Moreton Bay Regional Council

Planning Scheme Policy for the *PineRiversPlan*

PSP30 Landscape Design

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ADOPTION
Pine Rivers Shire Council adopted this planning scheme policy on 4 December 2006.

COMMENCEMENT
This planning scheme policy took effect from 15 December 2006.

ADOPTION OF AMENDMENT (Amendment 3/2008)
Moreton Bay Regional Council adopted amendments to the planning scheme policy on 18 November 2008.

COMMENCEMENT OF AMENDMENT
The amendments to the planning scheme policy took effect from 28 November 2008.

I, John Rauber, Chief Executive Officer, of the Moreton Bay Regional Council, hereby certify that this document is a true copy of the original.

John Rauber
Chief Executive Officer

PSP30 – LANDSCAPE DESIGN

HEAD OF POWER

This policy is a document that supports the *PineRiversPlan* and has been made by Council using the process prescribed in the *Integrated Planning Act 1997*.

OBJECTIVE

The purpose of this policy is to provide guidance for designers in the planning, design and construction of landscape works associated with development proposals. The information provided is intended to establish an acceptable minimum standard for these landscape works, encourage innovation, and to provide performance criteria for alternative solutions.

DEFINITIONS/APPLICATION

Application

This policy applies to landscape works required under any applicable code within the *PineRiversPlan*.

Definitions

Urban Area: Urban area means any area within the 'urban footprint' shown on the SEQ Regional Plan.

Rural Area: Rural area means any area other than an 'Urban Area'.

Fire Management Plan**:** A document outlining management of fire hazards within a specific area of standing vegetation. It details the objectives for management of the area and the nature, including the application of prescribed burning, and timing of specific management actions to be used to meet the defined objectives. (Rob Friend & Associates, 2001: 5)

Landscape Buffers**:** Landscape buffers are landform, structure and vegetative screens that are designed to reduce the impact of incompatible land uses, provide for visual amenity or minimise the adverse effects of noise/air pollution.

Landscape Gardens**:** Landscape gardens are a planted area that are primarily designed for beautification purposes rather than for screening incompatible uses and ameliorating the effects of noise and air pollution. Landscape gardens may be found within park and open space areas and may be used within commercial and industrial areas to improve the amenity of the development.

Pedestrian/Cycle Thoroughfares**:** Pedestrian/cycle thoroughfares are connectors that may link residential area, park and open space and commercial/retail nodes, and which are designated primarily for use by pedestrian and/or cycle traffic.

Centres: Centres means the Centres of Strathpine, Petrie, Arana Hills, Albany Creek, Warner, Kallangur, Dayboro, Mt Glorious, Samford, Mt Nebo.

Unless otherwise indicated in this policy, all terms used have the meaning prescribed in the *PineRiversPlan*.

POLICY STATEMENT

The intent of this policy is to ensure that planning, design and construction of landscape works:

1. Promotes the Shire's endemic landscape character;
2. Minimises potential maintenance and public safety hazards;
3. Does not adversely impact on the amenity of adjoining premises;
4. Makes provision for a high quality landscape with a long durable lifespan;
5. Facilitates the implementation of appropriate Water Sensitive Urban Design elements; and
6. Protects, manages and restores ecological features.

This is to be achieved by addressing each of the relevant "Performance Criteria" set out in this policy. Incorporation of those "implementation provisions" listed for each of the relevant "Performance Criteria" in the design of the landscape works automatically satisfies the requirements of this policy.

Innovative solutions are encouraged. However, such alternative solutions will need to be assessed by Council on a case by case basis for compliance with the stated "Performance Criteria" applicable to the proposed development.

This policy applies in conjunction with Council's Planning Scheme Policy PSP33 - Works in Public Open Space and Planning Scheme Policy PSP28 – Civil Infrastructure Design.

Structure of the Document

Each of the "Performance Criteria" contained in this policy is listed under a specific design element which in turn falls within one of the following three separate categories:-

1. General landscape design requirements;
2. Additional requirements for landscaping in road reserves; and
3. Additional requirements for landscaping in parks and reserves.

The design of landscape works will only need to address the "Performance Criteria" listed under that, or these, categories which are relevant to the context of the proposed development. Where an overlap results between the relevant "Performance Criteria", the requirements are to be considered as cumulative.

Performance Criteria

1.0.0 General Landscape Design Requirements

1.1.0 ACCESS, SAFETY AND SECURITY

This section relates to any landscape works involving access, safety and security generally.

PERFORMANCE CRITERIA 1.1.1. – EQUITABLE ACCESS: Equitable access to, across and through a site is accommodated in the landscape design.

Implementation Provisions:

IP 1.1.1.1. Pathways are designed to provide non-discriminatory access to people with varying levels of mobility and special needs.

IP 1.1.1.2. Tactile ground surface indicators are to be:-

(1) provided to aid users with vision impairment;
(2) installed in accordance with PSP28; and
(3) integrated within pavement treatments to ensure visibility and surface texture changes are accommodated.

Tactile surface indicators are provided to aid users with vision impairment (Cnr Learmonth Street and Gympie Road, Strathpine)

PERFORMANCE CRITERIA 1.1.2. – USER SAFETY AND SECURITY: Landscape works are designed and constructed to maximise the safety of users by accommodating driver, pedestrian and cyclist sightlines; accommodating maintenance practices and requirements; highlighting and providing barriers to possible hazard zones; directing pedestrian and cycle movement and alerting users to changing conditions.

Implementation Provisions:

IP 1.1.2.1. The mature unpruned height of under plantings on road verges or in roundabouts, medians and splitter islands is not to exceed 900mm above road surfaces. This height, however, may be reduced at the discretion of Council's traffic engineers and may vary from site to site.

IP 1.1.2.2. Street trees are to have a minimum of 2 metre canopy clearance from ground level at time of maturity. At the discretion of the traffic engineer, advanced stock may be required to provide a minimum 1.5 metre canopy clearance from ground level at the time of installation. In commercial centres, the traffic engineer may ask for advanced stock to provide a minimum 2 metre canopy clearance from ground level at the time of installation.

IP 1.1.2.3. At shared vehicle and pedestrian access points appropriate shared zone finishes will be constructed in accordance with Council specification.

IP 1.1.2.4. Lighting must be provided in accordance with relevant design codes and Australian Standards to provide safe access for night time activities and to promote user safety and security.

Street trees are to have a minimum 2m canopy clearance at time of maturity (Gympie Road, Strathpine)

PERFORMANCE CRITERIA 1.1.3. – CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN: Landscape design must address the principles of Crime Prevention Through Environmental Design (CPTED) to the extent appropriate to the context.

Implementation Provisions:

IP 1.1.3.1. Landscape design must address CPTED'S three overlapping strategies:

(1) *Natural Surveillance* – is concerned with the creation of environments that maximise visibility and the potential for casual surveillance. Natural surveillance in landscape design can be maximised through the appropriate design and placement of physical features.

(2) *Natural Access Control* – is used to guide pedestrians, cyclists and vehicles leaving or entering a space. It is also used to prevent and/ or discourage access and decrease opportunities for criminal activity.

(3) *Territorial Reinforcement* – is concerned with territorial influence. Environments can be designed to define and outline property and ownership and to deter potential offenders.

Natural surveillance in landscape design can be maximised through the appropriate design and placement of physical features (Discovery Drive, North Lakes)

PERFORMANCE CRITERIA 1.1.4. – PROVISION OF SHADE: Landscape design provides shade in a manner that maximises user health and safety.

Implementation Provisions:

IP 1.1.4.1. Shade is to be provided by built elements such as awnings and free standing structures, vegetation, or a combination of these.

IP 1.1.4.2. Shade structures must be in accordance with Council specification and certified by a Structural Engineer.

1.2.0 ENTRY STATEMENTS

This section relates to any landscape works involving entry statements.

