

Local Planning Policy

Vegetation Management

Prepared by Planning and Sustainability Services
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Preamble

In accordance with General Provisions 5.4, 5.5 and 5.6 of the Statement of Planning Policy No 2 for the Peel-Harvey Coastal Plain Catchment, the Council places a high priority on the role of vegetation as part of overall nutrient reduction management on subdivisions and developments. Additional benefits include biodiversity, fauna habitat, erosion attenuation, pest control, wind breaks/screening and salinity control. In recognition of both the constraints and opportunities for the use of vegetation, Council sets different requirements and standards according to lot size and property zoning.

Policy Intentions

To provide information to developers on Council's requirements, as they relate to revegetation management required by the Special Provisions of the Shire of Murray Town Planning Scheme and as a subsequent condition of subdivision approval.

To encourage the replacement of deep-rooted, local perennial vegetation, thereby improving fauna habitat, biodiversity, control of weed infestations, wind breaks/screening, salinity and nutrient uptake.

To create an aesthetically pleasing rural environment in which the Shire's ratepayers can reside.

Specific Zoning Requirements - Vegetation Retention and Replanting

1. 'Special Residential' Zone (new lots from 2000m² to 1Ha)

The Council recognises that Urban ('Special Residential') development typically requires the removal of most vegetation. However, it is in the interests of sound environmental management and equity with lower density development controls that the maximum amount of existing vegetation is retained, and that full use is made of opportunities to replant vegetation at the time of subdivision.

The following requirements apply to all new 'Special Residential' zoned land, subdivisions and development in the Peel-Harvey Coastal Plain Catchment of the Shire –

- a) Removal of existing vegetation is to be kept to a minimum.
- b) Vegetation should be retained and/or established in public open space and recreational areas, at the time of subdivision, for the purpose of retaining drainage and nutrients on the site and providing other ecosystem benefits such as the protection and enhancement of biodiversity.
- c) Proposals to subdivide land devoid of significant remnant vegetation cover must be accompanied by a Landscape Planting Program prepared by the developer in accordance with the detail supplied in Appendices A and B below.
- d) Where revegetation works are necessary, Council's preference is that plantings are to be in easily fenced and easily managed 'rows' in the following general locations -
 - adjacent to streams and watercourses - especially following earthworks or loss of vegetation cover;
 - in public open space, multiple use corridors, bridle trail and other common areas;
 - adjacent to man-made drains, including roadside drains - especially following earthworks or loss of vegetation cover;
 - surrounding drainage infiltration areas (detention basins planted with an appropriate succession of species from the water's edge to surrounding higher land, to prevent erosion and to perform a nutrient stripping function. If a drain is owned by the Water Corporation, a maintenance easement must be retained on one side); and
 - on road reserves - especially following earthworks or loss of vegetation cover.

- e) Vegetation is re-established such that planting areas include a mixture of trees and shrubs including understorey species. Up to two-thirds, but not less than one third of the plants used may be shrubs. The species used shall be chosen wherever possible from the recommended species list available from Council's Environmental Officer (ie "Field Planting of Trees and Shrubs - a guide for landholders and developers in the Shires of Serpentine-Jarrahdale and Murray").
- f) The application of fertilisers is minimised on public open space areas. Public open space will normally be part of a co-ordinated drainage and nutrient management concept. The Landscape Planting Program (see Appendices A and B) should aim for low maintenance and management inputs that, in particular, minimise the need to apply fertilisers on public open space areas.
- g) The developer is required to plan and carry out works for the treatment of public open space. Adjoining areas of remnant bush should be demarcated from formal irrigated and fertilised areas by means of a fence, bollards or dual use path to help prevent fertiliser and weed encroachment within the bushland. A bond will normally be lodged with the Council to guarantee the work and in certain circumstances a contribution to ongoing maintenance of the public open space may be required.
- h) Broad scale amendment of soils may be required where the soil type has a Phosphate Retention Index below 5.
- i) Detailed Planting Guidelines provided in Appendix B should be used as a basis for revegetation in urban areas.
- j) Plantings should be undertaken by the developer at the time of subdivision when that period coincides with suitable growing conditions for plants, (usually from May to August - rainfall permitting). Planting after August has a higher risk of failure unless plantings are irrigated during the following summer. A deep watering once per week is recommended to assist deep root growth.
- k) A Foreshore Management Plan is required where the site has land, which is within 30 metres of a waterway managed by the Peel Inlet Management Authority. The requirements for this plan will be determined on an individual basis in consultation with Department of Water, Department of Environment and Conservation, Bush Fires Board and Department of Planning.

