Safety Audit and Management Plan. In these circumstances, the assessing officer must be satisfied that the proposed development adequately addresses projected sea level rise and increases in flood levels.

Table 3 - Floor height requirements for land affected by Lake Flooding and Tidal Inundation requirements

| Development Type (including extensions) | Minimum Floor Height Requirements | Actual Minimum Floor Level for Land to which the Lake Flood Study Applies |
|--|--|---|
| Dwellings | | |
| Habitable rooms | 1 in 100 year probable flood level for 2050 + 500mm freeboard (post and beam rather than slab on ground preferred) | 2.36 m AHD |
| Non-habitable rooms and garages | 1 in 20 year probable flood level for 2050 | 1.61 m AHD |
| Carports, boat sheds, garden sheds, and other ancillary structures (excluding garages) | No requirement | |
| Unsealed electrical installations | 1 in 100 year probable flood level for 2050 + 500mm freeboard | 2.36 m AHD |
| Medium and High density residential development | | |
| Habitable rooms | 1 in 100 year probable flood level for 2100 + 500mm freeboard | 2.82 m AHD |
| Non-habitable rooms and garages | 1 in 20 year probable flood level for 2100 | 2.10 m AHD |
| Carports, boat sheds, garden sheds, and other ancillary structures (excluding garages) | No requirement | |
| Basement car parking | Constructed to preclude entry of floodwater at levels up to the 1 in 100 year probable flood level for 2100 + 500mm freeboard. Additional requirement for basement levels to implement a failsafe means of evacuation, and a pump-out system to remove flood waters. | 2.82 m AHD |
| Unsealed electrical installations | 1 in 100 year probable flood level for 2100 + 500mm freeboard | 2.82 m AHD |

| Development Type (including extensions) | Minimum Floor Height Requirements | Actual Minimum Floor Level for Land to which the Lake Flood Study Applies |
|--|---|---|
| <p>Commercial and Retail</p> <p>Internal floor height</p> <p>Basement car parking Also includes Places of Public Worship, restaurants, clubs, entertainment facilities, warehouses, and bulky goods showrooms etc.</p> <p>Unsealed electrical installations</p> | <p>1 in 100 year probable flood level for 2050 + 500mm freeboard</p> <p>Constructed to preclude entry of floodwater at levels up to the 1 in 100 year probable flood level for 2050 + 500mm freeboard. Additional requirement for basement levels to implement a failsafe means of evacuation, and a pump-out system to remove flood waters.</p> <p>1 in 100 year probable flood level for 2050 + 500mm freeboard</p> | <p>2.36 m AHD</p> <p>2.36 m AHD</p> <p>2.36 m AHD</p> |
| <p>Mixed Use development</p> <p>Internal floor height</p> <p>Basement car parking</p> <p>Unsealed electrical installations</p> | <p>1 in 100 year probable flood level for 2100 + 500mm freeboard</p> <p>Constructed to preclude entry of floodwater at levels up to the 1 in 100 year probable flood level for 2100 + 500mm freeboard. Additional requirement for basement levels to implement a failsafe means of evacuation, and a pump-out system to remove flood waters.</p> <p>1 in 100 year probable flood level for 2100 + 500mm freeboard</p> | <p>2.82 m AHD</p> <p>2.82 m AHD</p> <p>2.82 m AHD</p> |
| <p>Industrial</p> <p>Internal floor height</p> <p>Unsealed electrical installations</p> | <p>1 in 100 year probable flood level for 2050</p> <p>1 in 100 year probable flood level for 2050 + 500mm freeboard</p> | <p>1.86 m AHD</p> <p>2.36 m AHD</p> |
| <p>Sensitive Uses (Residential care facilities, hospitals, etc.)</p> <p>Unsealed electrical installations</p> | <p>Probable maximum flood level for 2100</p> <p>Probable maximum flood level for 2100</p> | <p>3.27 m AHD</p> <p>3.27 m AHD</p> |

2.10 NATURAL WATER SYSTEMS

Definition

A **natural water system** is a naturally occurring watercourse, waterway, lake, wetland, lagoon, estuary, and/or other water body.

Objectives

- a. To protect and maintain the water regime of natural water systems.
- b. To ensure that development does not adversely affect aquatic fauna.
- c. To ensure that development does not adversely affect water quality or availability, including ground water.
- d. To ensure that watercourses and associated riparian vegetation are maintained to contribute to water quality, and to mitigate sedimentation of the Lake Macquarie waterway.
- e. To ensure that natural water systems and associated vegetation and landforms are protected to improve the ecological processes and ensure that land is adequately buffered from development.
- f. To ensure that the pre-development water quality of receiving waters is maintained or improved.

Controls

1. Natural water systems must be maintained in a natural state, including the maintenance of riparian vegetation and habitat such as fallen debris.
2. Where a development is associated with, or will affect a natural water system, rehabilitation must occur to return that natural water system – as much as possible – to a natural state. The Rehabilitation Plan must be prepared in accordance with Council's *Guidelines for the Preparation of Rehabilitation Plans for Degraded Watercourses or Waterbodies*.
3. Rehabilitation should occur where a development site includes a degraded watercourse, water body, or wetland. Rehabilitation is to be carried out following the completion of a Rehabilitation Plan, This Plan must prepared in accordance with Council's *Guidelines for the Preparation of Rehabilitation Plans for Degraded Watercourses or Waterbodies*.
4. Stormwater must be managed to minimise nutrient and sediment run-off entering constructed drainage lines, natural watercourses, or waterways.
5. Development within a Vegetated Riparian Zone (VRZ), as shown in Figure 1 – Vegetated Riparian Zones, should be avoided where possible to retain its ecological processes. Where development is unavoidable within the VRZ, it must be demonstrated that potential impacts on water quality, aquatic habitat, and riparian vegetation will be negligible.
6. A Plan of Management must be submitted in accordance with State Government guidelines for development proposed within a VRZ.
7. Asset Protection Zones must not be located within the Vegetated Riparian Zone.

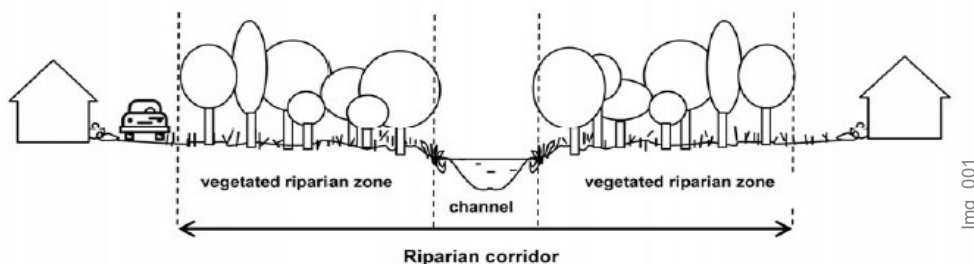


Figure 1 - Vegetated Riparian Zones

| Types of watercourses | VRZ Width ² (Each side of watercourse) | Total Riparian Corridor Width |
|--|--|-------------------------------|
| Any first order ¹ watercourse | 10 metres | 20m + channel width |
| Any second order ¹ watercourse | 20 metres | 40m + channel width |
| Any third order ¹ watercourse | 30 metres | 60m + channel width |
| Any fourth order ¹ watercourse or greater (includes estuaries, wetlands and any parts of rivers influenced by tidal waters) | 40 metres | 80m + channel width |

¹ As classified under the Strahler System of ordering watercourses.

² Bushfire Asset Protection zones will not be permitted in the Vegetated Riparian Zone. Additional areas may need to be protected to support ecological processes.

2.11 BUSHFIRE

Objectives

- a. To ensure that risks associated with bushfire are appropriately and effectively managed on the development site.
- b. To ensure that bushfire risk is managed in connection with the preservation of the ecological values of the site and adjoining lands.

Controls

1. Development must comply with the [NSW Planning for Bushfire Protection Guidelines](#)
2. Asset Protection Zones must:
 - i. Be incorporated into the design of the development;
 - ii. Be as low maintenance as possible;
 - iii. Be located outside areas of ecological value and the buffers necessary to protect them; and
 - iv. Not occur on adjoining environmental zoned land.
3. Bushfire prone areas and Asset Protection Zones must be identified on the Site Analysis Plan. Refer to Council's [Bushfire Prone Land Map](#).
4. Clearing for the purposes of Asset Protection Zones should be avoided on ridgelines and slopes of 1:5 or greater.
5. Clearing of vegetation must be limited to that necessary to meet the [NSW Planning for Bushfire Protection Guidelines](#).
6. Clearing of native vegetation or trees for the purposes of reducing bushfire risk must be consistent with the current Bushfire Risk Management Plan prepared under the *Rural Fires Act 1997*.

Note: Development Consent is not required for clearing for the purpose of bushfire hazard reduction if the clearing is consistent with the current Bushfire Risk Management Plan, and is undertaken in accordance with a current hazard reduction certificate issued by the Rural Fire Service or other certifying authority.

2.12 FLORA AND FAUNA

Objectives

- a. To avoid or minimise impacts on native flora and fauna
- b. To protect and enhance significant flora and fauna, vegetation communities and significant habitat on the site, and on surrounding development sites.
- c. To protect and enhance ecological corridors and increase the connections between habitats.