PERFORMANCE CRITERIA 1.2.1. – ENTRY STATEMENTS: Entry statements are established in a manner that allows for appropriate management and maintenance.

Implementation Provisions:

IP 1.2.1.1. Entry statements must be located wholly within private property.

IP 1.2.1.2. Short term entry statements for marketing purposes must be removed by the developer at off maintenance.

IP 1.2.1.3. Entry statements on public land must comply with Council specification relevant to the role and function of the individual element.

IP 1.2.1.4. Entry statements are to be treated with an appropriate anti-graffiti product.

1.3.0 COMMUNITY ART

This section relates to the design and construction of community art within public and private open spaces.

PERFORMANCE CRITERIA 1.3.1. – COMMUNITY ART: Community art must be designed, constructed and sited to enhance the **visual** amenity of the space, create a sense of place, add a social and cultural dimension to the landscape and maximise community benefit whilst being functional and durable.

Implementation Provisions:

IP 1.3.1.1. Community art should be designed to have one or more of the following characteristics:

(1) *convey* meaning by providing legibility and identity through landscape design;
(2) exhibit freedom of expression;
(3) *reflect* the cultural, historical and environmental values of local areas, communities and wildlife; and/or
(4) be *interpretive*.

IP 1.3.1.2. Community art may:

(1) be *temporary*;
(2) *function* as a standalone piece; and/or
(3) be *incorporated* into infrastructure or landscape design.

IP 1.3.1.3. Community art must be designed to:

(1) achieve a *scale* that reflects the setting to enable all users groups to successfully appreciate the piece/s;
(2) *provide* for the safety of users, particularly in regards to the provision of appropriate circulation space and setback from road edges;
(3) *minimise* vandalism (including graffiti);
(4) be of low maintenance and durability; and
(5) comply with the provisions of the relevant Australian Standards where it is integrated within a play space and is intended to be used as a play element.

IP 1.3.1.4. Community art should have the ability to attract users, evoke the senses and maximise the quality, experience and understanding of the space.

IP 1.3.1.5. Community art is to be located along pedestrian/ cycle thoroughfares, within identifiable community spaces and within areas where visibility is increased.

Community art may be designed to exhibit freedom of expression (Fish at Colmslie Beach)

Community art may be designed to reflect the environmental values of the local area (Fruit Bat at Montville)

Community art should have the ability to attract users, evoke the senses and maximise the quality, experience and understanding of the place (Skate Park, Albany Creek)

1.4.0 LANDFORM

This section relates to any landform works, such as mounding, that involve reconstructing the surface of the land for aesthetic or functional purposes. Land reconstruction may be undertaken as a component of engineering earthworks.

PERFORMANCE CRITERIA 1.4.1. – MOUNDING: Mounding is designed and constructed to minimise impacts on downstream properties or vegetation and minimise impacts to site drainage.

Implementation Provisions:

IP 1.4.1.1. Mounding for amenity purposes is designed to reduce impact on designated drainage corridors where it has the potential to impact on stormwater flow.

IP 1.4.1.2. Mounding for amenity purposes is designed to minimise or avoid the redirection of major stormwater runoff.

Mounding is designed and constructed with regard for maximum slope requirements (Wyllie Park, Petrie)

IP 1.4.1.3. The position of mounding has regard for the possible impact of diversion of water flow away from existing vegetation, intended for retention.

IP 1.4.1.4. Maximum slope requirements must comply with the following:

(1) Turfed areas – 1:4 maximum;
(2) Recreation land – 1:6 maximum; and
(3) Garden areas – 1:3 maximum.

IP 1.4.1.5. Mounding will generally be decompacted to a depth of 150mm by surface ripping prior to the application of soil, mulch or turf.

IP 1.4.1.6. Gradient transitions shall be shaped to allow a variation of mowing patterns over a given area without causing scalping.

IP 1.4.1.7. Mulched surfaces on mounds will use a suitable mulch approved by the Manages Parks, Reserves and Landscape Services.

IP 1.4.1.8. Mounding on the high side of pathways laid on low permeability soils may necessitate the provision of subsurface drainage at the path edge to prevent flooding or siltation over the path.

PERFORMANCE CRITERIA 1.4.2. – BATTERS, STEEP ROCK SLOPES and RETAINING WALLS: Batters, steep rock slopes and retaining walls are designed, constructed and stabilised for function and durability, minimise adverse impacts to the natural environment and adjoining premises caused by erosion or siltation and protect the safety of maintenance staff.

Implementation Provisions:

IP 1.4.2.1. Civil design will provide for batters no steeper than 1:3 where maintenance staff are expected to operate.

IP 1.4.2.2. Grassed batters or embankments in Crown Land intended to be mown by wheeled equipment that fall below the level of a formed road are profiled to enable access to the bottom of the bank for ride on mowing equipment. The access strip at the toe of the mown bank is to be a minimum width of 3.0m with adequate turn around provision.

IP 1.4.2.3. Where sustainable vegetative cover is not achievable on extreme slopes, retaining walls will be required. Retaining walls over 1.0 metre high must be designed and certified by a suitably qualified and experienced Structural Engineer and are to be approved by council prior to works commencing.

IP 1.4.2.4. Rock slopes and batters steeper than 1:1 are to be inspected and certified for long term stability by a suitably qualified and experienced Structural Engineer prior to acceptance off maintenance.

IP 1.4.2.5. Slopes/ rock faces greater than 1:2 are to be stabilised.

IP 1.4.2.6. Maintenance access is required to public land at the top of road cuttings.

IP 1.4.2.7. Stabilisation of batters may be achieved through the use of hydro mulching, stabilisation netting, erosion protection or engineering approved retention eg benching, the use of retaining walls and terracing with planting.

IP 1.4.2.8. Benching intended to provide growing media volume should be designed in consultation with the landscape consultant.

IP 1.4.2.9. Batters that are to be planted or grassed are to be cultivated on horizontal grades to a minimum depth of 100mm with a high organic topsoil mix cultivated into the soil structure. Green couch is to be used as the dominant grass species. The batters may also be hydro mulched or planted if practical.

IP 1.4.2.10. The toe of any batters and associated drainage are to be contained within the boundaries of the site and are not extended onto neighbouring lands or into adjoining vegetation protection zones.

IP 1.4.2.11. Extended maintenance periods may be applied to direct seeded, or hydro mulched batters at the discretion of the Manager, Parks, Reserves and Landscape Services. Factors to be considered in extending maintenance include erosion, strike rates, cover,

Where vegetative cover is not achievable on extreme slopes, retaining walls are required. (Lilley Road, Cashmere)

success of species spectrum, weed invasion, provision of adequate maintenance and others.

IP 1.4.2.12. The bearing side of a timber retaining wall must be lined with geotextile and back filled with gravel so that there is no direct contact between soil and timber. Socked ag drain coil 90mm diameter is to be located in the drainage material at the toe of the wall and discharged without causing inconvenience to open space users.

IP 1.4.2.13. All retaining walls over a metre high must be designed, specified, inspected and certified by a Structural Engineer.

IP 1.4.2.14. Retaining wall surfaces prone to unsightly graffiti will be required to be coated with an anti-graffiti material or screened with appropriate planting.

IP 1.4.2.15. Retaining walls supporting private property at the boundary of public open space are to be constructed within private property.

IP 1.4.2.16. Retaining walls supporting private property at the boundary of public open space must be designed to accommodate pedestrian access at the toe or top of the wall for the purposes of maintenance and fire risk management. This access strip will be at least 600mm in width and have a maximum cross fall of 20%.