2 **'Special Rural' Zone (New Lots from 2Ha to 4Ha)**

In recognition of the nutrient reduction potential of Alternative Systems for Domestic Wastewater Disposal, the Council sets different revegetation standards for lots serviced by these systems.

The following requirements apply to all new 'Special Rural' zone subdivisions and development in the Peel-Harvey Coastal Plain Catchment of the Shire -

- a) The subdivision shall be designed to minimise the impact upon existing vegetation.
- b) Proposals to subdivide land devoid of significant remnant vegetation cover must be accompanied by a Landscape Planting Program prepared by the developer, in accordance with detail supplied in Appendices A and B.
- c) No existing vegetation is to be removed except for the approved clearing of firebreaks, roads, fences, and utility easements, or where trees are dead, dying or in otherwise dangerous condition. Proposals to clear vegetation shall be assessed by Council's Environmental Officer and generally kept to a minimum in all circumstances.
- d) Building envelopes should not be cleared at the time of subdivision, but left for future lot owners to clear at the time of building, after their location is confirmed to the satisfaction of the Council and the lot owners.
- e) Vegetation is to be re-established on the site such that there is a percentage of planting over each lot area and at a prescribed density of trees and shrubs as indicated on the approved Landscape Planting Program.
- f) Up to two-thirds, but not less than one-third of the plants used may be shrubs including understorey species. The species used shall be chosen wherever possible from the recommended species list available from Council's Environmental Officer.

- g) Wherever possible, plantings should be in easily fenced and managed 'rows' in the following general locations -
- strategically placed to intercept surface and groundwater flow;
 - adjacent to streams, seasonal watercourses and drains – preferably on the northern side to provide shade and especially following earthworks or loss of vegetation cover;
 - surrounding drainage infiltration areas (detention basins planted with an appropriate succession of species from the shallow water's edge to surrounding higher ground, to prevent erosion and to perform a nutrient stripping function. If a drain is owned by the Water Corporation, a maintenance easement must be retained on one side);
 - parallel to lot boundaries at the rear, sides and front (where appropriate) of each lot;
 - north-south alignments to provide windbreaks from prevailing westerly and easterly winds; and
 - on road reserves - especially following earthworks or loss of vegetation cover.
- h) On subdivisions to be serviced by Conventional Domestic Wastewater Disposal Systems (septic tank and leach drains) -
- the planting area is to be a minimum of 15% of the area of each lot; and
 - the *minimum* planting density is to be 1,000 stems per hectare, with spacing no greater than 3m x 3m between stems.
- i) On subdivisions to be serviced by Alternative Domestic Wastewater Disposal Systems (eg Ecomax® or Biomax® ATUs) the area indicated on each lot planted to trees and shrubs may be proportionally reduced, provided the density of planting is increased - from a planting density of 1,000 stems per hectare to a maximum density of approximately 1,200 stems per hectare;
- j) Standard firebreaks are to be left next to fence lines, necessitating the row plantings to begin at least four metres inside fence lines. Trees and shrubs should not be planted such that canopies will overhang firebreaks when mature.
- k) The detailed Planting Guidelines provided in Appendix B should be followed.
- l) Stock must be excluded from the whole subdivision prior to planting, and the keeping of stock by lot owners will not be permitted unless the replanted area is permanently fenced to exclude stock.
- m) A Foreshore Management Plan is required where the site has land which is within 30 metres of a waterway managed by the Peel Inlet Management Authority. The requirements for this plan will be determined on an individual basis, in conjunction with Department of Water, Department of Environment and Conservation, Bush Fires Board, and Department of Planning.

Note:

Proposals for the subdivision of land containing significant stands of trees will be regarded more favourably in the event that the landowner is willing to negotiate with the Commissioner of Soil and Land Conservation to enter into an Agreement to Reserve for the protection of remnant vegetation under the Soil and Land Conservation Act. An officer from Agriculture WA may represent the Commissioner to establish an Agreement to Reserve.

3 Farmlet/Hills Landscape Protection Zone (New Lots of 4Ha to 40Ha)

The Shire of Murray has two lot size categories of 4Ha to 40Ha -

- Hills rural lifestyle ('Hills Landscape Protection' zone – 4 to 10Ha lots); and
- Hobby farms/equestrian use ('Farmlet' zone – 10 to 40Ha lots).