- d. To ensure rehabilitation of degraded areas.

Controls

1. Where the proposed development is likely to have an impact on native vegetation or fauna habitat, or where five or more trees are proposed to be removed, a flora and fauna assessment must be submitted with the development application. The flora and fauna assessment must be prepared in accordance with Council's [Flora and Fauna Survey Guidelines](#).
2. The flora and fauna assessment must be sufficient to adequately identify and assess all the impacts of the proposed development. This includes cumulative, direct and indirect impacts, as well as the impacts of Asset Protection Zones, provision of services (water and sewer, etc) and stormwater management.
3. Where a proposed development site is within a vegetation corridor identified on Council's Native Vegetation and Corridors Map, or identified as part of a site specific flora and fauna assessment, the corridor must be surveyed. Within the survey, the appropriate corridor width must be determined with reference to core habitat areas and potential edge effects and fragmentation. The proposed development should be located and designed to avoid impacts on the identified vegetation corridor. Where this is not possible, the development should be designed to minimise impacts.
4. Development should be designed to avoid impacts on native flora and fauna, and minimise any unavoidable impacts. Significant flora and fauna species, vegetation communities and habitat should be protected and enhanced through appropriate site planning, design and construction.
5. A Site Vegetation Plan must be submitted clearly indicating the location of the proposed development in relation to vegetation communities, significant flora and fauna species and vegetation, and significant habitat and corridors on the site.
6. Native vegetation buffers must be provided between development and areas containing threatened flora and fauna species or their habitat, threatened vegetation communities and native vegetation corridors. The width of the buffer should be determined with reference to the function of the habitat, the threat of sea level rise and the type of development proposed. The buffer should be designed to keep the area of significance in natural condition.
7. A suitable barrier such as a perimeter road should be provided between development, (including landscaped areas) and native vegetation or significant habitat features, to minimise edge effects
8. Where a proposed development is likely to impact on an area of native vegetation, it must be demonstrated that no reasonable alternative is available. Suitable ameliorative measures must also be proposed (eg: weed management, rehabilitation, nest boxes).
9. Rehabilitation of degraded areas of the development site should include local native species to establish a self-maintaining ecosystem as close as possible to the natural state.
10. Buildings and structures, roads, driveways, fences, dams, infrastructure, drainage and asset protection zones should be located outside of areas with significant flora and fauna, native vegetation corridors and buffers.
11. An application for removal of native vegetation will only be considered where it is ancillary to, and necessary for conducting an approved use of the land (ie: an application for clearing alone will not be supported).
12. Where retention or rehabilitation of native vegetation and/or habitat is required, a vegetation management plan must be prepared in accordance with Council's [Vegetation Management Plan Guidelines](#). This must detail how vegetation will be protected, rehabilitated and managed before, during and after construction.
13. Long-term protection and management of areas set aside for ecological reasons is encouraged through secure tenure with appropriate conservation management. This may be achieved through a Planning Agreement.

14. Development should be consistent with the effective conservation of land within any adjacent Environmental or Waterway zone and its protection from adverse impacts. It should include, but not be limited to weed invasion, erosion and sedimentation, pollution, chemicals, nutrients, stormwater run-off, feral and domestic animals.

Note: Council may require a bond to ensure that native vegetation is protected and any ameliorative measures are undertaken.

2.13 PRESERVATION OF TREES AND VEGETATION

Objectives

- a. To ensure that trees listed on Council's [Significant Tree register](#) are not adversely affected by development.
- b. To maintain and enhance the natural bushland or vegetated character of the city.
- c. To retain trees for the urban amenity, microclimate, scenic, air and water quality, and the social benefits that they provide.

Controls

1. For the purposes of Clause 5.9 in LMLEP 2014, development consent is required to ring bark, cut down, top, lop, remove, injure, wilfully destroy or clear:
 - i. Any species of vegetation that existed in the State of New South Wales before European Settlement;
 - ii. A tree which is listed in Council's Significant Tree Register;
 - iii. Tree(s) or native vegetation listed as heritage items or located within a Heritage Conservation Area; or
 - iv. A Norfolk Island Pine Tree (*Araucaria heterophylla*) that is greater than three metres in height, or that has a trunk diameter of 75mm or greater, measured at ground level.

Note: This clause includes Native Vegetation defined in the *Native Vegetation Act 2003* and marine vegetation covered by section 205 of the *Fisheries Management Act 1994*.

2. Except in the C2 Zone, development consent is not required to remove, injure, wilfully destroy or clear native vegetation (excluding native trees and shrubs over 3m in height), only if:
 - i. The work is for the purpose of landscaping understorey vegetation and lawn areas where the area to be cleared is less than 600m² (in total), and is on the same allotment as, and within the curtilage of an approved dwelling;
 - ii. The soil surface exposed in any period of 90 consecutive days is less than 250m²;
 - iii. The slope of the land is less than 15 degrees;
 - iv. The area is not subject to a development consent that requires the native vegetation to be retained; and
 - v. The work does not involve the disturbance of habitat for threatened species.
3. Development consent is not required to ring bark, cut down top, lop, remove, injure, wilfully destroy or clear a tree or native vegetation, if:
 - i. The tree is not listed on Council's Significant Tree Register or as Heritage Item or is located within a heritage conservation area, and
 - ii. The tree or native vegetation is not required to be retained by a development consent, and
 - iii. The tree or native vegetation is within five metres of the outermost projection of a lawfully used building (that is not exempt or complying development) and is on the same allotment as the building, or

- iv. The tree or native vegetation is within one metre of a sealed driveway to a lawfully used building (that is not exempt or complying development) and is on the same allotment as the building, or
- v. The tree or native vegetation is within five metres of the outermost projection of a lawfully used building (that is not exempt or complying development) on an adjoining allotment as the building and owners of both properties reach a written agreement that is submitted to Council prior to removal.

Note: For the purposes of clause 3 the distance must be measured from the trunk of a tree or shrub measured at ground level to the outer most projection of the building.

Note: A sealed driveway is a driveway or car park with an impervious surface such as concrete, pavers, or bitumen. A gravel driveway is not classed as a sealed driveway.

Note: A lawfully used building does not include drainage, excavation, a garden shed or jetty, but does include an underground water storage structure or septic tank.

- 4. Development consent is not required for removal of a tree or native vegetation if Council is satisfied beforehand that the tree or native vegetation:
 - i. is dead and is not required as habitat for native fauna or
 - ii. is a risk to life or property.

Note: Evidence to support removal should be forwarded to Council in accordance with requirements outlined in Council's *Tree Preservation and Native Vegetation Management Guidelines*. Council's Tree Assessment Officer may undertake a site inspection to verify that these conditions are satisfied.

Note: Habitat required for native fauna includes native vegetation and trees (including dead or dying trees) support hollows, spouts, splits, nests and roosts.

- 5. Development consent is not required for removal of a tree or native vegetation if:
 - i. The tree or native vegetation is in danger of imminent failure and there is risk to life or property; and
 - ii. The tree is not listed on Council's Significant Tree Register or as Heritage Item or is located within a heritage conservation area, and
 - iii. Evidence to support its removal is forwarded to Council following the removal, in accordance with Council's *Tree Preservation and Native Vegetation Management Guidelines*.
- 6. Development consent is not required for removal of a NSW native tree if the tree is:
 - i. not listed on Council's Significant Tree Register or as Heritage Item or is located within a heritage conservation area, and
 - ii. not located within other native vegetation and,
 - iii. less than three metres in height and
 - iv. has a trunk diameter at ground level of less than 75mm.
- 7. An application for removal of tree(s) and native vegetation will be considered only where it is necessary for conducting an approved use of the land. An application for clearing alone will not be supported.
- 8. A report from a suitably qualified arborist must be submitted to support:
 - i. Any application that may have an impact on a tree listed in Council's Significant Tree Register, or on tree(s) or native vegetation listed as heritage items or located within a heritage conservation area;
 - ii. Any request to review Council's determination of an application for tree pruning or removal; or
 - iii. Any application that Council determines may cause significant impacts on native trees or native vegetation.

9. An arborist report must include a plan to scale that clearly shows:
 - i. The location of the proposed development;
 - ii. The location, diameter, canopy spread, condition and species of each tree on the site;
 - iii. All trees to be removed;
 - iv. All trees to be retained;
 - v. All trees with habitat hollows;
 - vi. Tree protection zones for all trees to be retained; and
 - vii. Any asset protection zones.
10. Habitat trees must be assessed by a suitably qualified flora and fauna specialist.
11. Measures must be implemented to protect native vegetation and trees to be retained during construction works. Such protection measures must be specified in the development application, and should be compiled in accordance with Council's *Tree Preservation and Native Vegetation Management Guidelines*.
12. Where habitat trees are removed, measures (such as nest boxes) must be implemented to mitigate against injury or loss of native fauna and habitat. Such measures must be specified in the development application.
13. Boundary fences must be located, designed and constructed to avoid removing or damaging native trees that have a diameter of 200mm or greater, measured at ground level.

Note: Refer to Council's *Tree Preservation and Native Vegetation Management Guidelines* for further details and the Significant Tree Register.