Retaining walls are designed and constructed for function, durability and maintenance access (Old Northern Road, Albany Creek and Acacia Park, Murrumba Downs)

1.5.0 PLANT SELECTION AND PLANTING

This section relates to any planting works involving new planting and/ or the preparation of growing media or planting beds generally:

PERFORMANCE CRITERIA 1.5.1. – SPECIES SELECTION AND PLANT DESIGN FOR ECOLOGICAL SUSTAINABILITY: Species selection and plant design respects as far as practicable the indigenous flora of the shire, minimises the selection of non-indigenous species and consists of plants suited and able to flourish in the site conditions whilst balancing amenity appeal with environmental benefits, durability and sustainability.

Implementation Provisions:

IP 1.5.1.1. Species selection will use predominately species indigenous to the local area, sourced from local shire provenance or in the case of named varieties or cultivars, bred from species not identified as invasive

IP 1.5.1.2. Where required, information on flora indigenous to the shire may be found in the following:

(1) Living With The Environment;
(2) Flora of the Pine River Valley; and
(3) Council's Regional Ecosystem List (available from Council's Environmental Services Department).

IP 1.5.1.3. Landscaping occurring within 100m of endangered or of concern vegetation is to only use species known to occur in that ecosystem.

IP 1.5.1.4. Street trees within centres will use the relevant species as identified in Appendix 3 of this policy.

IP 1.5.1.5. Koala food trees which are known to occur in the local ecosystem will be utilised where suitable space exists.

IP 1.5.1.6. Landscaping that functions as revegetation or is intended to increase the viability or width of existing bushland will utilise only species from the appropriate Regional Ecosystem list.

IP 1.5.1.7. Named varieties or cultivars of native species may be selected for amenity planting to meet the spatial requirements of the site provided there is no parental history of invasive escape. Such species are not to be utilised for revegetation works

IP 1.5.1.8. The use of all two hundred (200) invasive weeds listed in the *Invasive Naturalised Plants in South East Queensland* (Queensland Herbarium) will be prohibited for revegetation works and amenity design with the exception of "green couch".

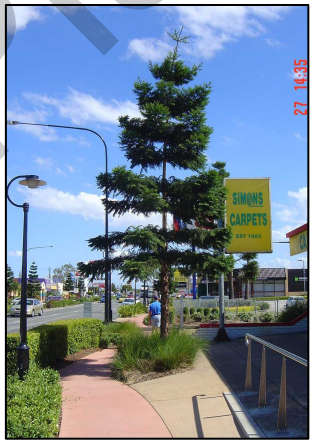
IP 1.5.1.9. The microclimatic demands of the plant material will be closely matched to the site conditions.

IP 1.5.1.10. Harsh microclimates such as car parks and plantings close to high volume traffic lanes will require particular attention not only to species selection but also to growing media volume, moisture supply, bottom drainage and maintenance access.

IP 1.5.1.11. Species will provide habitat and food source for local fauna as far as practicable.

IP 1.5.1.12. The use of annuals, balsam, periwinkles, *Gazania* and succulents will be avoided except where in compliance with a specific landscape theme approved by Council. Disease resistant long life cycle plant species of appropriate size, texture and form are the preferred selection.

The microclimatic demands of the plant material will be closely matched to the site conditions (Gympie Road, Strathpine)



Species selection must have regard for landscape character and amenity (Gympie Road, Strathpine)

Landscaping that functions as revegetation will utilise only species known to occur naturally in the area (Alexandra Avenue, North Lakes)

IP 1.5.1.13. Species selection must have regard for:

(1) the mature size of the species;
(2) the growing media volume and depth available to sustain mature growth;
(3) the susceptibility of the species to poor drainage;
(4) flower, fruit and leaf litter issues;
(5) the pest and disease management requirements of the species in their proposed location;
(6) landscape character and amenity;
(7) shade considerations;
(8) other ongoing maintenance requirements; and
(9) limb drop from susceptible species (eg Eucalypt sp.) when planted in high traffic or high use areas.

IP 1.5.1.14. Species selected must be well established disease free container or field grown stock that have been propagated for the specific site conditions i.e. sun hardened, shade tolerant or salt tolerant.

PERFORMANCE CRITERIA 1.5.2. – PLANT SITING: Plants are sited to maximise community benefit whilst recognising maintenance and sustainability requirements.

Implementation Provisions:

IP 1.5.2.1. Spatial constraints of the site will be recognised in the spacing of plant material with regard to both canopy and root zone/ growing media requirements of the selected species.

IP 1.5.2.2. The density of planting at the time of installation is to be designed to promote rapid coverage of garden beds so as to provide physical barriers to potential desire lines through planted areas.

IP 1.5.2.3. Species which are known to exhibit sharp foliage, thorns or heavy fruiting characteristics are to be avoided in high traffic areas or where primary contact by visitors and maintenance staff is likely to be frequent.

IP 1.5.2.4. Species location must have regard for:

(1) spatial constraints;
(2) mature size; and
(3) proximity of the planting site to structures prone to disruption.

Plants are sited to maximise community benefit whist recognising maintenance and sustainability requirements (Pine Rivers Park, Strathpine)

IP 1.5.2.5 Ensure all shrubs and ground covers are planted a minimum of half the mature spread from all pathways.

IP 1.5.2.6 To reduce the incidences of damage caused by root disturbance and falling branches, it is required that with all installed trees, the mature tree height be restricted to 10 metres when planted closer than 6 metres to all property boundaries.

PERFORMANCE CRITERIA 1.5.3. – POT SIZE: Pot sizes reflect the function and location for which the planting is proposed.

Implementation Provisions:

IP 1.5.3.1. Tube stock is only to be used in revegetation areas.

IP 1.5.3.2. In areas of high visual impact, pedestrian use and activity, larger and more advanced stock may be required conditional upon the quality of stock selected.

In areas of high visual impact, pedestrian use and activity, larger and more advanced stock may be required (Gympie Road, Strathpine)

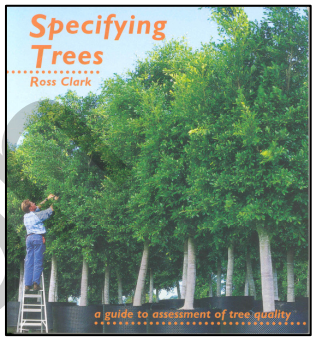
PERFORMANCE CRITERIA 1.5.4. - PLANT QUALITY: Plants of a high quality are to be provided in landscape works.

Implementation Provisions:

IP 1.5.4.1. Plants that have been grown to a standard that allows them to establish rapidly and grow to maturity are to be provided.

IP 1.5.4.2. The criteria used for the specification, selection and acceptance of bag and ex-ground stock are to be found in Ross Clark's "Specifying Trees" published by NATSPEC. Copies can be purchased by contacting NATSPEC:

By mail at:
61 Lavender Street
Milsons Point NSW 2061
By fax on:
(02) 9955 3537
By phone on:
(02) 9923 1499



Ross Clark's "Specifying Trees" publication

Pot stock will be sourced from accredited nurseries.

PERFORMANCE CRITERIA 1.5.5. - MEDIA AND SUB-GRADE PREPARATION: Adequate media volume and depth is required by the intended planting to overcome periods of critical thermal and water stress.

Implementation Provisions:

IP 1.5.5.1. All planting beds are to be cultivated to a minimum depth of 300mm, including sub soil cultivation and decompaction measures.

IP 1.5.5.2. Drainage is to be provided to all garden beds particularly in centre medians and road verges.

IP 1.5.5.3. A minimum 200mm finished depth of topsoil is to be provided for broad acre landscaping.

IP 1.5.5.4. A minimum 900mm finish depth of combines topsoil coverage and drainage layer is to be provided for general podium and planter bed landscaping. Tree planting beds on podium landscapes and in planters shall comply with Councils specification.

IP 1.5.5.5. Garden bed areas are to be mounded to achieve adequate drainage, facilitate root growth and restrict access where necessary.


