ENVIRONMENT, VEGETATION, LANDSCAPING & HERITAGE

1. INTRODUCTION

Protection of environment and heritage, applies to all engineering works where disturbance of a construction site is inevitable. This may involve the existing surface or any vegetation, horticultural feature, water body or stream, objects and places of Aboriginal or European heritage, or natural vegetation and critical habitat.

2. DEVELOPER RESPONSIBILITIES

2.1. LEGISLATION

Items of the "built" or "natural" environment which have conservation significance are protected by the *Heritage Act, National Parks and Wildlife Act, Threatened Species Conservation Act, Protection of the Environment Operations Act, Native Vegetation Act*, and *Maitland Local Environmental Plan* or certain *State Environmental Planning Policies (SEPP)* (for example, *State Environmental Planning Policy No 14 – Coastal Wetlands, State Environmental Planning Policy No 22 – Littoral Rainforests, State Environmental Planning Policy No 44 – Koala Habitat*), together with Council Policies and Plans including the "*Maitland Greening Plan*" and DCP "*Maitland Conservation and Design Guidelines*". The *Threatened Species Conservation Act* protects both plants and wildlife.

2.2. HERITAGE CONSERVATION AND PROTECTION

Where a known item of heritage or heritage site is affected by or adjacent to a development, specific conditions of consent will require protection measures during construction. These must be strictly adhered to, or severe penalties (fines and imprisonment or both) may result from action under Section 156 of the Heritage Act, Sections 125 and 126 of the Environmental Planning and Assessment Act, Section 86 and 90 of the National Parks and Wildlife Act.

Where in the course of undertaking development works a person uncovers or discovers a relic (within the meaning of the Heritage Act) or Aboriginal object or place, they are to:

- Cease work on the site.
- Take appropriate measures to secure and protect the site or relic including fencing.
- Contact Council's Engineer.
- Notify either the Heritage Council or the Office of Environment and Heritage, as appropriate, of the discovery as required by Section 146 of the Heritage Act or Section 89A of the National Parks and Wildlife Act.

For the purposes of the Heritage Act a relic is any object or material evidence of settlement of the area, which is fifty or more years old, but specifically excluding Aboriginal objects.

For the purpose of the National Parks and Wildlife Act, an Aboriginal object means any deposit, object or material evidence relating to Aboriginal habitation of New South Wales. Similarly, an Aboriginal place means a place declared by the Minister (administering the National Parks and Wildlife Act) that is or was of special significance with respect to Aboriginal culture.

The purpose of these provisions is not to restrict development unnecessarily, but to ensure that valuable historical or cultural information or items are not lost or destroyed. In the majority of cases, work will be able to proceed once data on the item or place has been recorded or the relic excavated. It is advised that there is no advantage to be gained by ignoring the provisions and proceeding with works that result in destruction of items or places of heritage significance.

3. VEGETATION

Environmental and vegetation protection measures shall apply to all works including the preparation of detailed plans of all necessary requirements for approval as part of the Construction Certificate.

Any persons involved with such works and their design, shall as a minimum, abide by the requirements outlined within this chapter, where applicable.

Measures must be taken to ensure that no contaminated material or noxious weeds are transported off site without due care, and with diligence and authorisation for removal and/or disposal.

4. TREES AND HABITATS

It is Council's policy to conserve native vegetation and minimise damage to trees in all new developments. The Maitland Greening Plan 2002, and the LEP requires the preservation of trees with a height of 3 metres or more, or with a hanging branch spread of 3 metres or more in diameter.

Further:

- All areas of Maitland City Council are subject to a Tree Preservation Order (TPO). Consultation with Council will be necessary regarding tree disturbance.
- Council's consent must be obtained prior to the removal of trees, endangered ecological community or mature vegetation via a Development Consent or Construction Certificate.
- Council must be notified of the intention to begin clearing at least two business days before commencing works. Trees to be removed shall be clearly marked on site and correspond with those approved on the development and engineering plans for removal. Precision felling of some trees may be necessary to avoid damage to other trees or structures.
- Consent from the Catchment Management Authority is required if the Native Vegetation Act applies to the development.
- Council's consent does not authorise access onto adjoining lands, such as for temporary storage or disposal of materials.

