



Googong DCP

Part 8

Environmental Management

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PART 8 - ENVIRONMENTAL MANAGEMENT

8.1. Introduction

This section outlines the objectives and development controls relating to general environmental management issues to apply to all development at Googong with the exception of development types covered in Part 6.

8.2. Soils and Salinity

Objectives

- 1) To minimise erosion and sediment loss during and after construction.
- 2) To minimise water pollution due to erosion, siltation and sedimentation.
- 3) To ensure development will not significantly increase the salt load in existing watercourses within the site.
- 4) To ensure measures are implemented as part of the development to prevent any degradation of the existing soil and groundwater environment.
- 5) To minimise the damage caused to property and vegetation by existing saline soils, or processes that may create saline soils.

Controls

- a) All development must incorporate soil conservation measures to minimise soil erosion and siltation during construction and following completion of development. Soil and Water Management Plans, prepared in accordance with *Managing Urban Stormwater – Soils and Construction (NSW Department of Housing 3rd Edition March 2004* ('The Blue Book') are to be submitted with each subdivision development application.
- b) All sediment and erosion controls are to be installed prior to the commencement of any construction works and maintained throughout the course of construction until disturbed areas have been revegetated/established.
- c) Unless provided at the neighbourhood structure plan stage each subdivision application is to be accompanied by a salinity report prepared by a suitably qualified consultant, reporting on the conditions of the site, the impact of the proposed subdivision on the saline land, the mitigation measures that will be required during the course of construction and a requirement that the consultant signs off the project upon completion of works. Investigations and sampling for salinity are to be conducted in accordance with the requirements of Site Investigations for Urban Salinity (DNR).

8.3. Cut and Fill

Objectives

- 1) Minimise the extent of excavation and fill.
- 2) Ensure that the built form responds to the topographical constraints of the Googong site.
- 3) Ensure dwelling designs allow for accessible driveway grades and safe vehicular movement.
- 4) Ensure that the amenity of adjoining residents is not adversely affected by any cut and fill operation.
- 5) To minimise the need for retaining walls.
- 6) To ensure that batters can be maintained and to limit the potential for soil erosion.

Controls

- a) Excavation and fill on building sites shall be limited to a max of 1.5m. Greater depth may be considered by Council, if within the building envelope, suitably retained and/or stabilised and not visible from the street.
- b) Development applications are to identify the extent of proposed cut and/or fill land and provide justification for the proposed changes to the land levels.
- c) The maximum height of retaining walls is to be 1.0m.
- d) Where terraced walls are proposed the minimum distance between each step is 0.5m.
- e) A variation to the retaining wall heights can be considered with supporting justification and concurrence of the adjoining neighbours. Walls over 1m in height are to be designed/certified by a structural engineer
- f) Batters are to be limited to a maximum gradient of 1 vertical: 4 horizontal.
- g) Proposed cut or fill in the vicinity of sewer and stormwater mains must comply with Council's *Development Adjacent to Water, Sewer and Stormwater Mains Policy*.

8.4. Stormwater Management and Flooding

Objectives

- 1) Ensure that all development within Googong incorporates stormwater reuse, retention and detention strategies to limit the changes to the hydrological regime of the receiving waterways.
- 2) To minimise the impacts of development and associated infrastructure on the health and amenity of natural waterways.
- 3) Treat run-off from development such that it does not adversely impact on downstream flora and fauna during construction and post development phases.
- 4) Incorporate Water Sensitive Urban Design (WSUD) in the planning of the site layout and design and development to promote sustainable and integrated management of land and water resources incorporating best practice stormwater management, water conservation and environmental protection.

Controls

- a) All Development Applications shall include a Stormwater Drainage Analysis, addressing the management of water quality and quantity (having regard to all contributing catchments and downstream water bodies), for the range of storm events from the 1 Year ARI to the 100 Year ARI storm event and addressing the objectives of WSUD.
- b) Existing natural drainage lines shall form part of a stormwater and runoff drainage management system utilising soil conservation measures (including detention basins and or wetlands) to alleviate stormwater peaks and retain sediments and pollutants.
- c) Stormwater management strategies shall be adopted to maximize the efficient use of land and facilitate adequate allocation of land for these purposes.
- d) Stormwater management strategies shall be developed and implemented in a manner which addresses potential salinity hazards.
- e) Stormwater treatments are to be designed to meet the minimum level of performance which is a reduction in the stormwater peak run off flows to predevelopment levels for the range of storms from the 1 year ARI to the 100 year ARI event.