Garden beds are to be mounded to achieve adequate drainage, facilitate root growth and restrict access where necessary
(Front of Moreton Bay Regional Council Office, Strathpine)

IP 1.5.5.6. All topsoil will comply with current Australian Standards and be free of pests such as Fire Ants and soil borne viruses and diseases.

IP 1.5.5.7. Generally, planting holes for trees (except for ex-ground stock) are to be a minimum 3 times the diameter of the rootball and will provide sufficient depth of sustainable growth (generally 300mm-400mm deep).

IP 1.5.5.8. All planting is to have associated fertiliser regimes incorporated as an integrated part of the growing and planting works program.

IP 1.5.5.9. A minimum 450mm finished depth of topsoil is required for intensive urban landscapes, medians and roundabout landscapes.

IP 1.5.5.10. Planting media is to include appropriate water saving devices such as water crystals.

PERFORMANCE CRITERIA 1.5.6. – ORGANIC MULCH: Mulch is used to suppress weed growth, retain moisture, improve soil texture, reduce maintenance requirements and provide a visually consistent surface in areas not intended for mowing or the installation of hard surfaces.

Implementation Provisions:

IP 1.5.6.1. All exposed soil surfaces not intended or suitable for grassed mowing areas are to be mulched.

IP 1.5.6.2. All mulched areas are to have a minimum 100mm settled depth cover of organic mulch.

IP 1.5.6.3. Mulched interfaces to edges, e.g. turf, pathways etc, are to be formed with a vertical face so that an immediate cover of 100mm mulch can be established.

IP 1.5.6.4. All mulch is to be free of viable seed or plant material capable of sprouting and deleterious materials such as rock, soil or rubbish.

IP 1.5.6.5. The type of mulch that can be used will be determined by the particular situation. Considerations will include gradient, surface water flow, wind exposure, pedestrian disruption, flammability and suitability for soil structure enhancement. Mulch products intended for use on gradients at or steeper than 1:4 will preferably be tub-ground or coarse hoop pine. Coarse hoop pine bark may require a top dressing of finer material to provide adequate light suppression and moisture retention.

IP 1.5.6.6. Inorganic mulch with specific maximum particle sizes may be used in landscapes to the satisfaction of the Manage Parks, Reserves and Landscape Services and/or Council's Subdivisions Engineer.

IP 1.5.6.7. Bagasse and Sugar cane trash are not suitable.

IP 1.5.6.8. To enable access for maintenance machinery, trees planted in turfed areas are to have mulch rings that are a minimum of 2 metres from raised structures (eg bollards, seats, bins, kerb, edging etc) and neighbouring mulched rings. Where this is not possible, trees are to be located within uninterrupted mulched beds.

Mulch is used to suppress weed growth, retain moisture, improve soil texture and reduce maintenance requirements (Front of Moreton Bay Regional Council Office, Strathpine and Memorial Drive, North Lakes)

Note: *The use of weed mat in conjunction with mulch will require specific approval from council.*

PERFORMANCE CRITERIA 1.5.7. – TURF: Turfing is used in circumstances where immediate cover is required for erosion/ siltation mitigation or to offset the high establishment and maintenance requirements of seeding.

Implementation Provisions:

IP 1.5.7.1. Unless otherwise approved by the Manager, Parks, Reserves and Landscape Services, only A grade turf is to be used for turfing.

IP 1.5.7.2. Turf is to be laid with edges butted up and is to be rolled into topsoil after watering.

IP 1.5.7.3. Where turf is to be laid against a flush mount mowing edge, kerb or path, topsoil will be levelled at 25mm below the hard edge.

IP 1.5.7.4. Turf is only to be used where there is sufficient separation from the road verges to reduce conflict with vehicles during maintenance activities.

IP 1.5.7.5. Narrow turf strips between back of curb and footpaths is to be avoided in high traffic flow areas.

Turf is to be laid with edges butted up and is to be rolled into topsoil after watering (Eatons Rise Estate, Eatons Hill)

Note: *Grass cover of less than 90 percent over the entire area at the on maintenance inspection will cause the maintenance period to be extended until cover is achieved. Extensive bare patches are not acceptable. Determination of 90% cover will be established by random sampling over the grassed area. 95% grass cover is required at the time of the off maintenance inspection.*

PERFORMANCE CRITERIA 1.5.8. – HYDRO-MULCHING: Hydro-mulching is used for erosion control on batters and slopes unable to be grassed and where regeneration of indigenous vegetation is desired.

Implementation Provisions:

IP 1.5.8.1. Additives of local native tree, shrub and ground cover species are to be used in seed mixes on steep gradients to assist in preventing erosion (Refer to Batters and Steep Rock Slopes in the Landform Section of this policy).

IP 1.5.8.2. Areas proposed for hydro-mulching will be provided with adequate soil volumes for satisfactory post-germination establishment.

IP 1.5.8.3. A minimum density of 1 plant per square meter germination will be required at the 'on maintenance' inspection.

Hydro-mulching is used for erosion control on batters and slopes unable to be mown with conventional equipment (Bruce Highway, Murrumba Downs)

PERFORMANCE CRITERIA 1.5.9. – GRASS SEEDING: Grass seeding is used where the turfing option is excluded due to cost constraints. Establishment and weed control costs will be a consideration in option selection.

Implementation Provisions:

IP 1.5.9.1. All seeded areas are to be prepared to achieve significant germintation within the required timeframe.

IP 1.5.9.2. Grass seeding is to use a minimum rate of 1kg/ 100m^2 consisting of a mix of the following:

- Jap Millet (Summer), Winter Rye (Winter) – 50%
- Unhulled Couch – 20%
- Hulled Couch – 30%

Note: *Grass cover of less than 90 percent over the entire area at the off maintenance inspection will cause the maintenance period to be extended until cover is achieved. Extensive bare patches are not acceptable. Determination of 90% cover will be established by random sampling over the grassed area. 95% grass cover is required at the time of the off maintenance inspection.*

PERFORMANCE CRITERIA 1.5.10. – STAKING: All tree specification and sourcing aims for successful establishment without the need for staking, however in areas prone to high winds staking may be used to protect trees during the establishment phase.

Implementation Provisions:

IP 1.5.10.1. All staking and ties are to be removed prior to the off-maintenance inspection. Any plant material unable to be self-supporting consistent with appropriate form and vigor is to be reduction pruned or removed and replaced. Plants displaying weakness or failure in root system are to be replaced.

1.6.0 IRRIGATION

This section applies to any landscape works where irrigation is to be installed as specified by council.

PERFORMANCE CRITERIA 1.6.1. - IRRIGATION: Irrigation works are designed and installed utilising best management practices whilst taking into consideration future maintenance costs to the asset owner and the safety of the asset users.

Implementation Provisions:

IP 1.6.1.1. Roundabouts, median strips and splitter islands intended for immediate or future landscaping of any form will be equipped with automatic hard wired irrigation systems. The only exception will be regions not connected to mains water supply.

IP 1.6.1.2. In commercial and retail centre development, all planted finishes on road verges and footpaths are to be equipped with permanent automatic irrigation infrastructure.

IP 1.6.1.3. Screen planting for noise attenuation structures is to be provided with a permanent water supply system feeding establishment irrigation reticulation. However, if irrigation is not warranted as permanent infrastructure, than QCVs, at maximum 40 metre centres, will be installed to cater for acute conditions, replanting and maintenance. Temporary irrigation systems designed for a 2-3 year life may be run from these QCVs as a single station, battery controlled system at Councils discretion.

Establishment irrigation will be required where consent conditions call for noise fences located on the rear or side boundaries of residential properties to be screened with buffer planting.

IP 1.6.1.4. Automatic irrigation installations are to remain functional indefinitely, therefore high quality of design, installation and coverage is essential. Compliance with manufacturer's specifications is required.