Note: Where the removal of five or more native trees is proposed, an arborist report may be required in addition to a Flora and Fauna Assessment prepared in accordance with Council's [Flora and Fauna Survey Guidelines](#).

2.14 EUROPEAN HERITAGE

Objectives

- a. To protect and maintain European heritage items and their facades.
- b. To retain, preserve and promote the adaptive re-use of heritage-listed buildings and contributory buildings in particular, and other buildings that contribute to the heritage character of the locality.
- c. To appropriately manage demolition of items of heritage significance, when all other alternatives to demolition have been fully investigated.
- d. To ensure that development is sympathetic to heritage items and contributory buildings.

Controls

1. A Heritage Assessment and Statement of Heritage Impact must be submitted to Council where a proposed development:
 - i. incorporates, or is adjacent to an item of heritage significance;
 - ii. is located within a heritage conservation area, or,
 - iii. has been identified by Council to have particular circumstances that warrant it.

Note: Council officers will use the following criteria to determine the need for Heritage Assessment and Statement of Heritage Impact is required under control 1(iii) above:

- The subject site includes a building erected prior to 1950 whether or not it is identified as being of a particular architectural style,

- The development is considered in conflict with it's heritage context, streetscape, or heritage precinct,
- The subject site includes a potential heritage item.
 2. The impact of development on an item of heritage significance must be minimised by:
 - i. Restricting the extent of development to that which is necessary;
 - ii. Conserving what is significant about the item;
 - iii. Clearly differentiating new development from the existing significant fabric;
 - iv. Ensuring that development is of a scale, form, mass, proportion and finish that is sympathetic with the heritage item; and
 - v. Ensuring that development is sufficiently separated from the heritage item, so as not to compromise the existing level of visibility.
 3. For development involving demolition of an item of heritage significance, a heritage assessment and Statement of Heritage Impact must be prepared and lodged. It must verify that all alternative options to demolition have been fully investigated, and demonstrate the replacement building's compatibility with the physical context. The Statement of Heritage Impact must include details of the:
 - i. Structural condition;
 - ii. Overall extent of the remaining fabric;
 - iii. Potential retention and adaptive reuse; and
 - iv. Comparative costings.
 4. Where demolition of the whole of a heritage item is proposed, approval must be sought concurrently for the replacement building.
 5. Alterations and additions to items of heritage significance must where possible:
 - i. Occur at the rear of the building;
 - ii. Maintain the established building line;
 - iii. Maintain an existing driveway access to the rear of the property;
 - iv. Incorporate or retain elements such as chimneys, windows and gables;
 - v. Maintain established patterns of buildings and garden; and
 - vi. Not overwhelm or dominate the existing building.
 6. Alterations and additions to items of heritage significance must be recognisable, on inspection, as new work. They must not mimic the design, materials or historic details of the heritage item.
 7. Garages, sheds, carports, external utilitarian structures and the like must be detached and located at the rear, or set back at least two metres behind the heritage item.
 8. Utilitarian structures must be constructed of the same material as the heritage listed building.

Note: Refer to Council's [Heritage Guidelines](#) for further information.

2.15 ABORIGINAL HERITAGE

Objectives:

- a. To protect and conserve Aboriginal cultural, spiritual, and sacred sites within the City.
- b. To ensure the impact of a proposed development on the heritage significance of an Aboriginal place or object is considered by adequate investigation and assessment.

Controls:

1. Where a development will disturb the ground surface and the natural ground surface has not been significantly disturbed, the development application must demonstrate that adequate due diligence has been undertaken. This includes (but is not limited to) submitting the following documentation in accordance with the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW*. This includes submitting the following documentation:

- i) A statement and results of a basic 200m Aboriginal Heritage Information Management System (AHIMS) search. Where a site is identified within 200m of the development site, a statement and results of a 50m AHIMS search must be included.
- ii) Identify whether the development site is partially or wholly within the Sensitive Aboriginal Landscape map under the LMLEP2014 and whether the exemptions under the Excluded Development Criteria (Table 4) apply.
- iii) A statement indicating whether there are landscape features that indicate the potential presence of Aboriginal objects.

Note: landscape features include: foreshore areas, creek lines, rocky areas, wetlands, ridge tops, ridgelines, headlands, sand dunes, caves.

2. A Due Diligence Assessment must be prepared by a suitably qualified person to determine whether the proposed development is likely to harm Aboriginal objects and identify whether an Aboriginal Heritage Impact Permit is required where:

- i) An AHIMS search has identified the likelihood of an Aboriginal item within 200m of the development site, and/or
- ii) The site is identified on the Sensitive Aboriginal Landscape map and the Excluded Development Criteria do not apply.

3. The Due Diligence Assessment must include an assessment of the cultural significance of the place to the Aboriginal Community.

Note: Clause 5.10(8) – Heritage Conservation of the LMLEP 2014 and the Lake Macquarie Aboriginal Heritage Management Strategy requires assessments to be forwarded to the Local Aboriginal Land Council for comment for a 28 day period.

4. An Aboriginal Cultural Heritage Assessment Report should be prepared where:

- i) A Due Diligence assessment has identified the potential for the site to contain an Aboriginal object or contains a place of significance, or
- ii) The development will have an impact on a known Aboriginal object or place.

Table 4 - Excluded Development Criteria for Development in Sensitive Aboriginal Landscape Map

| Excluded Development | Land on which excluded development may not be carried out |
|---|---|
| All development on sites having a combined/total area less than 800m ² | |
| Exempt development under the SEPP (Exempt and Complying Development CODES) 2008 on sites having a total area greater than 800m ² subject to: | <p>Within 200m of an AHIMS site</p> <p>Setback from DP High Water mark does not exceed 50m.</p> |

| Excluded Development | Land on which excluded development may not be carried out |
|--|---|
| <ul style="list-style-type: none"> • 75% of combined/total site area already disturbed; or • Works do not exceed existing disturbed footprint; or • Site has previously been assessed for Aboriginal heritage such as subdivision applications post 1997 development consent. | |

Note: The SEPP (Exempt and Complying Development Codes) 2008 does not apply to land within the Sensitive Aboriginal Landscape area. However, exempt development within this SEPP may not require further Aboriginal assessment if it fulfills the requirements of the Excluded Development Criteria Table.

5. Where required, the Aboriginal Heritage Impact Statement must be prepared in accordance with the Lake Macquarie Aboriginal Heritage Management Strategy and the Office of Environment and Heritage *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW*, which includes consultation with the Aboriginal community.
6. Where a proposal seeks to destroy, remove or impact on an Aboriginal object, any development will be Integrated Development and will also require a permit from Office of Environment and Heritage.

2.16 NATURAL HERITAGE

Objectives

- a. To ensure the protection of items of natural heritage significance.
- b. To ensure that insect fossil beds and fossilised trees are maintained, along with features of scientific interest in their natural state.
- c. To facilitate public appreciation and scientific investigation of insect fossil beds and geological features of scientific interest, without destruction or damage.

Controls

1. Where development is proposed on land within 50 metres of an item of natural heritage significance identified in the Lake Macquarie Local Environmental Plan 2014, a Heritage Impact Assessment must be prepared in accordance with the [Natural Heritage Guidelines](#).
2. The likely impact of development proposals on the insect fossil beds and geological features of scientific interest should be identified through a report by a palaeontologist or geologist, which establishes the significance of the site. Such a report should include management strategies before, during, and after construction.
3. The development should be designed to avoid natural heritage items.
4. Where it is not reasonable to avoid natural heritage items, the item must be protected and incorporated into the design. Reasonable access to the construction site and any excavated material should be provided to researchers and/or palaeontologists from the Australian Museum or other research institution.

5. Any natural heritage items extracted should be fully documented and catalogued prior to being forwarded to the Australian Museum. Documentation and cataloguing must be undertaken to museum standards.

2.17 SOCIAL IMPACT

Council has a statutory obligation under the provisions of Section 4.15 of the *Environmental Planning and Assessment Act 1979* to consider the social impact of a proposal when assessing a specific development application.

Social Impact Assessment focuses on the human dimension of a locality. It seeks to address the question “what will be the impact of a project/development on people?” and to anticipate outcomes that may flow from a proposed development which are likely to affect people’s way of life, their culture and/or their community.

Social Impact Assessment is not a tool to stop development, but is to assist in the assessment of development proposals so that the best development results.

Objectives

- a. To ensure that development takes into consideration the likely social impacts that may arise, including any effects on equity, access, participation and rights.
- b. To ensure that development occurs in appropriate locations, and is supported by adequate services and facilities to support the community and its needs.
- c. To ensure that services and facilities are accessible to all members of the community.
- d. To facilitate availability of active and passive recreation, natural landscapes, educational opportunities, employment opportunities, health services, public transport, and neighbouring centres, as well as maintaining or enhancing the aesthetics and amenity of the area.

Controls

1. A Social Impact Assessment (SIA) must be prepared in accordance with Council’s [Social Impact Assessment Guidelines](#), and submitted with the development application in the following circumstances:
 - i. the development is identified in table 5, or
 - ii. the development is valued at \$5,000,000 or greater, or
 - iii. the development has a floor area greater than 3000m², or
 - iv. where Council identifies that particular circumstances warrant it.