4.1. TREE DISTURBANCE

Regarding tree disturbance:

- Consent conditions regarding the protection of vegetation must be complied with, during construction.
- Works that are being carried out must be consistent with an approved Environmental Protection Plan, as part of a Construction Certificate. That plan must show, where appropriate, protection of vegetation, soil stockpiles, site (and/or habitat, such as nest boxes or offsets) rehabilitation and replanting and soil erosion and sediment control, and must show the size and spread of existing trees.
- Wherever possible all trees removed shall be recycled either by chipping, tub grinding or reuse as timber product.
- Replacement tree planting consistent with the *Greening Plan* will be required where shown on the engineering plans or as directed by Council's engineer following damage or unauthorised removal of trees.
- All trees and shrubs identified for protection on the engineering/environmental management plans shall be effectively protected by a fence enclosure to ensure:
    - Avoidance of soil compaction by stockpiling of fill material, sheds or car parking.
    - Avoidance of spills or placement of oils, bitumen, distillate concrete or the like within 10 metres of tree(s).
    - Trenching is not carried out within the critical root zone of trees.
    - No topsoil removal within 4 metres of trees.
    - Avoidance of damage to trees by machinery.

4.2. HABITAT TREATMENT

An ecologist shall be on site during the felling of identified trees and ensure that any displaced or injured wildlife is collected and released appropriately. All actions taken by an ecologist shall be reported to Council.

The following shall be satisfied prior to felling any tree or removing/pruning adjacent trees:-

- Determine if the tree constitutes a habitat tree or supports any species listed under the Threatened Species Conservation Act and whether a Section 5A assessment (Significant effect on threatened species, populations or ecological communities, or their habitats) under the Environmental Planning and Assessment Act has been carried out.
- Compliance with any Flora and Fauna Studies are carried out as part of the Development Application.
- Measures should be taken to reduce the potential for injury and death to animals likely to inhabit the tree and may require inspection of hollows, sectional dismantling and/or supervision of works or removal/relocation of animals by a qualified ecologist. Habitat trees include any trees with hollows.
- Retention of hollows should be undertaken where possible on the site, where this is not possible and habitat is not significantly impacted, the tree hollows should be placed where possible in retained vegetation and/or nest boxes should be placed to retain habitat potential.

- Where approved construction work requires the removal of trees, the contractor is to engage the services of a suitably qualified ecologist to inspect the site and identify any tree which is likely to be a habitat tree. The ecologist is also to be on site during the felling of any identified tree and ensure that any displaced or injured wildlife is collected and forwarded to an appropriate Wildlife Rescue Service. All actions taken by an ecologist shall be reported to Council.

5. ENVIRONMENT

Protection of the environment (encompassing its human, natural and built aspects) is considered a priority of design and construction.

When working near a water body further information should be sought regarding adequate precautions.

5.1. FIRE RESTRICTIONS

Burning of vegetation on-site is not permitted.

5.2. NOISE CONTROL

The contractor shall comply with all statutory requirements with respect to noise. All practical precautions shall be taken to minimise noise and to contain works within specified hours of operation. All construction equipment shall be fitted with recommended noise suppressors (see also Chapter 7 - Working Hours).

5.3. DUST CONTROL

The developer shall comply with any statutory controls with respect to dust pollution. Soil-exposed areas shall be progressively mulched or vegetated and watered, or treated with dust suppressants or other means.

When directed by Council, if in Council's opinion dust control is inadequate or that continued works creates a significant dust nuisance, works shall cease until it is considered by Council that works can recommence. (see also – Appendix B).

