

IMPLEMENTATION GUIDELINE NO. 19



Vegetation Retention

Date of Council Resolution

This guideline was adopted by Council on 12 December 2007 and takes effect on 19 December 2007, in accordance with section 2.3(2) of the Planning Scheme.

Purpose of the Guideline

The purpose of this guideline is to create opportunities and provide solutions to retain vegetation on land identified as suitable for development. Where Council accepts that the retention of vegetation is not appropriate or feasible (e.g. on part or all of the site), the development should provide for nil net loss of vegetation in the general locality.

Development that retains vegetation has flow-on benefits to the community which include:-

- maintaining the visual character and amenity of the City;
- assisting soil conservation;
- improving water quality;
- screening major transport infrastructure and unsightly land uses that produce negative visual impacts;
- providing shade and cooling;
- increasing property values;
- acting as carbon sinks;
- retaining and improving biodiversity; and
- improving air quality.

Current Planning Scheme provisions relating to vegetation retention are contained within the Reconfiguring a Lot Code (Part 12, Division 5), the Vegetation Management Code (Part 12, Division 4), the Earthworks Code (Part 12, Division 15) and the Development Constraints Overlay Code (Part 11, particularly Section 11.4.4 Bush Fire Risk Areas and Section 11.4.6 - Difficult Topography).

Application of the Guideline

This guideline applies to development within Large Lot Residential, Future Urban, Residential Low Density, and similar zoned areas which involve the creation of 10 or more new lots or dwellings.

The guideline does not apply in respect to land which is zoned for dense forms of development, such as Residential Medium and High Density, Commercial, Retail, Business and Industry and similar zoned areas except where vegetation clearing is proposed within greenfield locations.

Additionally, the guideline does not apply to development within the Rural D (Conservation), Rural E (Special Land Management), Urban Conservation, Business and Industry Buffer or similar zoned areas. Within these zones, strong

vegetation clearing controls are in place and no significant development is likely to occur.

Regard should also be given to vegetation protection responsibilities under the following acts:-

- Environmental Protection and Biodiversity Conservation Act 1999;
- Vegetation Management Act 1999; and
- Nature Conservation Act 1992.

Council's Implementation Guidelines are intended to apply a standard approach to the interpretation and implementation of the relevant aspects of the Planning Scheme.

They offer a degree of certainty and formality to applicants, Council and the community. Where an applicant is proposing a variation to the guidelines the onus is on the applicant to demonstrate the facts and circumstances to support the variation.

Nothing in this guideline is intended to affect the ability of Council to impose other reasonable and relevant conditions relating to the retention of vegetation in accordance with Section 3.5.30 of the *Integrated Planning Act 1997*.

Vegetation Retention Guidelines

1. Introduction

- (1) Vegetation retention should form an important component of the site planning process for any type of development, i.e. a material change of use, reconfiguring a lot, or operational works proposal.
- (2) Development should be designed and undertaken to provide for:-
 - (a) the retention of as much native vegetation and natural green space as possible on the site (Refer Figure 1.1);
 - (b) the minimisation of disturbance of significant vegetation (and other natural features) so as to protect ecological values, maintain slope stability and provide an aesthetically pleasing viewscape (refer Figure 1.2);
 - (c) the protection of natural drainage lines, particularly where they contain significant native vegetation (refer Figure 1.3);
 - (d) the use of appropriate construction methods and materials in response to an understanding of the site's environmental and geological conditions; and
 - (e) where Council accepts that the on-site retention of vegetation is not appropriate or feasible (e.g. on part or all of the site), the achievement of nil net loss of vegetation in the general locality.



Figure 1.1



Figure 1.2



Figure 1.3



2. Identifying significant Vegetation to be retained on site

- (1) To ensure that the most appropriate vegetation is incorporated into the design of the development, the following checklist is provided to assist in identifying (and therefore protecting) significant stands of trees and vegetative communities.