Note: Council officers will use the following criteria to determine if a SIA is required under control 1(iv) above:

- The development is targeted at a particular socio-economic or demographic group,
 - The development is considered in conflict with its locality, and
 - The development has, or is anticipated to generate, significant levels of community opposition.
2. Potential adverse impacts identified by a SIA must be mitigated through redesign, whilst positive impacts should be enhanced by the design or other actions.

Note: The scope, complexity and requirements of a SIA will be commensurate with the scale of the proposed development. Applicants are advised to consult with Council’s Social Planner regarding specific requirements.

Table 5 - Uses requiring Social Impact Assessment

| | |
|---|---|
| <ul style="list-style-type: none"> • Community facility • Designated Development • Education establishment • Expansion or Modification of an existing use that would otherwise be prohibited under the LEP • Funeral Chapel / Funeral Home • Group Home • Information and Education Facility | <ul style="list-style-type: none"> • Licensed Premises (Hotels, Taverns and Bottle Shops) • Major Roads, arterial or transport corridors • Place of public worship • Recreation Areas • School • Seniors Housing • Water System / Facilities |
|---|---|

2.18 ECONOMIC IMPACT

Council has a statutory obligation under the provisions of Section 4.15 of the *Environmental Planning and Assessment Act 1979* to consider the economic impact of a proposal when assessing a specific development application.

Economic Impact Assessment focuses on the economic dimensions of a locality. It seeks to identify how a proposal will contribute to the economic growth of the locality and City through locating development in appropriate areas, supporting existing development in the area and through the creation of employment opportunity and other economic benefits.

Objectives

- a. To ensure that development supports the Lake Macquarie hierarchy of centres and positively contributes to the City by supporting existing development in the locality and the community through the creation of employment opportunities.
- b. To ensure development contributes through additional local employment and economic benefits.

Note: Refer to Council [Economic Impact Assessment Guideline](#) for further information and guide to the economic considerations for specific types of development.

Controls

1. An economic impact assessment must be prepared and submitted to Council at the discretion of the assessing officer under the following circumstances:
 - i. Where development is valued at \$5,000,000 or greater, or
 - ii. Where the proposed development has a floor area greater than 5000m², or
 - iii. Where the development is inconsistent with the zone objectives.

3 DEVELOPMENT DESIGN

3.1 STREET SETBACK

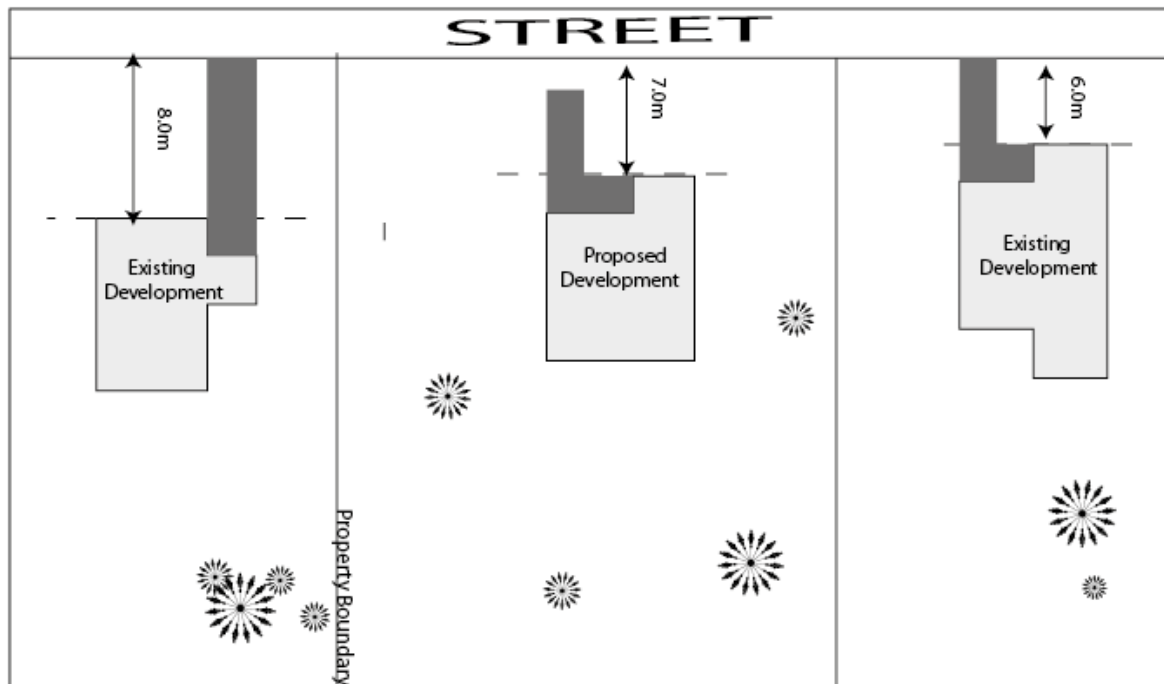
Objectives

- a. To ensure that the development complements the existing or desired future setback pattern in the locality
- b. To permit flexibility for developments that may be vulnerable to the impacts of flooding.

Controls

1. Where there are existing neighbouring buildings within 40 metres, front setbacks should be the average of the front setbacks of the nearest four neighbouring buildings.
2. Where the adjoining setbacks vary by more than three metres, the proposed development should be set back the same distance as one of the adjoining buildings.
3. Where there are no existing (or approved) buildings within 40 metres of the lot, the front setback should be a minimum of 20 metres.
4. Where the site is part of a community title development, the front setback must be a minimum of 4 metres from the front boundary

Where the site is identified as being vulnerable to flooding or expected sea level rise, front setbacks may be reduced to ensure that developments are adequately set back from the shoreline.