IP 1.6.1.5. All irrigation installations are designed to have a metered supply with approved back-flow prevention in accordance with AS 3500: National Plumbing and Drainage Code.

IP 1.6.1.6. Core irrigation components are compliant with Council's inventory, available on request from Council's Parks, Reserves and Landscape Services Department.

IP 1.6.1.7. Vandal resistant containment is provided for critical components.

IP 1.6.1.8. Emitter devices are limited to pop-ups and sub-surface. Micro system, drippers and shrub heads on risers will not generally be accepted.

IP 1.6.1.9. Irrigation system for landscape works (including an entry statement proposal) in the road reserve or any other Crown Land managed/or to be managed by Council shall, provide an isolation valve at the property boundary on the irrigation main from the backflow prevention device.

IP 1.6.1.10. All irrigation systems proposed in Crown Land are to be approved by Council prior to installation.

IP 1.6.1.11. Maintenance and operation of irrigation systems in crown land and cost of the water supply will be the responsibility of the private developer until the issuing of the "off maintenance" certificate (where such is related to a development adjacent).

IP 1.6.1.12. Hours of operation for systems shall comply with the current council regulations.

IP 1.6.1.13. Council may disconnect any water supply or privately constructed irrigation systems located in Crown Land at the issuing of the "off maintenance" certificate.

IP 1.6.1.14. Site specific assessment of the continuing need for non mandatory irrigation shall have regard for:

(1) purpose and function of the area being serviced by irrigation;
(2) maintenance requirements of planting;
(3) cost of continued maintenance and operation of irrigation system and associated infrastructure;
(4) continued costs of potable water supply; and
(5) performance of planting and grassing in achieving design intent.

IP 1.6.1.15. If a private resident/private developer wishes to continue responsibility for maintenance of landscape works and associated irrigation systems after the 'off ' maintenance period, a written agreement from Council will be required which details:

(1) responsibilities for water costs;
(2) responsibilities for management of planting and associated irrigation, hard surfacing and other built elements;
(3) extent of time of the agreement;
(4) spraying times and spraying patterns for irrigation; and
(5) a public risk insurance policy is to be entered into by the private resident/ managing body/developer of the development or residence adjacent to cover the landscaped area and irrigation system within the road reserve area for the specified period of time.

IP 1.6.1.16. The irrigation system is to be installed and tested prior to planting and mulching. For acceptance on-maintenance and off maintenance, the system will be required to be fully demonstrated and assessed against an "as constructed" scaled and accurate plan supplied by the developer's representative.

1.7.0 HARD SURFACING

This section relates to any landscape works that involve the use of hard surfacing, including the provision of all pavement treatments.

PERFORMANCE CRITERIA 1.7.1. – HARD SURFACING: All hard surfacing in open space areas and areas external to building envelopes must be designed to provide for safety and functionality, enhance visual amenity, and have regard for ongoing maintenance requirements and stormwater management.

Implementation Provisions:

IP 1.7.1.1. All hard surfacing is to comply with current Australian Standards for surface treatments.

IP 1.7.1.2. Hard surfaced areas that are subject to wetting are to comply with relevant Australian Standards.

IP 1.7.1.3. The selection and design of new hard surfacing considers the following:

(1) *Loading* – the hard surfacing is capable of supporting the volume and weight of expected traffic;

(2) *Durability* - long term sustainability requirements such as the rate of wear and tear and susceptibility to discolouration;

(3) *Maintenance costs and long term maintenance requirements* - aesthetic appeal, function, safety aspects, laying cost, availability for replacement and long term maintenance requirements need to also be addressed;

(4) *Design for resistance to heaving by tree roots* – additional reinforcing, deformable cushioning, rat walls, bridge beaming or flexible paving surfaces such as rubber epoxy compounds.

(5) *Vegetation protection* – porous pavers are used when hard surfacing is required around mature trees. In high intensity urban areas, where trees are installed in hard surface areas, the use of porous pavement over gap-graded subgrades is mandatory.

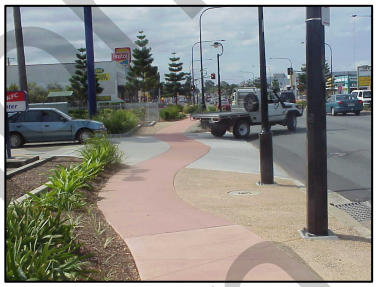
(6) *Ease of movement for users* – pedestrians, wheelchair users and people with mobility constraints require a surface that is comfortable and functional.

IP 1.7.1.4. All unit-paving areas are to be restrained by a hard edge, preferably concrete.

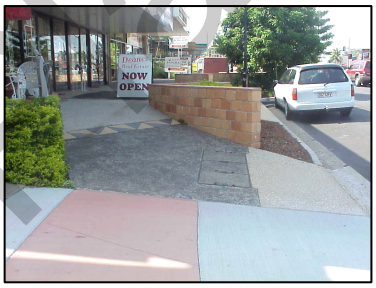
IP 1.7.1.5. In urban centres all unit paving is to be laid on a concrete sub base or minimum 150mm compacted roadbase.

IP 1.7.1.6. Facilities and furniture including bike racks are to be installed on paved, concrete or other hard surfaces.

IP 1.7.1.7. Pavement finishes, within centres are consistent with Appendix 1 of this policy.



Hardsurfacing is capable of supporting the volume and weight of expected traffic
(Gympie Road, Strathpine)



New surfacing should provide ease of movement and complies with AS148 Design for Access and Mobility
(Gympie Road, Strathpine)

IP 1.7.1.8. All hard surfacing is designed to exhibit the following gradient/slope ranges[1]:

HARD SURFACE TYPE	GRADIENT/ SLOPE
Pathways/Bikeways	1% - 8%
Entrance walks	1% - 4%
Pedestrian Ramps	up to 8%
Stairs	Consistent with the provisions of the Building Code of Australia for relationships between risers, goings and surface falls.
Ball play areas	1% - 3%
Adventure Playground Pad	1% - 3% for major installations. Peripheral areas to be assessed on individual merits for slope, elements and other features at the discretion of the Manager Parks, Reserves and Landscape Services.
Terrace and sitting areas	1% - 2%

Facilities and furniture are to be installed on paved, concrete or other hard surfaces (Gympie Road, Strathpine)

IP 1.7.1.9. All hard surfacing and areas external to building envelopes must be designed to provide appropriate stormwater management including a minimum cross fall of 1:50 away from built structures to a suitable collection point.

1.8.0 EDGING

This section relates to any landscape works that involve the use of edging, through the following strategy:

PERFORMANCE CRITERIA 1.8.1. – EDGING: Edging is designed to provide adequate separation between turf and gardens and to provide safety for maintenance staff and other user groups.

Implementation Provisions:

IP 1.8.1.1. Built edges must be installed at grass mulch interfaces in local, neighbourhood, town, district and regional parks and in commercial and retail centre development. Appropriate edging for these areas may include:

(1) Extruded concrete edging is to be 150mm, flush mounted – ready mixed and machine installed; or

(2) Brick - laid in either header or stretcher course on mortar; or

(3) Timber edges (only applicable on land not to be managed by Council at any time) are built to a high durability standard. The minimum dimensions of the cross section of the timber edge are to be 140x45. CCA Pine 50x50CCA stakes are to be installed at both ends of every panel and at max. 1.5m intervals. Edges screwed to stakes with galvanised batten screws.

Built edges must be installed at the grass mulch interfaces in parks and commercial and retail centres (North Lakes Town Park)

IP 1.8.1.2. Sprayed or spaded edges may only be installed in linear/ linkage parks, bushland recreation reserves and sporting facilities. These edges must be constructed in accordance with the following:

(1) At the mulch grass interface a vertical edge minimum 100mm depth must be built so that an immediate 100mm cover of mulch over soil will be provided to minimise weed germination at the edge.