- f) Stormwater management design is to maintain the existing hydrological regime for stream forming flows, with respect to peak flows and duration of flow.
- g) WSUD elements shall be incorporated into the design of all development.
- h) A Development Application shall include a WSUD assessment that addresses:
 - i. The relevant site characteristics and constraints.
 - ii. Stormwater management strategies, including treatment measures, reuse and maintenance requirements.
 - iii. A rationale for the proposed strategies.
 - iv. Evidence of stormwater modelling is to accompany all development applications for all proposed development except those for less than 10 dwellings.

8.5. Bushfire Management

Applicants are advised to consult the following publication: “NSW Rural Fire Service, *Planning for Bush Fire Protection 2019*” (The document can be obtained on the Rural Fire Service’s webpage: <https://www.rfs.nsw.gov.au/>)

A large scale map of fire hazard for the local government and surrounding area has been produced and certified by the Rural Fire Service and is available from Council. However it is at such a large scale that assessment by an applicant of individual sites is required to determine the level of potential bushfire threat.

The assessment will identify standards which may affect the choice of building construction, landscaping and design. Depending on the assessment, some protective measures can be incorporated at little or no cost during construction.

Objectives

- 1) Consider bushfire protection and management issues in land use planning and development decisions, to provide a safer environment for the community.
- 2) Manage vegetation to reduce potential bushfire attack in the vicinity of habitable buildings.
- 3) Design and siting of habitable buildings for the protection of life and to improve the survivability of the building during the passage of a fire front.
- 4) Provide safe access for emergency service personnel.
- 5) Ensure adequate water supplies are available to householders and emergency services to assist in the defence of habitable buildings against bushfire attack.
- 6) Establish a maintenance regime for fire protection for the life of the habitable building.

Controls

- a) A Bushfire Threat Assessment report must form part of all development applications for lands identified as ‘bush fire prone’ on the Bush Fire Prone Lands Maps. This assessment is to be prepared in accordance with “*Planning for Bushfire Protection*”, by the Rural Fire Service and Planning NSW, and specify the mitigation and other measures required to comply with those Guidelines.
- b) Assessment of bushfire threat must examine impacts on the proposed development from fire both on and approaching the site. It must also include an evaluation of the capacity of the existing road network serving the site to accommodate traffic in emergency situations, and consider emergency vehicle access to those parts of the site fronting a potential bushfire source.

- c) Preparation of an assessment of threat from bushfire should include reference to:
 - i. NSW Rural Fire Service (RFS) – *Planning for Bushfire Protection 2019*.
 - ii. AS 3959, Construction of buildings in bushfire-prone areas.
 - iii. Consultation with Council.
- d) The recommendations of the Assessment report must be incorporated into the design of the proposed development. That design may require further amendment based on additional conditions which may be imposed by the approving authority (normally Council or the RFS).
- e) Subject to detailed design at development application stage, the location and widths of APZs are to be provided generally as follows:
 - i. Are to be located wholly within the development site.
 - ii. May incorporate roads.
 - iii. Are to be maintained in accordance with the *Planning for Bushfire Protection 2019* (RFS).
 - iv. Are to be generally bounded by a perimeter fire trail/road that is linked to the public road system at regular intervals in accordance with *Planning for Bushfire Protection*.
- f) Reticulated water is to meet the standards contained within *Planning for Bushfire Protection 2019*. Water supply is to be via a ring main system, engineered to the requirements of Australian Standard 2419.1-1994 Fire Hydrant Installations.
- g) Dwellings adjacent to APZs are to be constructed in accordance with the requirements of Appendix 3 of *Planning for Bushfire Protection 2019* and *Australian Standard 3959 - Construction of Building in Bushfire Prone Areas*.

8.6. Aboriginal Heritage

Objectives

- 1) To ensure that any Aboriginal heritage significance is appropriately incorporated into the redevelopment of the precinct.

Controls

- a) Areas containing potential indigenous sites are identified at the Archaeological (Indigenous & European) Map contained within Appendix 2. Development shall not proceed within these areas without appropriate investigation and consultation with the relevant local Aboriginal groups.
- b) The investigations are to identify, where required, conservation zones for the protection and management of archaeological deposits. A Plan of Management is to be prepared to address the ongoing protection and management of the archaeological deposits.
- c) Any development application for development within these sites is to be accompanied by an Aboriginal Archaeological Report that is supported by the comments of the local Aboriginal groups.
- d) Where development impacts upon an identified Aboriginal site, Consent to Destroy Permits will need to be sought under *Section 90 of the NSW Parks and Wildlife Act 1974*.

8.7. European Archaeological Heritage

Objectives

- 1) To protect the recognised European archaeological significance of the precinct.
- 2) To ensure that information regarding the archaeological heritage significance of the precinct is incorporated into the development of the precinct.