Img_256

Figure 2 - Street Setback – existing development within 40 metres

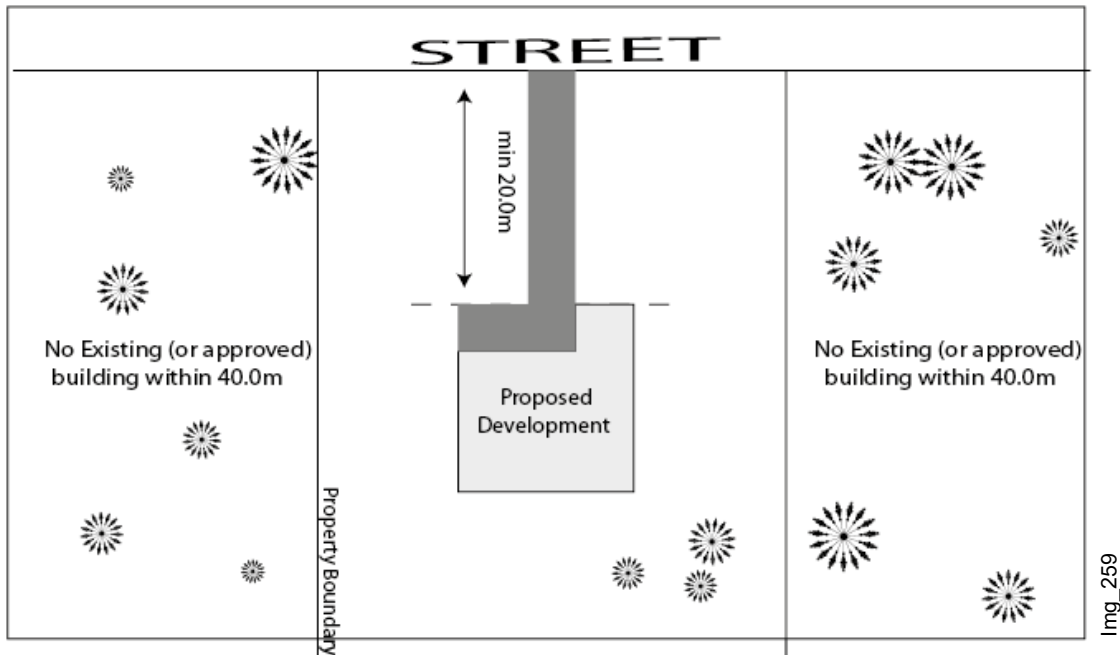


Figure 3 - Street Setback – no development within 40 metres

3.2 SIDE AND REAR SETBACK

Objectives

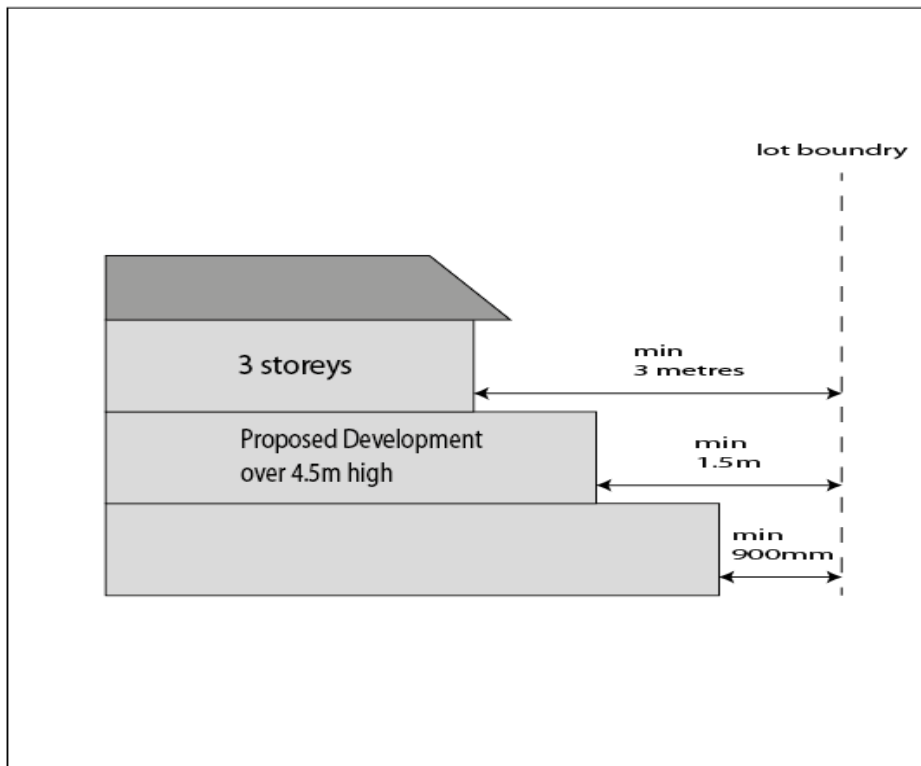
- a. To provide adequate separation between buildings to ensure that a reasonable level of privacy, amenity, solar access and natural ventilation.
- b. To provide a visual separation between buildings.
- c. To ensure that the natural amenity and environmental landscape character is maintained.
- d. To provide opportunities for the planting of vegetation.

Controls

1. In the C1, C2, C3 and C4 zones, buildings must be setback a minimum of five metres from side and rear boundaries.
2. In the C3 zone in a community title cluster subdivision, setback must be a minimum of:
 - i. 3 metres from a side boundary; and
 - ii. 10 metres from a rear boundary
3. In the C4 zone in a community title cluster subdivision:
 - i. side setback must be a minimum of 900mm for building height up to 4.5 metres.
 - ii. side setback must be a minimum of 1.5 metres for building height over 4.5 metres.
 - iii. side setback must be a minimum of 3 metres for building height over 2 storeys.
 - iv. rear setback must be a minimum of 3 metres for building height up to 4.5 metres.
 - v. rear setback must be a minimum of 6 metres for building height over 4.5 metres.

Note: The minimum setback of a point on a building is based on the building height at that point.

Note: Any additional controls for specific development types are located in Part 9 (Specific Land Uses).



img_260

Figure 4 - Side Setback

3.3 BUILDING BULK

Objectives

- a. To encourage good design and innovative architecture in order to improve the urban environment.
- b. To minimise the visual impact of development when viewed from adjoining properties, the street, waterways and land zoned for public recreation purposes.

Controls

1. Large areas of continuous wall planes must be avoided by varying building setbacks, and using techniques to provide visual relief.
2. Building height and scale must relate to the topography and the existing site conditions.
3. Verandas, recesses, surface treatments and variations in material selection and colour should be utilised to reduce building bulk.
4. Landscaping should be provided to reduce the visual bulk of buildings.
5. Walls in excess of 15 metres in length must be articulated, landscaped, or otherwise treated in order to provide visual relief.
6. Walls in excess of four metres high must be articulated, landscaped or otherwise treated in order to provide visual relief.

3.4 SOLAR ACCESS AND ORIENTATION

Objectives

- a. To ensure that reasonable access to sunlight is maintained.
- b. To ensure that the design for solar access is not outweighed by the desire for views.
- c. To promote passive solar design, and the use of thermal energy to encourage energy efficient buildings.

Controls

1. Developments must provide for the reasonable access to sunlight in accordance with the Planning Principle established by the Land and Environment Court in *The Benevolent Society v Waverley Council* [2010] NSWLEC 1082 and *Davies v Penrith City Council* [2013] NSWLEC 1141.
2. Development should avoid overshadowing of existing solar collectors for hot water or electricity.
3. Development must minimise overshadowing of public open space.
4. Openings on western elevations should be minimised to avoid the extremes of solar access. Where openings are unavoidable on a western elevation, they should be shaded by devices, eaves, landscaping or located higher on the façade.
5. At least 50% of the required area of private open space of each development, and at least 50% of the required area of private open space of adjoining development must receive a minimum of three hours of sunlight between 9am and 3pm on June 21.
6. Where adjacent existing developments and their open space receive less than the minimum requirements, any new development must seek to maintain or enhance that solar access.
7. Where lot orientation allows, developments should be designed so that the long axis of the development is running east-west.
8. Building openings on the western elevations should be minimised. Where openings are unavoidable, they should be located higher on the façade and shaded by eaves or landscaping or similar.

Note: The shadow cast by fences, roof overhangs, and changes in level are to be considered and should be indicated on any shadow diagrams submitted.

3.5 ENERGY EFFICIENCY AND GENERATION

Objectives

- a. To ensure building orientation maximises solar access and natural cross ventilation.
- b. To ensure energy efficiency is achieved in all developments.
- c. To allow opportunities for future installation of renewable energy generation and low carbon technology.
- d. To minimise the economic impacts of increasing electricity costs and any requirements to disclose energy efficiency when selling or leasing a property.
- e. To ensure that development minimises the use of water and non-renewable resources.
- f. To promote increased levels of energy efficiency in large-scale developments.

Controls

1. Buildings must be oriented to provide efficient use of solar energy and natural ventilation wherever possible.
2. Designs must consider future potential for renewable energy generation and low carbon technology.

3. Developments in excess of 4,000m² gross floor area must achieve the equivalent of a minimum 4 Star Rating under the Green Building Council of Australia's Green Star Rating tool.
4. Developments in excess of 2,000m² gross floor area should achieve the equivalent of a minimum 4 Star Rating under the Green Building Council of Australia's Green Star Rating tool.

Note: These controls are in addition to the requirements of BASIX and Section J of the Building Code of Australia. Formal certification of Green Star Rating under the Green Building Council of Australia is not required. Justification that the design would achieve the Green Star rate or an equivalent rating under a different system (e.g. NABERS) is only required.

3.6 LANDSCAPE DESIGN

Objectives

- a. To provide quality site landscaping appropriate to the nature and scale of the development.
- b. To conserve native vegetation and landscape features where possible.
- c. To integrate site landscape design with the surrounding landscape.
- d. To use predominantly local native species in the landscape design.
- e. To enhance the amenity of the proposed development.

Controls

1. Appropriate landscape documentation must be prepared and submitted, in accordance with Table 6 – Landscape Development Type and Requirements and Council's *Landscape Design Guidelines*.
2. Appropriately qualified professionals must prepare landscape documentation. For Category 3 development, a qualified landscape architect should prepare landscape documentation. For Category 2 development, a landscape architect, landscape designer, or horticulturist should prepare landscape documentation.
3. The landscape consultant's declaration must be signed and submitted with the relevant landscape documentation

Note: Refer to Council's [Landscape Design Guideline](#) for further details and requirements.

Table 6 - Landscape development type and requirements.

| Development Type and Category | Landscape Documentation | |
|---|------------------------------------|---|
| | Landscape Concept Plan at DA stage | Landscape Masterplan and Report at DA stage |
| Category 3: Large Scale <ul style="list-style-type: none"> • Development with an estimated value exceeding \$1m, or • Development of 10 or more dwellings, or • Designated development, or • Childcare facilities, community facilities, educational establishments, seniors housing, health services facilities, or tourist accommodation, or. • Development in areas of high scenic quality, adjacent to the lake or pacific highway, in or adjacent to an environmental zone, on visually dominant ridgelines, or in a heritage conservation area. | Yes | Yes |
| Category 2: Medium Scale <ul style="list-style-type: none"> • Development with an estimated value exceeding \$0.5m, or | No | Yes |

| Development Type and Category | Landscape Documentation | |
|--|------------------------------------|---|
| | Landscape Concept Plan at DA stage | Landscape Masterplan and Report at DA stage |
| <ul style="list-style-type: none"> • Development for 3-9 dwellings, or • Dual occupancy development | | |
| Category 1: Small Scale <ul style="list-style-type: none"> • Single dwellings, or • Development that will have little impact on the existing environment. | No | No |

Note: If a development type is not detailed in this table, or you are unsure of the category and requirements, seek advice from Council.

3.7 LANDSCAPE AND TREE PLANTING IN CAR PARKS

Objectives

- a. To provide broad canopy tree cover in car parks for shade and shelter.
- b. To reduce the visual impact of car parking areas.
- c. To maintain safety for car park users and sightlines below the tree canopy.

Controls

1. Development must include supply, installation and maintenance of at least one advanced clear-trunked broad canopy tree for every six at-grade car parking spaces.
2. Each landscape planting area must include at least one medium canopy tree with suitable ground covers or low shrubs below.
3. Each landscape planting area must have a minimum width of two metres.
4. The root volume for each tree must be a minimum of 8m³ and between 600 and 750mm deep.
5. The root volume must be either existing deep soil or an equivalent volume of gap graded (load bearing) soil, with a porous vehicle pavement over, that is installed to manufacturers specifications.
6. Each area allocated to tree planting must have a corresponding clear air space that is at least eight metres high and six metres wide.
7. All trees installed must be advanced stock and at least 75L container size.
8. All trees installed must be established and maintained for the life of the development. Any failed trees must be replaced immediately.