(2) The maximum mown gradient above the edge must not exceed 10% so that repeated mowing to the edge will not compromise the edge or the stability of the mower.

Edging must be able to sustain the movement of tractor mowers (North Lakes Town Park)

IP 1.8.1.3. All edging, especially that associated with Council managed land, is to be designed with smooth navigable lines and must be able to accommodate the operational characteristics of mowers and maintenance vehicles. Inward facing 90 degree of sharper corners are not permitted.

IP 1.8.1.4. At garden and turf interfaces, edging is to finish flush so that mowing obstacles and trip hazards are not created.

[1] All hard surfacing is to comply with Australian Standards relating to Design for Access and Mobility.

1.9.0 INFRASTRUCTURE AND FACILITIES

This section relates to the provision of infrastructure and facilities through the following strategy:

PERFORMANCE CRITERIA 1.9.1. – INFRASTRUCTURE AND FACILITIES PROVISION: Infrastructure and facilities are designed to be functional and sustainable for the intended service life.

Implementation Provisions:

IP 1.9.1.1. Standard infrastructure items, such as bollards, seating, bins and bubblers, will be provided in accordance with Council Specifications, Desired Standards of Service for relevant park type and Appendix 2 of this policy.

IP 1.9.1.2. The only infrastructure and facilities that are to be located in road reserves are those associated with public transport, traffic engineering requirements, horticulture maintenance support and community benefit.

Other infrastructure and facilities that are to be located in road reserves will require prior approval from the appropriate authority with which jurisdiction lies e.g. State controlled roads - Department of Natural Resources or Department of Main Roads - and Council for all Council managed road reserves.

Standard infrastructure items, such as bins, will be provided in accordance with Council specification (Gympie Road, Strathpine)

IP 1.9.1.3. The design and construction of playground equipment is to comply with Council requirements and relevant Australian Standards both in supply and installation of softfall.

IP 1.9.1.4. Infrastructure items are designed, constructed and located to minimise vandalism (including graffiti).

IP 1.9.1.5. Infrastructure items, such as shelters, are to have building approval and be certified by a Structural Engineer.

IP 1.9.1.6. Where appropriate, mains powered stainless steel BBQs are to be provided. Where mains power is not available the use of gas or solar powered stainless steel BBQs will be considered.

IP 1.9.1.7. Infrastructure items should not be located within the tree preservation area of habitat trees.

Infrastructure is designed to be functional and sustainable (Stapylton Park, North Lakes)

PERFORMANCE CIRITERIA 1.9.2. – INFRASTRUCTURE AND FACILITIES SITING: The location and siting of infrastructure and facilities should have regard for traffic engineering requirements, ease of maintenance, user convenience and access and user safety and security.

Implementation Provisions:

IP 1.9.2.1. Siting requirements are in accordance with Council specification.

IP 1.9.2.2. Facilities requiring regular programmed servicing or maintenance, e.g. rubbish collection and cleaning of bbqs, shall be located so as to be accessed from vehicles parked safely on road verges or internal car parking areas.

IP 1.9.2.3. An adequate provision of facilities, such as rubbish bins, bubblers and seating, capable of meeting potential user needs will be located in high intensity areas and within park and open space areas.

Seating must be provided for pause (Gympie Road, Strathpine)

IP 1.9.2.4. Seating within centre development and park and open space areas will be provided for pause on long grades and where there is a significant outlook and shade. They may also be provided at the beginning/ end of walking tracks and recreation trails.

IP 1.9.2.5. Playground facilities are to provide adequate separation from carriageways, car park areas, bikeways and water bodies. Landform, planting or fences may be used to provide separation from areas of higher hazard. Areas for supervision of play activity must be provided between the facilities and areas of higher hazard.

IP 1.9.2.6. The location of trees or structures, designed to provide shade for infrastructure and facilities, must have regard for peak usage times, typically mid morning, midday and after school.

Playground facilities are to provide adequate separation from carriageways, car park areas, bikeways and water bodies (Rosmarin Avenue Reserve, Eatons Hill)

PERFORMANCE CRITERIA 1.9.3. – BOARDWALKS: Boardwalks are designed and constructed using best practice.

Implementation Provisions:

IP 1.9.3.1. Boardwalks are designed and constructed, within Council specification and any other applicable standards, using sound, robust and durable practices and high quality fixtures and fittings while having regard for user safety, maintenance requirements (including the provision for Quad Bike access) and vandalism resistance.

Boardwalks are designed and constructed using sound, robust and durable practices (North Lakes Town Park)

STRATEGY 1.9.4. – SURFACE TREATMENT AND FINISHES: Timber and metal infrastructure utilises surface treatments and finishes that are durable and sustainable.

Implementation Provisions:

General

IP 1.9.4.1. For all structures, excluding boardwalks, fixings and fastenings must be galvanised. However, in coastal low land areas fixings and fastenings must be stainless steel.

IP 1.9.4.2. In all boardwalk construction, stainless steel screws and galvanised bolt type fastening must be used above water surfaces. For all elements that are subject to immersion, stainless steels is required.

Timber

IP 1.9.4.3. Timber surfaces are milled, dressed or sanded free of splinters.

IP 1.9.4.4. Timber finishes are durable and renewable without the need for future colour matching i.e. clear. Stains are applied in accordance with manufacturer requirements.

IP 1.9.4.5. Treated timber which is machined has new faces treated with appropriate preservatives.

Metal

IP 1.9.4.6. Metal surfaces are galvanised, anodised, powder coated or metal sprayed.

IP 1.9.4.7. Cuts and welds are made smooth and galvanised prior to a finish coating.

Painted Finishes

IP 1.9.4.8. Council will only accept painted finishes in specific and nominated circumstances.

1.10.0 LANDSCAPING WITHIN CAR PARKS

The landscaping within carparks section relates to any landscape works within car parks through the following strategy:

PERFORMANCE CRITERIA 1.10.1. – LANDSCAPING WITHIN CAR PARKS: Landscaped areas and buffer strips associated with car parks enhance visual amenity and are designed for long term sustainability and durability.

Implementation Provisions:

IP 1.10.1.1. Planting beds located along road frontages are a minimum width of 2 metres.

IP 1.10.1.2. All trees that are to be planted within car parks are at least 45L stock. Tube stock or larger may be used for all other amenity and buffer planting.

IP 1.10.1.3. Trees within car park areas are to have a minimum 600mm clear trunk height for a 1.5m high tree at planting and be able to attain a clear trunk height of 2.0 metres at maturity.

IP 1.10.1.4. The mature height of under plantings does not exceed 900mm.

IP 1.10.1.5. All trees and shrubs maintain adequate sight lines in accordance with traffic visibility and engineering safety requirements especially at planting bed ends.

IP 1.10.1.6. Landscape areas located along road frontages are to be provided with a minimum 300mm depth of friable growing media and must be designed to be well irrigated and effectively drained.

IP 1.10.1.7. Planting bed areas are to be identified, marked out, sub soil decompacted and excavated to the required minimum depth of 300mm with adequate subsoil drainage and conduit pipework for the irrigation system (if required).

IP 1.10.1.8. All excavations are to remain open for inspection by a Council officer, prior to backfilling with approved soil, lightly compacted to the required finished surface level.

IP 1.10.1.9. Growing media depths for gardens are as follows:

(1) general beds – 300mm;
(2) tree planting areas – 450mm; and
(3) median/ island beds – 450mm.

1.11.0 LANDSCAPE BUFFERS (SCREENING)

This section applies to any landscape works that are related to the design and construction of landscape buffers.

PERFORMANCE CRITERIA 1.11.1. – LANDSCAPE BUFFERS (SCREENING): Landscaped buffers are designed to have regard for ongoing maintenance requirements and to function as effective screens; screening undesirable features, incompatible land uses and acoustic barriers, retaining walls, solid walls and fences located along road frontages and creating privacy.