Controls

- a) Elements of European archaeological heritage significance are shown on Archaeological (Indigenous & European) map in Appendix 2. Prior to any development that affects these elements a detailed assessment of heritage significance (Heritage Impact Statement) is to be undertaken which addresses the significance assessment criteria contained in the NSW Heritage Manual.
- b) An applicant is to demonstrate to Council how any proposed development that affects the identified elements responds to any identified archaeological constraints. If any relics are to be retained in situ, an applicant is to outline with the development application all management measures to ensure ongoing protection of the relics.

8.8. Tree Retention and Biodiversity

Clause 1.8 of this DCP adopts a number of Clauses from the *Queanbeyan Development Control Plan 2012 (QDCP 2012)*. This includes the adoption of Clause 2.12 of the *QDCP 2012*, Tree and Vegetation Management. This Clause therefore needs to be read in conjunction with Clause 2.12 of the *QDCP 2012*.

Objectives

- 1) Development should minimise the loss of trees to protect scenic values, habitat and biodiversity.
- 2) Development should minimise the loss of existing site trees that enhance natural or scenic values, control sunlight, or provide shade, shelter, habitat or screening.
- 3) The development should minimise the environmental impacts of clearing for bushfire hazard reduction.
- 4) To maintain or improve as much existing vegetation as practicable within the locality.
- 5) Reduce impacts of runoff from roads and impervious areas on adjacent lands.
- 6) To manage weeds on the site during and after construction to prevent the spread of weeds.

Controls

- a) Development must provide filter and protection strips to natural drainage lines, watercourses, streams, foreshores of constructed drainage corridors, riparian habitat strips and exclusion zones for preserving vulnerable and/or significant remnant vegetation and species.
- b) All high recovery potential vegetation is to be retained within open space. The moderate recovery potential vegetation is to be retained, where possible, within open space but may be retained within private lots.
- c) Existing significant trees, in particular large hollow bearing trees and remnant are to be retained wherever possible within development sites, public and community parks, streetscapes and riparian corridors.
- d) Native vegetation (canopy level) shall be provided, where possible within pocket parks, riparian corridors and street verges. Details of any planting shall be provided within a detailed Landscape Plan submitted at development application stage.
- e) Where development is located within or close to a known biodiversity corridor fencing shall be sympathetic to the passage of native fauna.

- f) Development must provide temporary tree/vegetation protection measures prior to any clearing works.
- g) Erosion and sediment controls during and after construction should have minimal impact on watercourses and remnant bushland.
- h) Where required by Council, subdivision development applications are to be accompanied by a Weed Management Plan that identifies weed control measures during and after development.
- i) Trees selected for retention at subdivision stage must be carefully considered to ensure that retained trees do not later adversely impact on development on those subdivided lots.

8.9. Land Contamination Management

Objectives

- 1) To minimise the risks to human health and the environment from the development of potentially contaminated land.
- 2) To ensure that potential site contamination issues are adequately addressed at the subdivision stages.

Controls

- a) Development applications for development in Areas of Environmental Concern (AEC) as identified within Appendix 2 shall be accompanied by a Stage 2 Detailed Site Investigation prepared in accordance with Council's Policy – *Management of Contaminated Lands*. A Remediation Action Plan (RAP) will be required for areas identified as contaminated land in the Stage 2 Site Investigation.
- b) When redevelopment is proposed on a site where Council suspects that contamination may be present or for applications proposing a change of use to a more sensitive land use (e.g. residential, education, public recreation facility etc), Council may request a Stage 1 Preliminary Site Contamination Investigation.
- c) All investigation, reporting and identified remediation works must be in accordance with the protocols of Council's Policy – *Management of Contaminated Lands*, the NSW Office of Environment and Heritage (OEH) *Guidelines for Consultants Reporting on Contaminated Sites* and *State Environmental Planning Policy (Resilience and Hazards) 2021*.
- d) Prior to granting development consent, Council must be satisfied that the site is suitable, or can be made suitable for the proposed use. Remediation works identified in any RAP will require Council consent prior to the works commencing.
- e) Council may require a Site Audit Statement (SAS) (issued by an OEH Accredited Site Auditor) where remediation works have been undertaken to confirm that a site is suitable for the proposed use.

8.10. Odour

Objectives

- 1) To ensure appropriate levels of odour amenity for future residents near the sewerage treatment plant.