Vegetation Retention Criteria – Vegetation Survey	YES	NO
Does the existing vegetation consist of regionally or locally significant species, protected species or ecosystems, plants and plant communities that have heritage or landscape significance?	<input type="checkbox"/>	<input type="checkbox"/>
Does the existing vegetation have important habitat / biodiversity values?	<input type="checkbox"/>	<input type="checkbox"/>
Does the existing vegetation include old or dead trees with hollows or nests that potentially could be used by hollow-dwelling fauna?	<input type="checkbox"/>	<input type="checkbox"/>
Does the existing vegetation enhance the landscape amenity and character of the site and in particular does it comprise visually prominent hillsides, or ridgelines?	<input type="checkbox"/>	<input type="checkbox"/>
Does the existing vegetation present as a special / attractive feature of the site?	<input type="checkbox"/>	<input type="checkbox"/>
Vegetation Retention Criteria – Slope Analysis	YES	NO
Does the existing vegetation contribute to geological or slope stability, i.e. does the existing vegetation exist on land with slopes in excess of 15%?	<input type="checkbox"/>	<input type="checkbox"/>
Does the existing vegetation retard erosion and assist in sediment control?	<input type="checkbox"/>	<input type="checkbox"/>
Vegetation Retention – within Drainage Corridors	YES	NO
Does the existing vegetation assist in the stabilisation of creeks and natural drainage paths?	<input type="checkbox"/>	<input type="checkbox"/>
Does the existing vegetation contribute to water quality management and the natural behaviour of the catchment?	<input type="checkbox"/>	<input type="checkbox"/>
Vegetation Retention – within Corridors for Buffers / Linkages	YES	NO
Does the existing vegetation screen unsightly development or act as a buffer?	<input type="checkbox"/>	<input type="checkbox"/>
Is the vegetation a continuation of a vegetation band or wildlife corridor encompassing other nearby land?	<input type="checkbox"/>	<input type="checkbox"/>



- (2) Where a site analysis identifies significant vegetation, or where Council determines that a site contains significant vegetation, the applicant shall prepare a report and associated maps, diagrams and other illustrations, prepared by a suitably qualified and experienced person to:-
 - (a) highlight the extent of significant vegetation on site; and
 - (b) outline what methods are proposed to retain significant vegetation on site.
- (3) Where the applicant is proposing the removal of on-site vegetation, the applicant shall also demonstrate the achievement of nil net loss in accordance with the provisions of Clause 7 below.

3. Site Planning

- (1) Vegetation identified as significant should be retained on site and mapped as part of the initial site planning process (Refer to Figure 3.1).
- (2) As part of the site planning process significant stands or areas of vegetation or individual specimens should be designed into the development and retained within (in order of preference):-
 - (a) parkland or drainage reserves or communal open space; or
 - (b) the rear, front or side of larger lots outside a nominated building location envelope area (if applicable); or
 - (c) a road reserve (which should have extra wide footpath areas or median strips) (Refer to Figure 3.2).