Note: Advice on recommended canopy trees for car parking areas should be requested from Council.

Note: Refer to Council's [Landscape Design Guideline](#) for further details and requirements.

3.8 FENCING

Objectives

- a. To ensure that fencing does not detract from the natural character of the landscape, inclusive of fencing design, materials and height.

Controls

1. Fencing must be consistent with the natural character of the landscape. Acceptable forms of fencing include post and wire, or post and rail fences.

2. Other types of fencing will only be permitted where the fencing does not have a detrimental impact on the scenic quality or natural character of the locality.
3. Fencing must not have the potential to affect fauna movement.
4. Solid fencing (including Colorbond) must not be used within Environmental Protection Zoned areas, except for entrance features, which must be constructed of masonry.

3.9 TRAFFIC AND TRANSPORT

Note: Several Australian Standards are specifically relevant to this section. All designs and development must be in accordance with the relevant Australian Standard.

Objectives

- a. To provide effective, efficient and safe movement for pedestrians, cyclists and motor vehicles.
- b. To ensure that vehicles can enter and leave a development site in a forward direction, unless otherwise justified to Council's satisfaction.

Controls

1. A Traffic Impact Statement must be prepared and submitted with any commercial/retail or industrial application for development with an area greater than 1000m², or where access to the site will be via an arterial or sub-arterial road.
2. Access to a site must be limited to one location where possible.
3. Direct access to arterial and sub-arterial roads must be minimised to maintain the efficient flow of traffic on those roads. Alternative access is encouraged where available.
4. Driveways must be located as far as possible from intersections.
5. All driveways must be designed and constructed to provide adequate sightlines.
6. Driveways and internal road circulation must be designed to cater for safe manoeuvring and queuing, so as not to disturb traffic operations on external roads.
7. The design and layout of the development must reflect the type of vehicles that will need to access the site/development. It must also ensure that vehicles can enter and leave the site in a forward direction.
8. Driveways must be of a type, construction and width suitable to the proposed development, and must be designed so as not to detract from the streetscape

Note: Refer to Council's [Traffic Impact Statement and Vehicle Access Guideline](#) for further details and requirements.

3.10 DESIGN OF PARKING AND SERVICE AREAS

Objectives

- a. To ensure that on-site parking and driveways do not dominate or detract from the appearance of the development or the local environment.
- b. To maximise pedestrian safety and amenity.
- c. To ensure the safe and efficient movement of vehicles within, entering and leaving the site.

Controls

1. Parking and service areas must be located to the side or rear of the development.
2. The design of parking areas must include direct, safe and well marked pedestrian routes from the parking area to building entries.
3. Car park design must not result in dead-end aisles.

4. Parking aisles must be orientated at right angles to the main building frontage.
5. The design of parking areas must include appropriate lighting for safe pedestrian movement and security.
6. Car parks must be screened from the street with landscape planting or with high quality façade screening that allows natural lighting and ventilation.

Note: The design of parking areas must comply with the provisions of AS2890 Parking Facilities

3.11 CAR PARKING RATES

Objectives

- a. To ensure that the number of car parking spaces is sufficient to support the intended use.
- b. To ensure that the number of car parking spaces does not discourage the use of public transport or other modes of transport.

Controls

1. The number of car parking spaces provided must be consistent with the specifications of the Table 7: Car Parking Rates.
2. Where vehicle parking requirements are not specified in Table 7, justification must be provided that supports the proposed vehicle parking provisions, such as:
 - i. Survey data from comparable facilities; and
 - ii. Survey data from existing operations where expansion is proposed.
3. Where the floor area of an existing development is being increased, the required car parking is to be calculated for the additional floor area only.
4. Where the proposed number of car parking spaces is **less than** or **greater than** specified in Table 7, justification must be provided to support a variation, such as:
 - i. Survey data from comparable facilities;
 - ii. Survey data from existing operations where expansion is proposed; or
 - iii. A proposal for dual use of parking spaces.
5. A reduction to the car parking rate must not exceed 20% or 20 spaces, whichever is the lesser.

Note: Where the required parking cannot be entirely provided on-site, alternative provisions for car parking may be made in accordance with the relevant *Section 7.11 Contributions Plan(s)* and/or [Council's Voluntary Planning Agreement Policy](#).

Note: 'Amenities' and 'storage space' are not included when calculating Gross Floor Area (GFA) for car parking purposes.

Table 7 - Car parking rates table for development in Environment Protection zones

| Development Type | Car Parking Rate |
|------------------------------------|---|
| Disability parking rate | One space per 50 spaces. Where the requirement is between five and 50 spaces, at least one space is to be provided for persons with a disability. Disabled parking must comply with the relevant Australian Standard. |
| Dual occupancies (attached) | One undercover space and 1 space as single file parking per dwelling of the dual occupancy. |
| Dwelling house | One undercover space and one space as single file parking. |

| Development Type | Car Parking Rate |
|--|---|
| Home business or industry <i>Where vehicles are an intrinsic component of the business or industry</i> | As per Dwelling - ie: one undercover space and one space as single file parking per dwelling. As per dwelling house, plus two spaces |
| Bed and breakfast establishment | As per dwelling house, plus one space per guestroom. May be provided as single file parking where guest parking is provided behind dwelling parking. |
| Eco-tourist facilities (not including a motel or hotel) <i>Where serviced apartments</i> <i>Where backpackers hostel</i> <i>Where a Camping Ground</i> | One space per unit, plus one space per 50m ² GFA for any dining room provided as part of the development, One space per 100m ² GFA and parking for a mini-bus One space per tent site |
| Funeral homes | One space per employee plus one space per three seats in chapel(s) |
| Education establishments <i>Where pre-school with normal school Hours</i> <i>Where primary or secondary school</i> <i>Above secondary school</i> | One space per 4 children, plus 1 space per 1.5 full-time equivalent staff. One space per 1.5 full-time equivalent staff, plus one space per 50 students One space per 1.5 full-time equivalent staff, plus one space per eight students |
| Community facilities | Five spaces, plus one space per 40m ² GFA |
| Place of public worship | One space per three seats |

3.12 NON-DISCRIMINATORY ACCESS

Objectives

- a. To ensure that development accommodates all people regardless of mobility.
- b. To ensure universal design that provides non-discriminatory access and equitable use.
- c. To minimise the scale and visual impact of ramp structures on the footpath and building façade.
- d. To ensure that design for flooding and sea level rise does not preclude non-discriminatory access.

Controls

1. The design and construction of development must ensure that non-discriminatory access is provided to enable all users of that development to access the same level of service and use.
2. Building entries must be located where there is the smallest level change from the public footpath to the ground floor interior.
3. Where floor levels are raised to accommodate flooding or projected sea level rise, the design of non-discriminatory access must incorporate an external terrace or internal floor space set at an intermediate level between the footpath and general ground floor level of development.

4. Where development is listed in Table 8, a Disability Access Audit must be prepared in accordance with Council's *Non-discriminatory Access Guideline* and submitted to Council. The Disability Access Audit must be prepared by an accredited access consultant.

Note: Refer to Council's [Non-discriminatory Access Guideline](#) for further information.

Note: A Disability Access Audit may be waived for some developments at the discretion of the assessing officer for some Changes of Use proposals.

Table 8 - Development types requiring a Disability Access Audit

| | |
|---|--|
| Amusement centres with a total floor area of 500m ² or more | Markets with a total floor area of 500m ² or more |
| Backpackers' accommodation with 20 or more bedrooms | Manufactured home estate/caravan park |
| Boarding House with more than 20 rooms | Medical centre |
| Business/commercial premises with a total floor area of 500m ² or more | Mixed use development with a total floor area of 500m ² or more |
| Child care centre | Multi-dwelling housing with 10 or more dwellings |
| Community facility | Nightclub |
| Educational establishment | Passenger transport facilities |
| Entertainment facility | Place of public worship |
| Function centre | Recreation facilities – indoor, outdoor and major |
| Group home | Registered club |
| Health consulting rooms with four or more consulting rooms | Retail premises with a total floor area of 500m ² or more |
| Health services facilities | Residential care facility |
| Hospital | Residential flat building with 10 units or more |
| Hotel or motel accommodation | Seniors housing |
| Information and education facility | Tourist accommodation with 20 units or more |
| Licensed premises | Change of Use |

3.13 SAFETY AND SECURITY

Objectives

- a. To ensure that development mitigates opportunities for crime, and perceived opportunities for crime.

Controls

1. Developments must ensure that the following Crime Prevention Through Environmental Design (CPTED) principles have informed the design of the proposed development:
 - i. Surveillance – Developments must be designed and managed to maximise the potential for passive surveillance;
 - ii. Access Control – Developments must be designed so as to make them legible for users without losing the capacity for variety and interest;

- iii. Territorial Reinforcement – Developments must be designed to define clearly legitimate boundaries between private, semi private and public space; and
- iv. Space Management – Developments must be designed and detailed to minimise damage and the need for undue maintenance, without undermining the aesthetic and functional qualities of the building.