Controls

- a) If an odour impact assessment was not prepared as part of the Neighbourhood Structure Plan stage any residential development within 400m of the proposed or operating sewerage treatment plant is to be accompanied by a *Level 3 Odour Impact Assessment* (using the dispersion-modelling program CALPUFF) to verify the actual nuisance levels of odour generated by the sewerage treatment plant. The

assessment is to be undertaken in accordance with the DECCW *“Approved Methods for modelling and assessment of air pollutants in NSW” 2005*.

- b) Any land identified by the odour Level 3 study as being within a nominated separation distance shall not be developed until it can be demonstrated to Council that changes to the operation of the sewerage treatment plant have resulted in removal of the odour source.

8.11. Construction Waste

All construction waste contains resources that are useful. Recovering, recycling and using these as secondary resources reduces demand for landfill sites. Waste includes:

- Any substance (whether solid, liquid or gaseous) that is discharged, emitted or deposited in such volume, constituency or manner as to cause an alteration in the environment.
- Any discarded, rejected, unwanted, surplus or abandoned substance.
- Any otherwise discarded, rejected, unwanted, surplus or abandoned substance intended for sale or for recycling, reprocessing, recovery or purification by a separate operation from that which produced the substance.
- Any substance prescribed by the regulation to be waste for the purpose of the *Protection of the Environment Operations (Waste) Regulations 2014*.

Objectives

- 1) Development should include design and project management to maximise avoidance, reuse and recycling of subdivision debris and refuse, demolition waste and building/construction materials.
- 2) Building designs and construction techniques should minimise waste generation.

Controls

- a) A Waste Management Plan must be provided for all development requiring construction works on site. The level of detail in the plan will reflect the scale of development being undertaken but will generally include details of:
 - i. The volume and type of waste to be generated.
 - ii. How waste is to be stored and treated on site.
 - iii. How and where residual material is to be disposed.
- b) The Waste Management Plan must be accompanied by drawings with specific details showing:
 - i. On site sorting and storage areas.
 - ii. Access for collection vehicles.
 - iii. Vegetation to be removed or retained.
- c) The Waste Management Plan must optimise recycling to reduce waste to landfill.

8.12. Landfill/Earthworks

It is common practice to use the term ‘clean fill’ to describe the material suited for landfill activity. However landfill carried out with material that contains building waste such as broken concrete slabs or bricks may be contaminated and present long term environmental problems particularly in flood affected areas.

The EPA requires that landfill uses only virgin excavated natural material (VENM) such as clay, gravel, sand, soil and rock.

Landfill with material that is mixed with any other type of waste excavated from areas of land contaminated with human made chemicals or which contains sulphidic soils is not acceptable.

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Landfill with material other than VENM may require a licence from the EPA for a waste facility operation.

Objectives

- 1) To ensure that any earthworks (excavation or filling) will not have a detrimental impact on environmental functions and processes, neighbouring uses or heritage items and features of the surrounding land.
- 2) Proposed development that includes any landfill activity using material other than VENM should be referred to the EPA as an integrated development assessment.
- 3) Development should minimise the amount of landfill required.

Controls

- a) Adequate justification of the need for landfill to be deposited on a site must be provided.
- b) The type and origin of landfill material being used must be detailed. Landfill activity must only be undertaken using VENM such as clay, gravel, sand, soil and rock only must be used for land filling activities.
- c) Material that is mixed with any other type of waste which has been excavated from areas of land contaminated with human made chemicals as a result of industrial, commercial, mining or agricultural activities or which contains sulphidic ores or soils must not be used for landfill.
- d) Council may approve the addition of selected crushed inert materials to VENM for specific landfill activities.
- e) A scaled plan must be provided demonstrating the location of any existing features on the property such as drainage lines and infrastructure, vegetation, roads etc.
- f) A site plan prepared by a registered surveyor must be submitted demonstrating the existing levels of the property and proposed levels of the landfill.
- g) The extent of the fill including location, depth, direction and gradient slope of the surface and batter slopes must be clearly demonstrated on a plan.
- h) Landfill must not adversely affect the natural flow of drainage or runoff.

8.13. Development near Googong Dam Foreshores

This clause applies to development on land identified as “Googong Foreshore Buffer Area” on the Local Clause Map.

Objectives

- 1) To protect the Googong Dam water supply catchment from inappropriate development that may compromise water supply and quality.

Controls

An applicant is to demonstrate to Council that:

- a) The building and associated infrastructure envelope identified for each existing or proposed lot are appropriate having regard to the land capability and the objective of this clause.
- b) The development incorporates an appropriate management regime relating to stormwater run-off, bushfire control, vegetation clearing, access provision, fencing controls, recreational uses, feral animal and weed control, management of grazing, keeping of animals and landscaping with indigenous species.