Figure 3.1 – Site Analysis – Identification of Significant Vegetation and Slopes

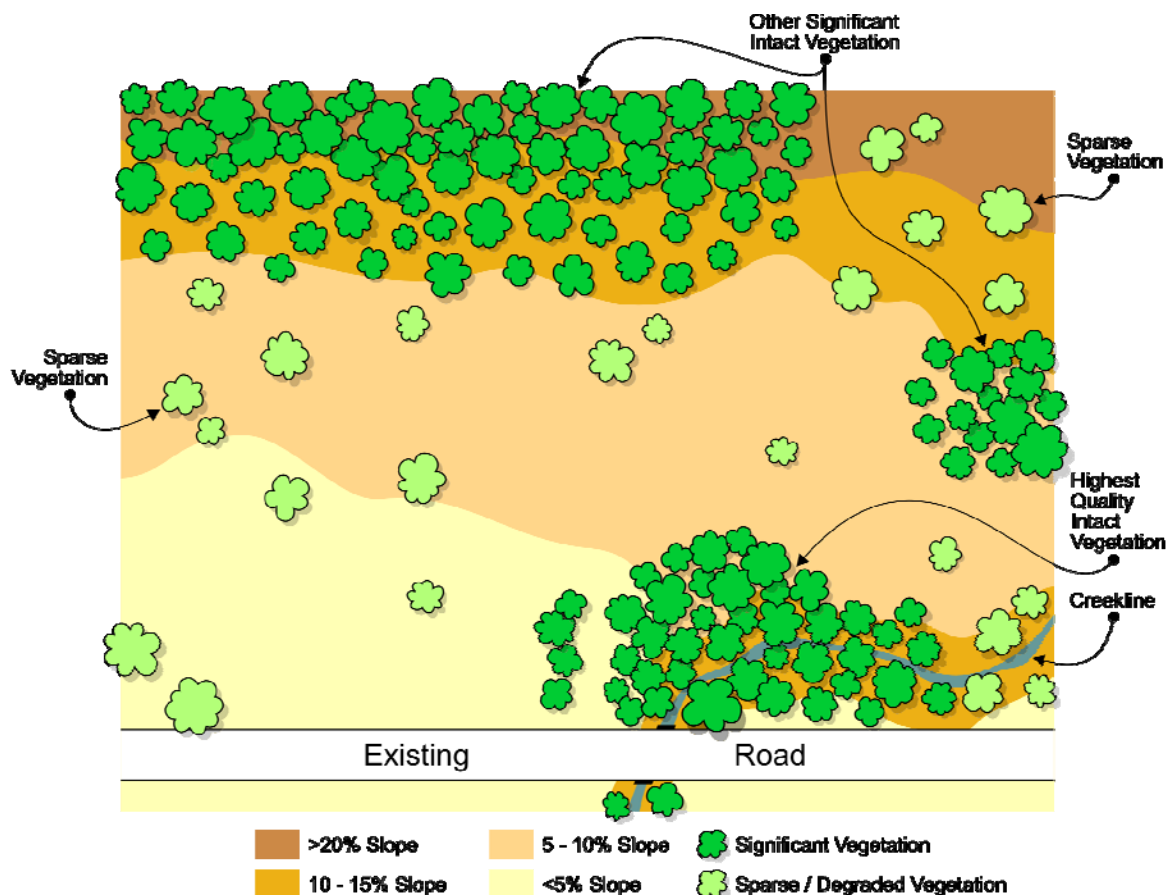
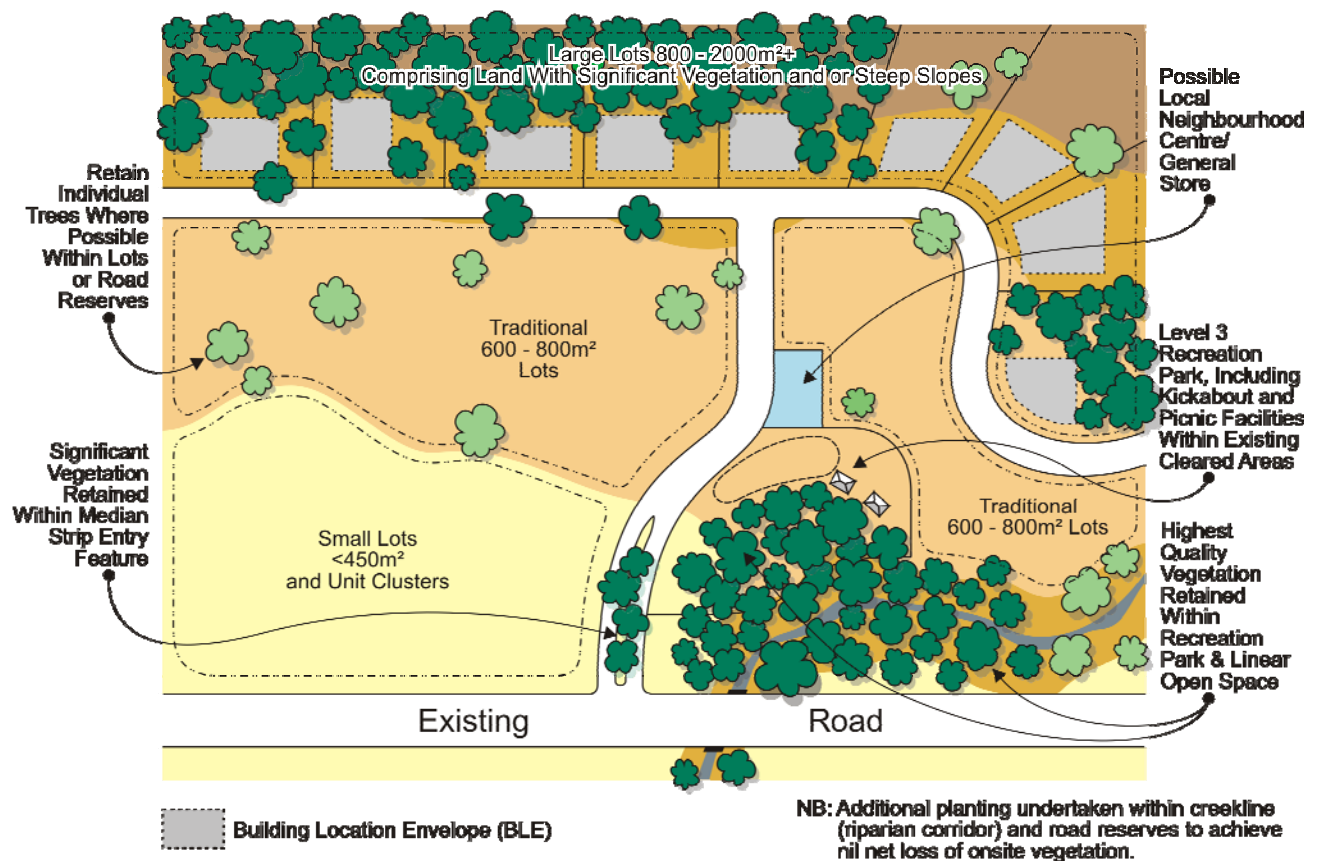