Note: Refer to Council’s [Crime Prevention Through Environmental Design Guideline](#) for further information on CPTED principles.

2. Where development:

- i. is listed in Table 9, or
- ii. is valued at \$5,000,000 or more, or
- iii. has a gross floor area greater than 5,000m², or
- iv. will be open to the public between the hours of 9pm and 6am, a Crime Risk Assessment must be prepared and submitted to Council.

3. The Crime Risk Assessment should be prepared by a person who has undertaken the NSW Police Service ‘Safer by Design’ course (or equivalent) and must:

- i. Analyse the types of crime that may be prevalent in the area, and to which the development may be susceptible;
- ii. Provide information as to how the design was informed by the CPTED principles; and
- iii. Inform the design, construction or future management practises of the development (eg: building materials, signage, lighting, landscaping, security patrols, maintenance and graffiti removal practices).

4. Any recommendations or shortfalls identified by a Crime Risk Assessment are to be implemented into the design of the development to the satisfaction of the assessing officer.

Note: Refer to Council’s [Crime Prevention Through Environmental Design Guideline](#) for further information on what needs to be covered in a Crime Risk Assessment.

Table 9 - Development types requiring a Crime Risk Assessment

| | |
|---|--|
| Community facilities | Car parks |
| Development involving the provision of publicly accessible open space | Places of public worship |
| Educational establishments | Seniors living developments and hospitals with more than 30 beds |
| Information and education facilities | Eco-tourist facilities |

3.14 CUT AND FILL

Objectives

- a. To minimise land shaping, particularly outside the building footprint.
- b. To ensure development is on a stable site.
- c. To minimise the impact on groundwater flow.
- d. To ensure that development does not concentrate surface water flows to adjoining properties.

- e. To minimise the extent of earthworks, stormwater infrastructure and retaining structures and the associated costs.

Controls

1. Fill is not permitted within core riparian zones, within the Lakefront Development Area or the Foreshore Development Area, or within the extent of the 100 year probable ARI (1% AEP) flood event.
2. Cut and fill associated with a development must only occur within the building and car park footprint.
3. Cut and fill associated with a dwelling development must comply with the provisions in Table 10 and Figure 5.
4. Where the ground level change across the proposed footprint of a dwelling, measured in any direction, exceeds 2m, the dwelling design must include one or more of the following:
 - i. split level design
 - ii. 2 storey design with the garage below habitable floorspace
 - iii. drop edge beam or suspended slab on a footing wall
 - iv. pier and beam construction.
5. Cut and fill associated with all other development must comply with the provisions in Table 11.
6. Retaining structures greater than 1m in height must be designed by an engineer, and the certification details lodged with the development application.
7. Batter slopes must not exceed a gradient of 1:4, unless stabilised by dense planting.
8. Fill must not contribute to unreasonable impacts on amenity or the redirection of water onto adjoining properties.
9. Any fill used must be certified Virgin Excavated Natural Materials, certified Excavated Natural Material or uncontaminated engineered fill.

Table 10 - Requirements for cut and fill works for a dwelling

| Location | Type of Works | Requirement | Other Requirement |
|----------------------------|----------------------------|-------------------------|--|
| within building footprint | cut and/or fill - retained | d =3 m max | |
| outside building footprint | cut and/or fill - retained | c =1.0m max | |
| near common boundary | cut and/or fill - retained | a =2m min* b =1m max | landscape planting to area between boundary fence and retaining wall |
| near common boundary | fill – unretained batter | f =400 min | side and rear fences built on existing ground level |
| remainder of site | cut and/or fill - retained | 1.0m max | retaining walls on or near a front boundary do not exceed 1.0m. |
| remainder of site | fill – unretained batter | e = 600mm max | batter slope not to exceed 1:4 |

Note *: distance to a boundary is measured from the face of the retaining wall

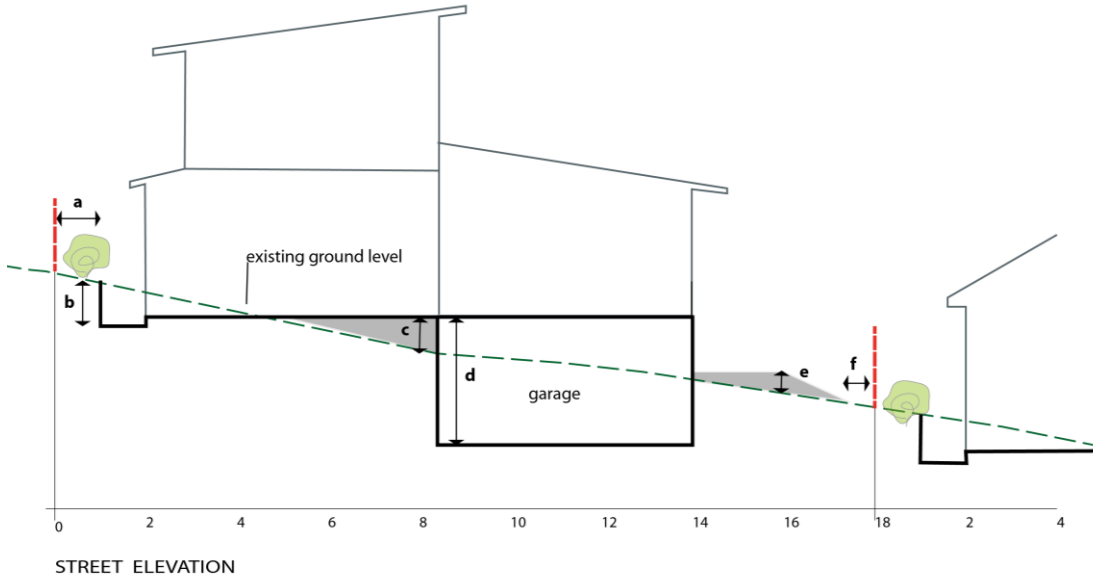


Figure 5 - Cut and fill for a dwelling

Table 11 - Requirements for cut and fill works generally

| Location | Type of Works | Height | Other Requirement |
|---------------------------|----------------------------|---------------|--|
| within building footprint | cut and/or fill - retained | 4m max | |
| within 2m of a boundary | cut and/or fill - retained | not permitted | landscape planting to area between boundary and retaining wall |
| remainder of site | cut and/or fill - retained | 1.0m max | . |

Note *: distance to a boundary is measured from the face of the retaining wall

4 OPERATIONAL REQUIREMENTS

4.1 DEMOLITION AND CONSTRUCTION WASTE MANAGEMENT

Objectives

- a. To reduce demolition waste by maximising beneficial reuse of infrastructure, buildings and materials onsite.
- b. To avoid creating construction waste wherever possible.
- c. To enable maximum diversion of demolition and construction waste to reuse, recycling or composting.
- d. To ensure that waste management is planned across all demolition and construction stages so that reusable resources and waste can be appropriately and effectively stored and removed safely from site without adverse impacts on local amenity.

Controls

1. Applications must provide a completed Demolition Waste Management Plan (WMP) (where there are demolition works) and a Construction WMP (for all construction works), in accordance with Chapter 2 (for Demolition) and Chapter 3 (for Construction) of the Lake Macquarie City Council Waste Management Guidelines unless the development is:
 - i. Permitted without consent in this zone
 - ii. Agriculture (other than intensive agriculture)
 - iii. Drainage
 - iv. Earthworks
 - v. Forestry
 - vi. Rail lines
 - vii. Roads
 - viii. Roadside stalls
 - ix. Signs
 - x. Stormwater management facilities
 - xi. Utility installations

These plans must be provided to any relevant person involved in the demolition and/or construction, including architects, project managers, builders, contractors and sub-contractors.
2. The Demolition WMP must describe how the proposal avoids creating waste and how it maximises the reuse and recycling of demolition and construction materials.
3. The following must be shown on scaled plans to be submitted with the development application for demolition and construction stages:
 - i. waste storage area(s) with bins and equipment shown to scale;
 - ii. waste collection area(s) with bins shown to scale (if different from storage areas);
 - iii. waste carting route(s) from buildings to waste storage area(s);
 - iv. bin carting route(s) from waste storage to collection point(s) (if different from storage areas); and
 - v. for developments proposing onsite collection, the waste collection vehicle route, swept paths and clearances.

4.2 WASTE MANAGEMENT

Objectives

- a. To ensure that waste management infrastructure and operational procedures are an integral part of the development's design and ongoing management.
- b. To ensure sufficient volume of equitably accessible, safe, hygienic and aesthetically appropriate waste storage is provided on the property to minimise negative impacts of waste management on occupants and neighbours.
- c. To enable maximum opportunities for separation of reusable, recyclable, compostable and problem wastes from residual garbage bins.
- d. To ensure equitable access for all occupants to opportunities to maximise diversion of waste.
- e. To provide flexibility to expand or reconfigure waste separation systems, so that owners and occupants have options to access a range of waste services.
- f. To ensure secure separation of commercial waste from residential waste storage and collection.
- g. To provide unobstructed waste collection point(s) that are safely and efficiently accessible by Council waste collection vehicles wherever possible.
- h. To provide unobstructed, safe access to move bins and bulk waste (such as furniture and whitegoods) between storage and collection points.
- i. To integrate with the natural landscape.