Implementation Provisions:

IP 1.11.1.1. The height of screening vegetation relative to the width of the landscape buffer is as follows:

HEIGHT OF SCREENING	WIDTH OF BUFFER
Not less than 8.0m	8.0m - 10.0m
8.0m	5.0m
5.0m	3.0m
Maximum 2.5m	2.0m
Maximum 1.2m	1.0m

IP 1.11.1.2. Plant selection has regard for plant maturity with particular attention given to issues relating to shade and access to sunlight for adjacent land uses.

IP 1.11.1.3. Plant selection and planting reflects the required screening function.

IP 1.11.1.4. Unless otherwise stipulated by conditions of development approval landscaped buffers may comprise of planting only or a combination of earth mounding, planting and fencing in accordance with Engineers specifications.

IP 1.11.1.5. Planting of landscape buffers consists primarily of shrubs and trees complemented by the use of sustainable ground covers.

IP 1.11.1.6. The location of the buffer does not compromise traffic visibility and safety requirements.

IP 1.11.1.7. Vehicle access to planting strips is prevented by appropriate devices and structures for example slip rails, wheelstops, bollards or kerb.

IP 1.11.1.8. Landscape buffers are designed to provide safe access for routine maintenance personnel and equipment.

IP 1.11.1.9. Areas adjacent to landscape buffers that are intended to be mowed must not exceed a cross fall gradient of 1: 4.

IP 1.11.1.10. Drainage swales may be incorporated into the landscape buffer design where no alternative control method is achievable.

1.12.0 LANDSCAPING WITHIN HIGH VOLTATGE EASEMENTS

This section relates to any landscape works within high voltage easements.

PERFORMANCE CRITERIA 12.2. – LANDSCAPING WITHIN HIGH VOLTAGE EASEMENTS: Landscaping is designed and constructed to have regard for the safe and efficient operation of high voltage easements.

Implementation Provisions:

IP 1.12.1.1. Vegetation height must comply with the power supplier's requirements. Landscaping approval may be sought from the relevant power supply services provider.

1.13.0 SITEWORKS

The siteworks section applies to any landscape works that involve vegetation protection, clearing, stockpiling and managing impacts during construction, through the following strategies:

PERFORMANCE CRITERIA 1.13.1. – RETENTION AND PROTECTION OF SIGNIFICANT VEGETATION: The canopy, trunk and root system of vegetation located within Tree Preservation Areas are retained and protected from disturbance.

Implementation Provisions:

IP 1.13.1.1. The minimum Tree Preservation Area (TPA) is calculated as a radius from the tree equal to ten times the Diameter Breast Height (DBH).

IP 1.13.1.2. Prior to the commencement of site earthworks the TPA is to be delineated with temporary fencing comprised as a minimum of star pickets at 5 metre centres with barrier mesh secured firmly. Fencing is to remain in place for the duration of the construction period.

IP 1.13.1.3. Site sheds, buildings, driveways, stockpiling, car parking or the cleaning or servicing of machinery is prohibited within the TPA.

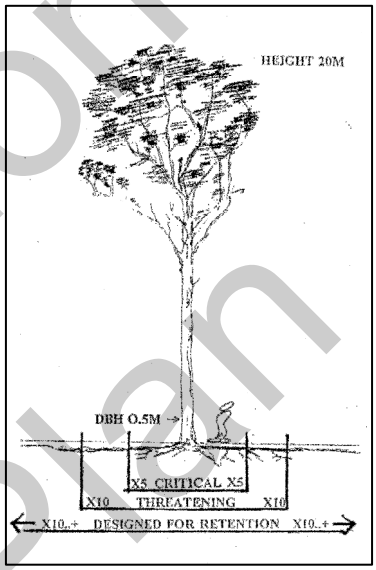
IP 1.13.1.4. The soil level is not to be altered within the TPA.

IP 1.13.1.5. Where operational clearance is required for machinery operating in close proximity to trees, branch removal is undertaken with appropriate equipment and to AS 4373-Pruning of Amenity Trees.

IP 1.13.1.6. Trunks of trees are protected from bark bruising or bark removal by the installation of close proximity fences or trunk wrapping with material capable of providing a protective barrier such as timber battens or corrugated iron secured externally by twitched wire.

IP 1.13.1.7. Root systems at risk of compaction by machinery will be covered by a blanket of organic mulch 300mm deep.

IP 1.13.1.8. Where significant disturbance is unavoidable within the TPA and excavation of a trench exposes roots within the TPA an appropriate root curtain is to be constructed immediately using hessian, hay bales or mulch which is then dampened and kept moist.



The minimum Tree Preservation Area (TPA) is calculated as a radius from the tree equal to ten times the Diameter Breast Height (DBH) *(Contact Council's Parks, Reserves and Landscape Services Department for more information)*

IP 1.13.1.9. All incidences of significant structural or physiological damage to vegetation intended for retention will require the technical services of a qualified aborist who will assess the tree for rectification or removal.

IP 1.13.1.10. If installation of services or footings cannot be avoided within/ or through the appropriate protection zone, arboriculturally sound practices are to be used eg coring or tunnel boring. Methods and practices are to be approved by Council's Parks, Reserves and Landscape Services Department prior to works commencing or continuing.

PERFORMANCE CRITERIA 1.13.2. – DISPOSAL OF VEGETATION: All cleared vegetation, including weeds, is disposed of in a manner which minimises nuisance and annoyance to existing premises and degradation of adjacent vegetation intended for retention and environmental impacts.

Implementation Provisions:

IP 1.13.2.1. Cleared vegetation is volume reduced by chipping or grinding and stockpiled on site pending calculation of site mulching demands. Weed seeds are not to be chipped/ground.

IP 1.13.2.2. Pit burning is not undertaken unless the pit burning is:

(1) not less than 100m from any dwelling or commercial premises;
(2) generally carried out as one continuous operation;
(3) only undertaken when weather conditions are favourable;
(4) outside the range of possible radiated heat damage to any vegetation intended for retention; and
(5) not within 200 metres of significant vegetation intended for retention in park or reserve areas; and
(6) not located on land to be transferred to Council as Park or Reserve.

Cleared vegetation is volume reduced by chipping or grinding and stockpiled on site (Dakabin Rubbish Tip)

IP 1.13.2.3. Haul routes crossing existing or proposed park and open space are ripped and cultivated to rectify soil compaction.

IP 1.13.2.4. Cleared vegetation is not disposed of by above ground burning.

IP 1.13.2.5. All two hundred (200) invasive weeds listed in the *Invasive Naturalised Plants in South East Queensland* (Queensland Herbarium), declared plants (Class 1, 2 and 3) and any other prohibited plants adopted by Council are to be treated and removed from the site to the satisfaction of the Manager Parks, Reserves and Landscape Services.

IP 1.13.2.6. All reproductive material is to be removed off site and to be appropriately disposed of at a landfill site (not within the green waste section). This ensures that no regeneration of plants occurs on site or in the dumping location. This solution is mandatory for weeds identified in IP1.13.2.5.

IP 1.13.2.7. All non-reproductive material is to be disposed offsite, as far as practicable, in the green waste section of a landfill site.

IP 1.13.2.8. Declared plants are to be controlled/ removed in accordance with the *Land Protection* (*Pest and Stock Route Management*) *Act 2002* and Council requirements.

IP 1.13.2.9. All works shall be in accordance with a Vegetation Management Plan or Weed Treatment and Removal Strategy approved by Council.

PERFORMANCE CRITERIA 1.13.3. – DISPOSAL OF RUBBISH: All rubbish is disposed of in a manner, which minimises environmental impacts.

Implementation Provisions:

IP 1.13.3.1. Rubbish located on proposed crown land is to be removed and disposed of at a landfill site. It is not to be disposed of by any other practice unless authorised by a Council representative.