Figure 3.2 – Preferred solutions for the retention of identified significant vegetation



4. Preferred solutions for the on-site retention of significant vegetation

(1) Preferred solutions for vegetation retention within open space, drainage reserves, natural drainage lines, or landscape nodes.

- (a) Significant stands of vegetation are particularly suited for inclusion within parkland areas (especially local recreation parks), drainage reserves, natural drainage lines, or communal open space.
- (b) All native vegetation is to be retained as a minimum within 30m from the stream edge of a designated watercourse, or 10m from the top of bank, whichever is the greater (refer Part 12, Division 4 of the Ipswich Planning Scheme).
- (c) Attractive, mature, existing vegetation may also be used as a landscape feature to enhance the entry to an estate or village.
- (d) Individual trees suitable for retention within open space or landscape nodes should possess the following attributes:-
 - (i) be healthy and disease free;
 - (ii) contain no root damage;
 - (iii) be injury free from construction;

- (iv) a 200mm minimum trunk width measured at 1.2 metres from the ground; and
- (v) a 5 metre minimum height.

(e) Council may permit the removal of some vegetation within proposed parkland or other open space areas in order to provide for necessary recreation infrastructure such as pathways, seats, tables and shelter structures.

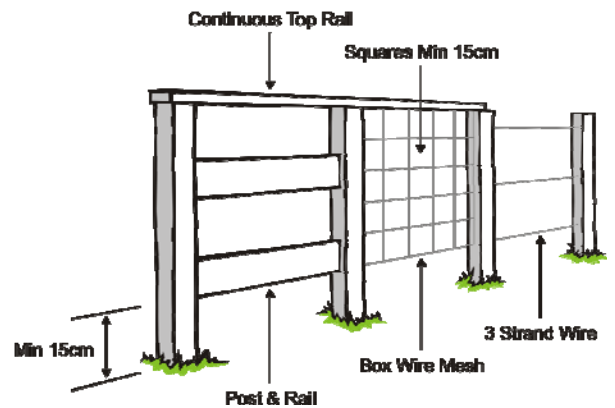
(2) Preferred solutions for vegetation retention within lots and associated lot size and density configurations.

- (a) As a general principle, small lots (i.e. 450m² or less in area), or unit clusters should be concentrated within existing cleared areas or land containing sparse / degraded vegetation, and particularly where such land has a slope of less than 10%.
- (b) Land containing significant vegetation requires careful consideration regarding the placement of buildings, services, fences and access paths and generally greater separation between buildings (hence larger lot sizes) to facilitate vegetation retention.