Council recognises a lower potential for nutrient export on these lots than for smaller lots. While there is potential for increased phosphorus inputs from fertiliser use and the keeping of stock, both these sources can be minimised if best practices for land management are followed. It is the intent of Council to promote and encourage the adoption of best management practices by 'Hills Landscape Protection' and 'Farmlet' zone residents.

The following requirements apply to all 'Hills Landscape Protection' and 'Farmlet' zone new land subdivisions and development in the Peel-Harvey Coastal Plain Catchment and the Darling Scarp (Planning Precincts 10a, b, c) of the Shire of Murray Local Rural Strategy -

- a) The subdivision shall be designed to minimise the impact upon existing vegetation.
- b) Proposals to subdivide land devoid of significant remnant vegetation cover must be accompanied by a Landscape Planting Program prepared by the developer, in accordance with detail supplied in Appendices A and B.
- c) No existing vegetation is to be removed, except for the approved clearing of firebreaks, roads, fences and utility easements, or where trees are dead, dying or in otherwise dangerous condition. Proposals to clear vegetation shall be assessed by Council's Environmental Officer and generally kept to a minimum in all circumstances.
- d) Building envelopes should not be cleared at the time of subdivision, but left for future lot owners to clear at the time of building after their location is confirmed to the satisfaction of the Council and the lot owner.
- e) Appropriate guidelines for revegetation will be determined by the Council for each proposal based closely on those outlined in 3.2(d), (e), (f), (g), (j) and (l) above. The area of planting will vary dependent on the amount of remnant vegetation, the proposed land use and the scale of the subdivision, but should be generally less than that outlined in 3.2(h) and (i).
- f) A Foreshore Management Plan may be required where the site has land, which is within 30 metres of a waterway managed by the Peel Inlet Management Authority. The requirements for this plan will be determined on an individual basis, in conjunction with Peel Inlet Management Authority, Department of Conservation and Land Management, Bush Fires Board and Department of Planning.

Note:

Proposals for the subdivision of land containing significant stands of trees will be regarded more favourably in the event that the proponent is willing to negotiate with Agriculture, Western Australia and to enter into an Agreement to Reserve for the protection of remnant vegetation under the Soil and Land Conservation Act.

Policy Implementation Guidelines

All proposals to subdivide land devoid of significant remnant vegetation cover must be accompanied by a Landscape Planting Program prepared by the developer, in accordance with detail supplied in Appendices A and B.

Council shall actively encourage developers to undertake revegetation works prior to the finalisation of the rezoning process in order to expedite the subsequent subdivision clearance.

Prior to the finalisation of subdivision, a notification under Section 70A of the Transfer of Land Act shall be sought on the title of all new lots advising new landowners of the revegetation works that were completed as a requirement of the subdivision approval.

As a general rule, conditions relating to the implementation of landscape planting works will be complied with prior to clearance of the conditions by the relevant authority, unless exceptional circumstances dictate otherwise. Such circumstances may include incorrect time of year for planting, unavailability of tube stock or inappropriate planting conditions (ie. water logging or drought).

Council shall provide clearance of a condition of subdivision subject to the following -

- a) submission and subsequent approval of a suitable Landscape Planting Program as detailed in Appendix A; and
- b) completion of revegetation works to the satisfaction of the Director Planning and Development Services.

Where clearance is sought for a condition of subdivision or development relating to tree planting/landscaping prior to the establishment of vegetation to the satisfaction of the Council, such clearance may be granted upon satisfactory completion of the following -

- a) submission and subsequent approval of a suitable Landscape Planting Program, as detailed in Appendix A;
- b) a suitable Deed of Agreement between the subdivider and Council (and/or the Purchaser and Council should lots be sold) to be prepared at the subdivider's cost;
- c) lodgement of an absolute caveat sufficient to provide for the completion of the required works by contractors engaged by the Council in the event that the proponent fails to satisfy the condition or intends delaying tree planting.
- d) lodgement of a bond (in the form of an 'open ended' bank guarantee with no expiry date).

The bond amount (bank guarantee) accepted is to be the greater of two quotations received from qualified, competent local contractors approved by the Director of Planning and Development Services. The quotation is to take into account all necessary site preparation works (as detailed in Appendix B, Section 3), appropriate species selection, a signed contract for supply of an after-care arrangement for a period of 18 months post planting (as detailed in Appendix B, Section 5) and a 20% contingency/administration allowance. This is to be provided at the subdivider's cost, prior to seeking subdivision clearance.

Further to the applicable Special Scheme Provisions, Council will not approve the keeping of livestock within subdivisions subject to a Landscape Planting Program until such time as -

- a) the vegetation is established to the satisfaction of Council; or
- b) permanent stock proof fencing is installed around revegetation works.