Controls

1. Applications Operational Waste Management Plan (WMP) must be prepared in accordance with the Lake Macquarie Waste Management Guidelines and submitted with the development application for all identified in Table 12, in other parts of this Development Control Plan or when Council identifies that particular circumstances warrant it.

Table 12 - Uses Requiring an Operational Waste Management Plan

| |
|---|
| <ul style="list-style-type: none"> • Dwellings • Commercial and retail, recreation and tourism facilities • Industrial developments and infrastructure • Events • Subdivisions |
|---|

2. The Operational WMP must address all wastes that will be generated from the operation of the premises. The plan must maximise opportunity for separation from general waste of reusable, recyclable and compostable materials for reuse, recycling and composting wherever possible.
3. The development application must demonstrate - in the Operational WMP and on plans with bins, equipment, waste collection vehicle swept paths and clearances all shown to scale - that the development has sufficient and usable:
 - i. bin type, sizes, numbers and collection frequency; and
 - ii. internal storage within premises; and
 - iii. waste carting route(s) from premises to external waste storage area(s); and
 - iv. external waste storage areas; and
 - v. bin carting route(s) from waste storage to waste collection point(s); and
 - vi. waste collection point(s);
 - vii. for developments proposing onsite collection, the waste collection vehicle route(s), swept paths and clearances; and

- viii. waste management information guide for owners and occupants.
- 4. For developments with the following specific land uses, the development and Operational WMP must address other matters as identified in the Lake Macquarie Waste Management Guidelines:
 - i. boarding houses and hostels; group homes; short-term rental accommodation; social housing; and seniors' living developments;
 - ii. commercial and retail premises
 - iii. veterinary hospitals;
 - iv. aged care facilities;
 - v. child care centres;
 - vi. service stations;
 - vii. public and private recreation; and amusement and functions centres and entertainment facilities;
 - viii. vehicle repair workshops and depots;
 - ix. sustainable aquaculture; and
 - x. light, heavy and general industries, hazardous, offensive and high technology industries; infrastructure; and waste management or resource recovery facilities.
 - xi. to demonstrate compliance with the Lake Macquarie Waste Management Guidelines.
- 5. If the development is not designed to enable Lake Macquarie City Council waste services, a letter must be provided from a private waste contractor advising how they are able to provide the required garbage, recycling and green (garden and food) waste services and (if needed) access the premises.

4.3 ON-SITE SEWAGE MANAGEMENT

Objectives

- a. To ensure that land is suitable for on-site sewage management, and that on-site sewage management systems are designed to operate sustainably, without resulting in environmental harm or risk to public health.

Controls

- 1. On-site sewage management must not be located on sites:
 - i. Where connection to reticulated sewer is available (this requirement does not apply to grey water treatment systems); or
 - ii. Below the 20-year ARI flood level.
- 2. Where an on-site sewage management system is proposed, an assessment report must be provided to determine land capacity for sewage effluent. An appropriately qualified consultant must carry out the assessment. The site assessment must:
 - i. Be undertaken in accordance with the Environmental Health Protection Guidelines, and On-site Sewage Management for Single Households;
 - ii. Recommend suitable wastewater treatment technology;
 - iii. Include water balance calculations for determination of the size of the effluent irrigation area based on zero wet weather storage requirements; and
 - iv. For greywater treatment systems, it must be demonstrated that the proposed system complies with the *NSW Guidelines for Greywater Reuse in Sewered, Single Household Residential Premises*.
- 3. Applications for sewage treatment systems must include:
 - i. Sewerage Site Plan (1:200) indicating the location of the treatment system, disposal area, and buffer distances to boundaries, dwellings, water courses and other significant features on the site; and

- ii. Detailed plans and sections of the proposed effluent disposal system.
- 4. Other than for greywater treatment systems, surface and subsurface irrigation areas should be made up of irrigation zones that are a minimum 300m² and maximum 500m². Multiple irrigation zones must be dosed via an automatic irrigation controller or indexing valve.
- 5. Pump-out septic systems are only acceptable where on-site disposal of effluent is not feasible, and where access is available for a pump-out service to be rendered safely from a public road at the property boundary.

4.4 LIQUID TRADE WASTE AND CHEMICAL STORAGE

Objectives

- a. To ensure that liquid trade waste is disposed of appropriately, and does not enter the environment.
- b. To ensure that chemicals associated with a development are stored in a secure manner.

Controls

- 1. Where development is proposed that will generate liquid trade wastes, evidence of a liquid trade waste agreement with Hunter Water must be provided. On-site treatment and/or disposal of liquid trade waste will not be permitted.
- 2. Developments that generate liquid trade waste must ensure that this waste is adequately contained and bunded to prevent pollution entering the environment.
- 3. Where chemicals are stored within, or as part of development, those chemicals must be adequately contained and bunded to prevent chemicals entering the environment unintentionally in the event of a spill, flooding, or any other event that may lead to the escape of chemicals.
- 4. All containment and bunded areas must drain to the reticulated sewerage system under agreement with Hunter Water. No on-site treatment or disposal of liquid trade waste or spilt chemicals will be permitted.

4.5 EROSION AND SEDIMENT CONTROL

Objectives

- a. To ensure that development is designed to prevent erosion by minimising disturbance, retaining vegetation and reducing the need for earthworks.
- b. To prevent erosion and sediment-laden run-off during site preparation, construction and the ongoing use of land.
- c. To ensure that a number of integrated solutions, using a treatment train approach, are implemented for the control and treatment of erosion and sediment.

Controls

- 1. For proposals where the area of soil disturbance is less than 250m², appropriate erosion and sediment control measures must be installed and maintained. This will prevent pollutants from entering water courses during construction and until 70% ground cover is attained.
- 2. For proposals where the area of soil disturbance is more than 250m² but less than 2500m², an Erosion and Sediment Control Plan (ESCP) must be prepared and lodged, in accordance with Council's [Erosion and Sediment Control Guideline](#).
- 3. For proposals where the area of soil disturbance is more than 2500m², a Soil and Water Management Plan, identifying erosion prevention and sediment control measures, must be prepared and lodged, in accordance with Council's [Erosion and Sediment Control Guideline](#).
- 4. The maximum area of soil exposure at any one time must not exceed 2.5 hectares.

Note: Council may vary the requirements, especially where there is a higher or lower risk of polluting receiving waters. Further information may be required for any site depending on, but not limited to, the calculated soil loss, sediment type and an assessment of site constraints and opportunities.

4.6 AIR QUALITY

Objectives

- a. To ensure that development does not adversely affect air quality beyond the National Environment Protection Measure (Ambient Air Quality) standard for criteria air pollutants.
- b. To ensure that measures are implemented to maintain air quality.
- c. To ensure that odours and emissions do not have an unreasonable impact on the amenity of neighbouring properties, or the health of their occupants
- d. To ensure that odours and emissions do not have an unreasonable impact on public health.
- e. To ensure that emissions do not have an unreasonable impact on natural environment.

Controls

1. An air quality report must be prepared by an air quality/odour expert where a proposed development has the potential to adversely affect air quality. This report must:
 - i. Consider the information provided on Council's [Local Air Quality Maps](#);
 - ii. Address impacts caused by construction and ongoing operation or occupation of the development;
 - iii. Identify emissions, and measures to mitigate the overall impact, and the impact on nearby residences and occupants of other properties especially sensitive receivers; and
 - iv. Be prepared in accordance with the [Approved Methods for the Modelling and Assessment of air pollutants in New South Wales](#) and other requirements prescribed in State and Federal legislation.

Note: Council's air quality map is based on modelling air pollution in the local government area and identifies areas where the Criteria Air Pollutants exceed the National Environment Protection Measure (Ambient Air Quality) standard.

4.7 NOISE AND VIBRATION

Objectives

- a. To minimise the generation of noise and/or vibration, and to mitigate associated adverse impacts on the amenity of neighbouring properties and their occupants, and on occupants of the proposed development.

Controls

1. Where proposed development has the potential to produce an adverse noise or vibration impact on occupants of the site or of nearby properties, an acoustic and vibration study must be prepared by a qualified consultant, to Council's satisfaction.
2. Noise or vibration generated by development must not exceed the criteria stipulated in the [NSW Industrial Noise Policy](#) or the [Noise Guide for Local Government](#) at the property boundary of the noise source, or at a receiving lot boundary.
3. Measures must be implemented to ensure that any noise or vibration generated is not offensive, in accordance with the [Noise Guide for Local Government](#)
4. During construction, the operating noise level of machinery, plant and equipment must comply with the [Noise Guide for Local Government](#).
5. A suitably qualified acoustics consultant must prepare a Noise Management Plan where construction is proposed to exceed 26 weeks.

6. Noise generating operations and outdoor operations must only occur between 7am and 6pm Monday to Saturday.
7. Council may request at any stage an independent report to confirm that noise emissions are within acceptable limits; such costs are to be borne by the applicant/ operator.