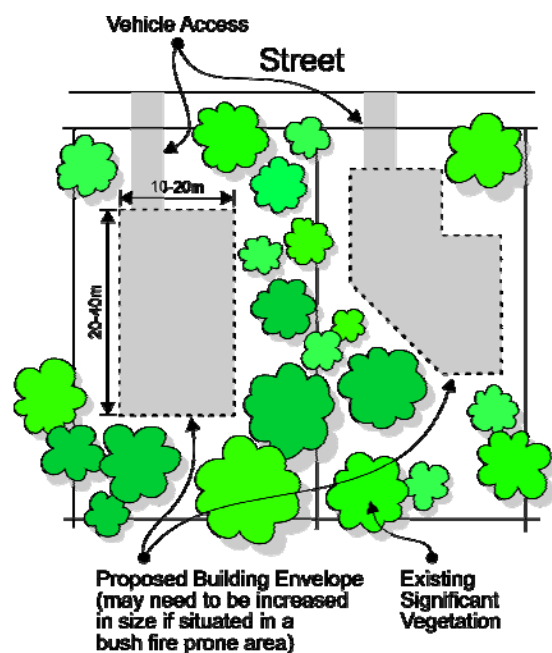
- (c) Appendix A to the Reconfiguring a Lot Code (Part 12, Division 5 of the Ipswich Planning Scheme) sets out relevant design criteria (including slope analysis) for various types and sizes of residential lots.
- (d) Section 11.4.6 of the Ipswich Planning Scheme specifically deals with difficult topography (i.e. land with slopes greater than 15%).
- (e) Building Location Envelopes (BLE's) may offer a very effective mechanism to assist with both on-site vegetation retention and the development of sites containing difficult topography.
- (f) The BLE Plan should be designed following a tree survey wherein the identification of the best location for the BLE has been assessed.
- (g) BLE's should be nominated for all subdivision proposals on sites covered by significant vegetation or constrained by difficult topography (i.e. greater than 15% slope).
- (h) BLE Plans should include:-
 - (i) a detailed plan of the proposed building envelopes (including location of vehicular access and utilities such as water mains and sewers);
 - (ii) the location of site boundaries; and
 - (iii) the location of existing native vegetation.
- (i) BLE size may increase in response to lot size, but should generally be within the range outlined below:-
 - (i) 4000 – 6000m² lots with a BLE of 1000 – 1500m²;
 - (ii) 800 – 1000m² lots with a BLE of 200 – 400m²; and
 - (iii) for lots less than 800m² the size of the BLE is to be determined on a case by case basis.
- (j) Buildings and earthworks should not be undertaken outside the approved BLE's with the exception of minor earthworks for on-site effluent disposal requirements where no vegetation clearing is involved.
- (k) Where the subject lots form part of an important fauna movement corridor:-
 - (i) timber paling fencing (or other forms of barrier fencing) should generally be restricted to the boundary of the BLE; and
 - (ii) lot boundary fencing (if required) should allow fauna movement (Refer Figure 4.1).

Figure 4.1 – Fauna Friendly Fencing – Appropriate Types



- (l) Limited clearing of vegetation outside the BLE is permissible to allow for vehicular access and connection of utilities only.
- (m) Utilities should be co-located within the driveway / vehicular access to the lot, where possible.
- (n) Houses on lots with nominated BLE's should be constructed as Hillside Homes, utilising alternative construction techniques such as post supported structures or split slab construction to minimise the need for surface disturbance or earthworks.
- (o) The use of extensive cut and fill earthworks on sites with nominated BLE's is not supported.
- (p) Where a bushfire risk has been identified, particular regard should be had to Part 11.4.4 of the Planning Scheme.