5.4. SITE STORAGE

Equipment and materials stored on site shall be approved by Council's Engineer so as to prevent damage to the site, roadway, footpath and minimise hazards to person. Materials should be contained on-site to avoid impacting the surrounding properties and environment, and stockpiled in a manner to avoid cross contamination of materials from the action of the weather or vehicle movement.

5.5. CONTAMINANTS

The developer is to dispose of all contaminants oils, liquids, solids etc. in accordance with statutory regulations and produce receipts for appropriate disposal as required. Appropriate records should be available for all soil brought on site to show it complies with an appropriate resource recovery exemption under the POEO Waste regulations. Where it is suspected that soil is contaminated, Council may direct that soil testing is required.

6. SOIL CONDITIONS

Soil issues such as salinity, acid sulphate soils and sodic soils can impact both the environment and infrastructure. Should any of these concerns occur management plans need to be established and provided to Council for approval with the construction certificate.

7. EROSION

For works where there is a possibility of erosion of soil by wind, water or vehicles creating dust and sedimentation problems, an environmental protection proposal shall be prepared for approval as part of the engineering design for the Construction Certificate. (Refer to Appendix B).

7.1. CONTROLS - DURING CONSTRUCTION

Contractors must employ *effective* sediment control measures, to ensure that sediment and pollutants are not carried off the development site, nor eroded by wind and water, nor by "tracking" of vehicles.

It is an offence under the Protection of the Environment Operations Act to pollute the environment as a result of sediment leaving the site. A breach may result in the issue of an infringement notice, and attract a monetary fine. (Refer also to Chapter 7 - Construction)

Designs should be prepared which minimises the extent of disturbed areas, which may involve staging of clearing/stripping such that small areas are exposed and stabilized (perhaps with established grass cover), prior to the next stage commencing.

7.2. CONTROLS - POST CONSTRUCTION

Development and subdivision proposals shall include permanent devices and methods to treat pollutants in stormwater runoff, such as litter, course and fine particles, phosphorus, nitrogen and hydrocarbons. (See also chapters 6 - Stormwater & Chapter 8 - Developments).

Such devices and methods to be employed may be:

- Gross Pollutant Traps (pits, racks, basins etc)
- constructed wetlands
- bio-retention (dry basins) and
- combinations of any such devices, as necessary.

Bio-retention facilities are particularly susceptible to uncontained erosion from future building activity within the subdivision, and should therefore be postponed for construction until approximately 80% completed allotment development within the contributing stormwater catchment, or in the case of staged development, prior to issue of the subdivision certificate for a latter stage within the release area. For this purpose an unlimited-time cash bond or bank guarantee shall be submitted to Council for an approved value of the works, plus 50%.

7.3. MATERIAL TRANSPORTATION

All transportation of construction materials, sands, gravels, soils etc to and from the site must be carried out in such a manner as to prevent depositing materials on surrounding streets. The developer shall ensure that adequate control measures are in place to prevent this occurrence or then to rectify the pollution if it occurs. All loads of loose materials shall be covered during transport to and/or from the site.

8. LANDSCAPE AND VEGETATION

Before the lodgement of a Development Application all Landscaping options should be investigated to best integrate the proposed development with existing landscaping and significant vegetation. Landscape and vegetation management should be based upon suitable initial site evaluation and analysis including any existing significant vegetation.

Aspects to be considered are:

- trees and vegetation for retention
- trees and vegetation for removal
- Areas to be undisturbed such as buffer areas and semi natural areas.

Earth mounds, retaining walls and grade changes should be designed so as not to impede normal surveillance, nor to create personal "entrapment" scenarios.

8.1. STREET LANDSCAPING

Unless directed otherwise by Council, all new road reserves shall be landscaped with street trees utilising the following guidelines.

Species - The landscape designer is encouraged to recommend new species and to use variety of species in the designs. Maitland City Council has for reference, a list of suitable street tree species which identifies some local spp and suitable varieties that have been successfully placed as street trees, with the following specific qualifications:

- Eucalyptus spp / Corymbia spp Angophora spp are not considered suitable street tree species. These trees are more suitably placed as massed plantings within reserves and not as isolated individual placed specimens. Smaller bred varieties that are below a 10m mature height may be considered most appropriate.