Council's Environmental Officer shall undertake an inspection of all completed plantings to ensure compliance with the submitted Landscape Planting Program. An inspection is also required prior to the expiration of the after-care contract to monitor the establishment of the plantings and ascertain compliance with the relevant subdivision condition(s).

The return of any or all bond monies held by Council will be subject to the satisfactory completion of works in accordance with the relevant conditions contained within the Deed of Agreement.

Administration

Directorate		Officer Title	
Planning and Sustainability		Director Planning and Sustainability	
Version	Decision to Advertise	Decision to Adopt/Amend	Current Status
1	OCM08/083 – 24/4/2008	OCM09/115 – 25/6/2009	Adopted

APPENDIX A

LANDSCAPE PLANTING PROGRAM DETAIL GUIDELINES

A Landscape Planting Programme is to be submitted with all subdivision applications devoid of significant remnant vegetation cover within the 'Special Residential', 'Special Rural', 'Farmlet' and 'Hills Landscape Protection' zones of the Shire of Murray. A Landscape Planting Program shall -

- be at a scale of not less than 1:2,000;
- use an aerial photograph as the base layer;
- show contours at one metre intervals;
- clearly identify the extent of existing vegetation (including both trees and understorey shrubs) to be retained, vegetation to be removed (if any), and the extent of natural regeneration;
- identify existing fences in serviceable condition and proposed fence lines;
- identify wetlands, watercourses, natural drainage depressions, sumps and other relevant land features;
- identify proposed areas for replanting and indicate the species, planting density, site preparation and after-care methods to be used;
- indicate potential changes in land capability (slope, drainage, soil type, depth to groundwater, rainfall etc) that will impact on species required for revegetation;
- if applicable, define the proposed reservation of public open space, including replanting of vegetation, soil amendment, and any nutrient and/or irrigation requirements; and
- provide adequate detail of the proposed after-care management contract, and evidence of an agreement to supply such after-care for a period of eighteen months post-planting.

For further information, proponents should be advised to obtain a copy of Council's Landscape Protection Note entitled 'Landscape Planting Programs' from the Environmental Officer.

APPENDIX B



VEGETATION PLANTING AND MANAGEMENT GUIDELINES

1. Species Choice

The species used should be native and preferably local to the site and the surrounding area. Species from the Perth Metropolitan area and the Swan Coastal Plain south of Perth may be used where local indigenous species are not available or are inappropriate to the site conditions.

Up to two-thirds, but not less than one-third of the plants used may be shrubs. The species used shall be chosen wherever possible from the recommended species list available from Council's Environmental Officer.

Such a choice ensures that vegetation will suit the conditions present on the site and is in keeping with the landscape of the area. Some species prefer - yet others will not tolerate - waterlogging, acidity, or other soil conditions. Proximity to salt-laden coastal winds and rain, potential for fire, and suppression of undergrowth may also be of concern.

Other factors to consider are the suitability of species for use under power lines, the effect of vegetation on fire hazard and weed potential if the species is not local.

2. Planting Location

Wherever possible, plantings should be in easily fenced and managed 'rows' in the following general locations -

- strategically placed to intercept surface and groundwater flow;
- adjacent to streams, seasonal watercourses and drains, preferably on the northern side to provide shade and especially following earthworks or loss of vegetation cover;
- surrounding drainage infiltration areas (detention basins planted with an appropriate succession of species from the shallow water's edge to surrounding higher ground, to prevent erosion and to perform a nutrient stripping function. If a drain is owned by the Water Corporation, a maintenance easement must be retained on one side);
- parallel to lot boundaries at the rear, sides and front (where appropriate) of each lot;
- north-south alignments to provide windbreaks from prevailing westerly and easterly winds; and
- on road reserves - especially following earthworks or loss of vegetation cover.

3. Site Preparation

Local contractors should be used, if possible, for site preparation, tree planting and management, as they are aware of local problems and requirements. The use of a single contractor for preparation, planting and management ensures a better standard of work. Further guidelines for site preparation are provided with each Recommended Species List for the land types in the Shire.