Figure 4.2 – Example of BLE Plan



- (3) Preferred solutions for vegetation retention within road reserves.
- (a) Road reserves may need to be widened to incorporate vegetation retention within footpath areas, median strips or islands (Refer to Figures 4.3 to 4.10).
 - (b) Expanded road reserves are a particularly effective treatment for the retention of vegetation along ridgelines (Refer to Figure 4.9).
 - (c) Individual trees suitable for retention within the road reserve should possess the following attributes:-
 - (i) a 200mm minimum trunk width measured at 1.2 metres from the ground;
 - (ii) a 5 metre minimum height;
 - (iii) be healthy and disease free;
 - (iv) contain no root damage;
 - (v) have a balanced branching structure;
 - (vi) be not multi-trunked at base;
 - (vii) generally do not constitute species which are prone to sudden loss of large limbs;
 - (viii) be injury free from construction; and
 - (ix) be a species that is suitable for the new microclimate and hydrology.

Figure 4.3 – Vegetation retained within median strip

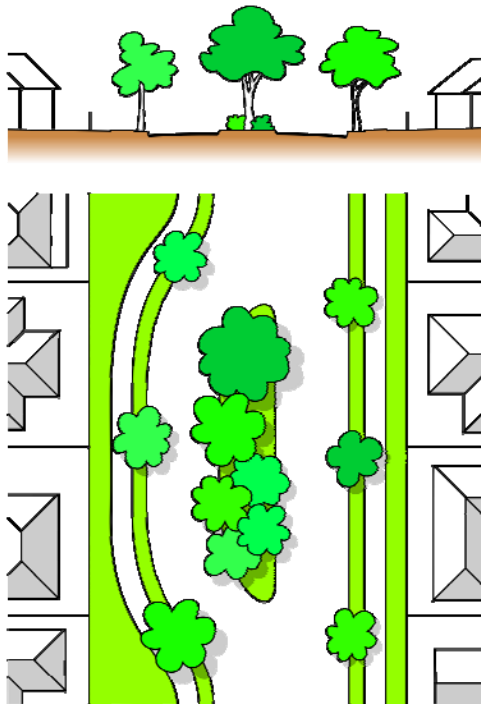


Figure 4.4 - Kerbs to be built out to protect existing root-zones

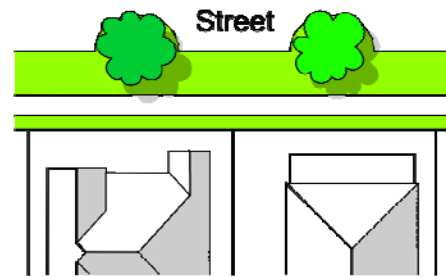


Figure 4.5 – Vegetation retained within expanded road reserve

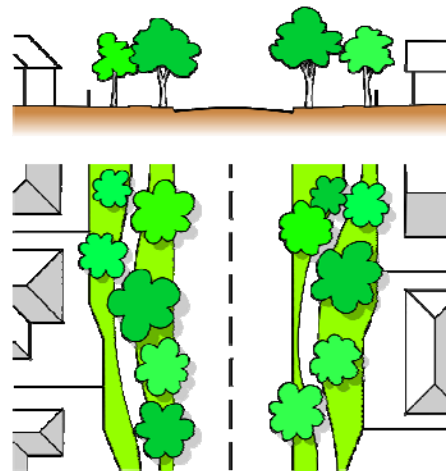


Figure 4.6 – Vegetation retained in cul-de-sac head

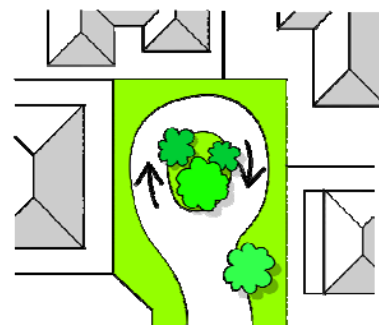


Figure 4.7 – Vegetation retained in cul-de-sac head including parking bays

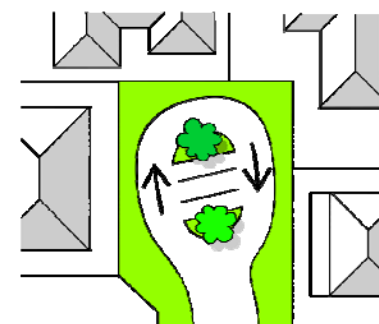


Figure 4.8– Vegetation retained in cul-de-sac head (“T” configuration)