- Prohibited species are (by common name) Camphor Laurel, Silky Oak, Pine, Fig, Pepper Tree, Poplar, Liquid Amber.
- Lophostemon confertus – Brush Box, considered an attractive and successful street tree in Maitland, may only be considered on footway verges of 4.5m or greater, and without overhead power lines, light poles or a concrete footpath.

Size - Ideally trees should be chosen that reach a mature height of 10-15m, and be able to be undercut to a specified height for safe sight-lines for pedestrians and vehicular traffic.

Grasses - Where disturbed areas require cover or new grass is provided which will be maintained by Council, Couch (spp Cynodon dactylon) must be provided. Such areas may be drainage reserves, public reserves and road reserves adjacent to those public land reserves. Other turf grasses are optional for lot frontages.

Design - Where street tree planting is proposed, trees shall be selected by an experienced landscape designer, and be approved by Council, as being suitable species as street trees. Where possible, trees should be chosen to provide longevity and to be compatible with Maitland's climate and soil characteristics, ensuring that the expected mature size of the trees are suitable for a footway/street environment, being consistent with existing vegetation in the area. Very large trees are not acceptable in road reserves. Preference shall be given to tree species that occur naturally in Council's local environment. The location of trees in the footway shall consider street intersection sight-lines and public safety, and shall not impede personnel surveillance.

Design parameters:

- Trees shall be planted and located in the footway in accordance with Standard Drawings SD001, SD002 & SD049, (subject to satisfying standard "clear zone" requirements) generally placed 1.2m from the nominated face-of-kerb and not closer than 0.5m from the edge of a pedestrian/cycle path.
- All large street tree species that are considered to present a risk with root invasions must be provided with root control barriers installed on the kerbside of trees and adjacent to any concrete path.
- In urban areas with a legal speed limit of 60km/h or less, trees must not be placed in the footway of the major road within 15m of an intersecting and/or such that the appropriate line of sight determined by the geometry of the street, is not compromised.
- In rural areas, the exclusion zone for tree planting is 70m along the major road from the property corner boundary at the intersection, so that landscape foliage does not obstruct sight-lines between the corner and the approaching vehicle in the major road.
- Trees, when mature, must be of a size that will sustain foliage undercut to a minimum height of 2m. Shrubs should be chosen/maintained to enable trimming below a height of 1.2m.
- Prior to any excavation work commencing the existence and location of any underground services must be established.
- Where overhead power supply mains exist, consideration must be given to the location of the trees and the mature height of proposed trees, relevant to the soil and moisture conditions, such that the street infrastructure is not affected.
- Tree planting locations should be complimentary with street lighting to optimise pedestrian safety.
- Tree-guards (other than supporting stakes) are not encouraged, but may be placed for interim protection within staged subdivisions, and must be removed upon release of the final stage.
- Shrubs, if approved, must satisfy sight-line requirements.
- Hedges are not permitted.

9. BUSHFIRE PRECAUTIONS

Consideration in the design of developments and subdivisions shall have regard to bushfire hazard. The designer should follow the recommendations of the NSW Rural Fire Service and the requirements of the publication, "Planning for Bushfire Protection".

Subject to that publication where subdivision abuts bushland in a bushfire prone area as defined by the bushfire prone map, the following guidelines should be observed and/or provided:-

- An all-weather, 4 metre wide, perimeter fire trail (with a 1m wide cleared shoulder) incorporating suitable drainage, located within a minimum 6 metre wide cleared and maintained zone.
- A perimeter road located within a nominated fuel reduction zone, located between the subdivision and the bushland.
- A fuel reduction zone, of a width determined by the Rural Fire Service, and dependent upon terrain and aspect.
- Access to the fire trail from the local road system.
- Safe building envelopes within a subdivision
- A blue raised road pavement marker, where required, placed on the road pavement opposite a water hydrant.