Site preparation on Pinjarra Plain and Bassendean soils (the majority of sites within the Shire), for example, should take place well prior to planting and should include -

- (a) exclusion of all stock;
- (b) ploughing to ensure a friable soil in the planting strip;
- (c) ripping to about one metre should occur in late summer or early autumn when the soil is dry, to maximise fracturing;
- (d) mounding is usually necessary over most of the site to raise plants above waterlogged conditions in winter and should occur after the first rains, when the soil is moist;
- (e) erosion and water control through mounding across slope may be required, as may be brickwork patterns in mounded areas to trap water flows;
- (f) furrow-lining may be necessary to direct water to plants in raised and drier areas;
- (g) a settling interval (about one month);
- (h) weed control of rip lines and/or mounds is essential (especially for Couch grass, Sorrell, and Dock), and observance of recommended withholding period. The use of a residual and knockdown herbicide mix is recommended for best results;
- (i) site preparation on the Bassendean sand ridges should take place well prior to planting and must include -
 - (j) exclusion of all stock;
 - (k) only ripping to about 0.5 metre across the slope;
 - (l) furrow-lining;
 - (m) a settling interval (about one month); and
 - (n) weed control just prior to the time of planting, and observance of recommended withholding period.

4. Planting

Well recognised local contractors should be used for planting, where possible. A list of the contractors known to operate in the area is available from Council's Environmental Officer. Planting should utilise quality tube stock no older than eight to 12 months for tree and shrub species. The planting season will be dictated by seasonal variance. However, planting is generally limited to the period June-August.

Seedlings should be planted in accordance with the submitted Landscape Planting Program. The spacing between plants shall be a maximum of 3m x 3m and due care should be taken to ensure adequate space for seedling growth according to their respective growth form (eg tree, shrub, groundcover etc).

Access in mid to late winter can be a problem due to wet conditions so every opportunity should be taken to plant when conditions allow. Slow release fertiliser with a low phosphorus content may be added at the time of planting at the rate of 50 grams (or one pellet) per plant. The use of tree guards greatly improves seedling survival and should therefore be incorporated into all planting programs.

5. After-Care Vegetation Management for the First 18 Months

The after-care management program aims to give seedlings the best chance of survival in the first 18 months - this is considered the critical period. It has been consistently demonstrated that, with good site preparation and planting in the above manner, trees and shrubs should survive well without watering. However, pressures from weed encroachment, grasshopper attack and grazing from stock and rabbits must be removed. Developers are required to provide an after-care program for a period of 18 months post-planting.

Follow-up weed control is of paramount importance in this Shire and should be done as early as possible. This is extremely beneficial to plant survival and reduces the risk of fire hazard later in the year.

Rabbit control is most effective if carried out over larger areas to reduce the chances of reinfestation and control by groups of landholders in a locality is encouraged.

There is a range of control methods available for grasshoppers but early control is the most efficient and cost effective option.

Information on control strategies and methods for all these pests is available from Agriculture, Western Australia.

Removing stock from the planted areas for at least four years is essential. Short term, controlled grazing by stock may be necessary in the future to reduce fire risk but should not be used in the first four years while the plants are vulnerable to damage from the stock.

The after-care management program for the first 18 months should include -

- a replacement scheme for losses;
- the erection of suitable fencing, or exclusion of all stock likely to damage the plantings, (eg horses, goats and sheep), from the whole of the planting area until trees become established;
- watering of planted seedlings should not be necessary to ensure survival, except in long or very dry summers;
- weed control is essential - plantings must be sprayed to control weeds or weeded by hand using a weed wand or manual weeding;
- grasshopper control - insecticide needs to be applied when hoppers first emerge, which is generally October to December. Early hatchlings usually emerge from high sandy ridges but a second cycle may occur in January.

6. Long Term Management

Beyond 18 months post-planting, it is important that winter grass and weeds receive annual attention to reduce the potential fire risk. Several control methods may be considered as listed below -

(a) Spraying of grass/weeds

An August/September application of a glyphosate based spray at the manufacturer's rate will reduce spring grass accumulation.

(b) Mowing or Slashing



The mowing of tall grasses in early spring will reduce the accumulated fire risk. Trees and shrubs should be of sufficient size such that they are easily recognised and avoided. Contract firebreak maintenance and grass control is offered throughout the Shire.

(c) Once trees and shrubs have become well established, and sufficiently robust, controlled grazing by stock may be considered. Permitting stock access to established tree areas requires close management. Grazing is not recommended within the first three years, once the trees or shrubs are of sufficient size to withstand stock then grazing access can be given to stock for short periods of time.

Depending on the grass build-up, stock grazing may be for an 8-hour session. The objective is to reduce the grass build-up without giving stock the opportunity to browse on the native shrubs or trees. Several short 'crash grazing' sessions in spring are more effective than an extended grazing period. Supervision and observation is critical to ensure that your efforts in establishing and maintaining the valued tree areas are not damaged.

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