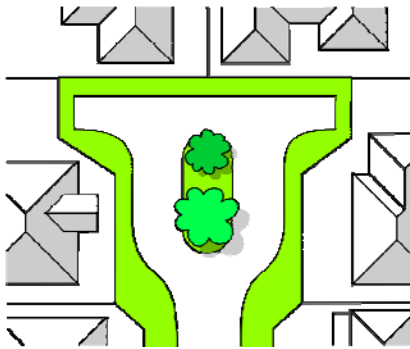


Figure 4.9– Vegetation retained within expanded road reserve along ridgelines

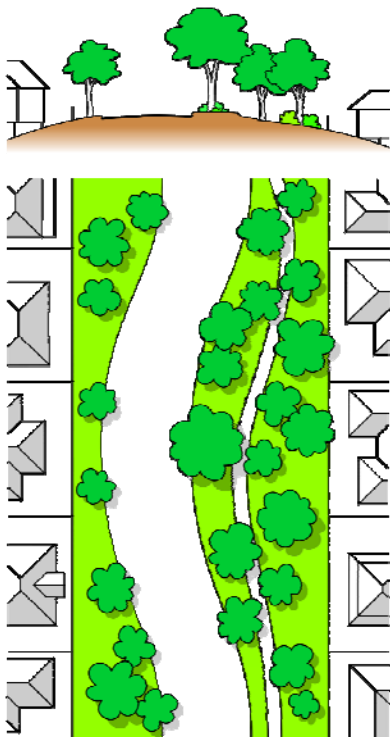
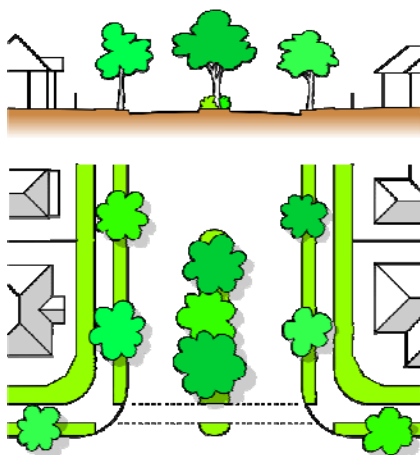


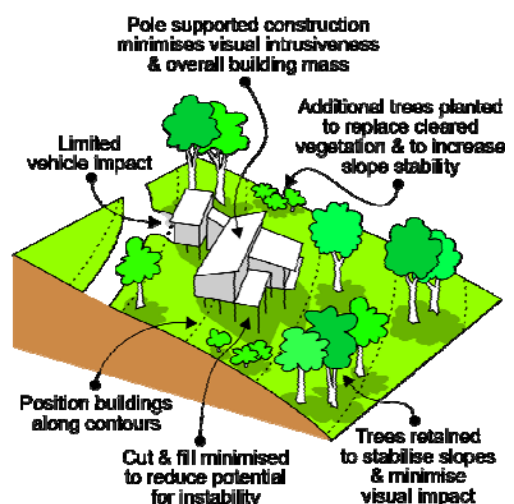
Figure 4.10 – Vegetation retained as an entry feature



5. Earthworks on Sloping Sites

- (1) Vegetation removal, building construction and associated roads or access driveways should (where possible) avoid areas with a slope of 20% and greater.
- (2) Buildings on sites with a slope greater than 10%, should be designed and sited to blend into the landscape with minimal excavation where possible i.e. buildings should be constructed on stumps or piers in preference to 'slab on ground' construction.
- (3) Access roads and access driveways should conform as far as possible to the natural contours of the land.
- (4) Road alignments should follow the natural contours of the land and the flattest gradients to minimise the extent of cut or fill, for example:-
 - (a) cut and/or fill batters should not exceed 1.2 metres in height and should generally be less than 800mm in height; and
 - (b) cut/fill should be limited such that finished surface levels are within 1.5 metres of the original natural surface.
- (5) Retaining walls should be limited to a maximum height of 1.2 metres above natural ground level and generally should be less than 800mm in height.
- (6) Maximum driveway gradients for individual lots should be limited to 1 (Vertical) in 5 (Horizontal), generally with an allowance of 1 (Vertical) in 4 (Horizontal) for the first 6 metres from the property frontage.
- (7) All cut and fill slopes should be revegetated with local endemic trees, shrubs and ground cover species immediately following construction.
- (8) Services should be co-located within the verge to facilitate the protection of existing root systems of trees retained within road reserves.

Figure 5.1 Preferred solutions to achieve Environmentally Responsible Development



6. Individual Tree Selection and Retention

- (1) Some applicants strive to retain as many trees as are practical on their developments. However, the best intentions can sometime be wasted if the trees that have been left after clearing, earthworks and construction works are damaged or unsuitable for retention.
- (2) The most important and delicate part of a tree is the top 200mm of the tree's root zone. Compaction of a tree's root zone or damage to the bark at the base of tree trunks may cause irreversible injuries to the tree.
- (3) To ensure that the trees retained within the development are suitable and are kept in the best possible condition, an assessment of the following attributes should be undertaken:-
 - (a) species;
 - (b) health, vigour and condition;
 - (c) structural defects;
 - (d) life expectancy;
 - (e) size and form (existing and future mature growth); and
 - (f) suitability for retention in the development.
- (4) It is recommended that the services of a qualified arborist be commissioned when determining suitable tree species for retention and an accurate tree survey accompany development applications for land containing significant vegetation.
- (5) The tree survey should locate all trees that:-
 - (a) have a Diameter at Breast Height (DBH) (i.e. measured at 1.2 metres above ground level) of greater than 200mm;
 - (b) are regionally or locally significant species or protected under state / federal legislation; or
 - (c) have streetscape value or cultural heritage significance.
- (6) Section (6)(A) of the Ipswich Planning Scheme Policy 2 sets out relevant criteria to be noted on tree surveys, including information relation to:-
 - (a) species;
 - (b) size and form including DBH and height;
 - (c) notes on health / vigour / condition / defects;
 - (d) biodiversity values (nests, size and number of hollows etc); and
 - (e) individual identification number (e.g. 001, 002 etc).

NOTE:

- (1) Items (a), (b) and (e) above should be shown on the tree survey plan e.g. 001ET/061020 (001 – tree ID number, ET – species *Eucalyptus tereticornis* / 0.6 – trunk diameter, 10m – radial canopy spread and 20m – height).
- (2) Colour coding according to trunk diameter would allow ease of interpretation.

7. Nil Net Loss

- (1) The achievement of nil net loss of mature native vegetation in the local area is important to retain the natural character of a locality.
- (2) Where vegetation clearing is required on part or all of a site, the cleared vegetation is to be offset to achieve nil net loss of vegetation within the general locality.
- (3) The following options are available to achieve nil net loss:-
 - (a) Undertaking a tree survey indicating mature vegetation to be cleared [see clauses 6(5) and 6(6) of this guideline] and including a plan for the effective replacement of this vegetation within the development site at the rate of one (1) new advanced tree planting per existing mature tree; or
 - (b) Providing a plan showing the area in hectares, or part thereof, to be cleared and providing a plan for the replacement of vegetation at a rate of 1000 tube stock per hectare of cleared area within the development site (e.g. in parkland, drainage corridors, road reserves or on large lots).
- (4) Where Council considers that the on-site replacement of vegetation is not appropriate or feasible (e.g. on part or all of the site), the following options are available, where approved by Council:-
 - (a) Payment of a contribution to Council for tree planting at the rate of vegetation clearing shown in the tree survey at the rate of one (1) new advanced tree planting per existing mature tree, or at a rate 1000 tube stock per hectare of cleared area, within the local area and at the contribution rate specified in Council's Register of General Charges;
 - (b) Undertaking tree planting by the developer at the rate of vegetation clearing shown in the tree survey at the rate of one (1) new advanced tree planting per existing mature tree, or at a rate of 1000 tube stock per hectare of cleared area, within the local area; or
 - (c) Payment of a contribution, or in kind support to provide for planting equal to the rate of vegetation clearing shown in the tree survey at the rate of one (1) new advanced tree planting per existing mature tree, or at a rate of 1000 tube stock per hectare of cleared area to a local environmental or community group that is undertaking, or planning to undertake, planting within the local area (e.g. along a local watercourse).
 - (d) Such other arrangements as may be approved by Council.