Rubbish located on proposed crown land is to be removed and appropriately disposed of at a landfill site (Dakabin Rubbish Tip)

PERFORMANCE CRITERIA 1.13.4. – CONSERVING VALUABLE SEED BANKS: Clearing works must be managed in a manner which conserves valuable seed banks contained within the topsoil layer of the site

Implementation Provisions:

IP 1.13.4.1. Where a valuable seed bank resource for local native species is contained within the topsoil layer, strategic removal of the topsoil layer is to be undertaken and stockpiled.

PERFORMANCE CRITERIA 1.13.5. – STOCKPILING OF MATERIALS: Stockpiling of material is undertaken in a manner that minimises environmental impacts and nuisance and annoyance to existing and adjacent premises. Existing or future public open space sites used for stockpiling are decompacted and remediated prior to any further landscape planting or grassing works.

Implementation Provisions:

IP 1.13.5.1. Stockpiles of landscape material are stored separately on site.

IP 1.13.5.2. Landscape material is free of any deleterious material that has the potential to impact upon the intended use of the land, prior to stockpiling.

IP 1.13.5.3. Stockpiles are treated appropriately to prevent wind and water borne erosion and weed infestation. Temporary erosion and sediment controls are installed to contain the stockpile and are removed upon usage of landscape material

IP 1.13.5.4. Stockpiles are not located within any Tree Preservation Area.

IP 1.13.5.5. Stockpiles are not placed below the 100 year ARI floodline for rivers and 50 year ARI floodline for creeks and other watercourses.

IP 1.13.5.6. Stockpile sites are deep ripped and organic matter and Gypsum is cultivated into the topsoil profile.

PERFORMANCE CRITERIA 1.13.6. – MANAGING IMPACTS DURING CONSTRUCTION: Landscape works are carried out in a safe manner that minimises adverse impact to the natural environment caused by erosion, siltation, incineration of cleared vegetation, and rubbish and avoids noise, dust and siltation impacts/ nuisance, redirection of stormwater runoff and any inconvenience to residents and other premises.

Implementation Provisions:

IP 1.13.6.1. The landscape works incorporate temporary stormwater runoff, erosion and sediment controls and trash traps designed in accordance PSP 28.

IP 1.13.6.2. Stormwater runoff, erosion, and sediment controls are constructed prior to commencement of any clearing works.

IP 1.13.6.3. Landscape works are carried out within the following times:

(1) Monday to Friday (other than public holidays) between 7 am and 6 pm on the same day;
(2) Saturday (other than public holidays) between 7 am and 12 noon on the same day; and
(3) No work is carried out on Sundays or public holidays.

IP 1.13.6.4. During construction, dust suppression measures (such as watering of the site) are implemented to protect nearby premises.

Erosion and sediment controls are constructed prior to commencement of any clearing works (Glenrock Parade, North Lakes)

IP 1.13.6.5. Temporary construction works do not pond or concentrate stormwater runoff in adjoining properties.

IP 1.13.6.6. Temporary construction works do not create nuisance or annoyance on adjoining premises as a result of altering the stormwater runoff pattern exiting the site.

IP 1.13.6.7. Construction traffic to and from the site uses the highest classification streets and roads where a choice of access routes is available.

IP 1.13.6.8. All materials associated with the landscape works that are dropped, deposited or spilled on streets giving access to the site are removed and the streets are cleaned as soon as practicable after the event. Any damaged areas are repaired and reinstated to the original condition.

IP 1.13.6.9. Where works are carried out on existing roads a traffic control plan is prepared in accordance with the Manual of Uniform Traffic Control Devices. All traffic control measures are properly erected and maintained during the works.

IP 1.13.6.10. All traffic movements to and from the site frontage are carried out in a safe manner.

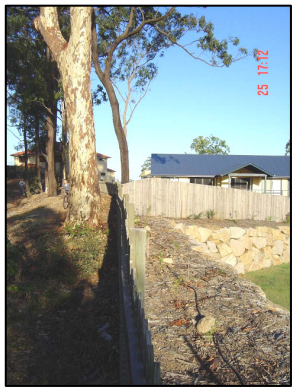
PERFORMANCE CRITERIA 1.13.7. – PROVISION OF STRUCTURALLY SOUND AND SAFE TREES IN PUBLIC AREAS: Trees retained in public areas, including parks and road reserves, are structurally safe and compatible with the use of these areas by the public.

Implementation Provisions:

IP 1.13.7.1. Remnant trees within felling radius of road reserves, pedestrian or recreational focus points and private property are assessed by a qualified arborist with appropriate public liability insurance.

IP 1.13.7.2. Trees intended for retention will be pruned to manage structural integrity issues but with regard for the habitat values that the tree may offer immediately or in the future. Where pruning for safety removes nesting hollows, provision should be made for the secure installation of nest boxes and hollow branches at the direction of Councils Environmental Services Department.

IP 1.13.7.3. Pruning is to be in accordance with AS 4373 – 1996 “Pruning of Amenity Trees”.



Trees, which because of clearing, are now subject to wind loads higher than pre-clearing and are considered prone to structural failure or wind throw will be removed by the developer prior to on and off maintenance acceptance (Church Road, Eatons Hill)

IP 1.13.7.4. The following categories of trees will be removed by the developer prior to the acceptance of the site on and off maintenance.

(1) Trees with damaged or removed bark exceeding one third of the trunk circumference measured at any height.
(2) Trees subjected to soil level increases exceeding 200mm height over 30% or more of the DBH x 10 area.
(3) Trees displaying symptoms of major structural defects not able to be rectified by remedial pruning or other horticultural practices.
(4) Trees, which because of clearing, are now subject to wind loads higher than pre-clearing and are considered prone to structural failure or wind throw.

Trees displaying symptoms of major structural defects not able to be rectified by remedial pruning or other horticultural practices will be removed by the developer prior to on and off maintenance acceptance (Riversleigh Cresecent, Eatons Hill)

2.0.0 Additional Requirements for Landscaping in Road Reserves

2.1.0 LANDSCAPE DESIGN, PLANT SELECTION AND PLANTING

This section relates to any planting works involving new plantings (including street trees) in roundabouts, median strips and road reserves.

PERFORMANCE CRITERIA 2.1.1. – LANDSCAPE DESIGN: Landscape design has regard for traffic management and pedestrian movement.

Implementation Provisions

IP 2.1.1.1. Landscape design must integrate with civil design to ensure the side of the road to carry an intended footpath/ bikeway is not constrained by above or below ground utilities. In doing so this will ensure adequate root volume to sustain appropriately sized trees is available while minimising damage to paths, kerbs and driveways.

IP 2.1.1.2. Where, bus stops and car drop off points are known, planting should not be located within the vicinity of these zones.

IP 2.1.1.3. Signalised intersections have specific traffic management requirements. All planting is to be considered at a site-specific level in consultation with Council and be undertaken in accordance with traffic visibility and safety requirements.

IP 2.1.1.4. Landscape design should not require lane closures for maintenance activities. The design should provide compliance with all workplace health and safety requirements and the *Manual of Uniform Traffic Control Devices*, Department of Main Roads; Part 3 – Works On Roads. In particular section 4.3.

Planting should not be in the vicinity of bus stops and car drop off points (Gympie Road, Strathpine)

Signalised intersections have specific traffic management requirements (Cnr North Lakes Drive and Memorial Drive, North Lakes)

PERFORMANCE CRITERIA 2.1.2. –STREET TREES: Landscape design has regard for the long term sustainability of street trees. Street trees are appropriately sited in road reserves. Conditions for street tree contributions are provided for.

Implementation Provisions:

IP 2.1.2.1. Street trees are to be a mix of species unless otherwise approved by the Manager, Parks, Reserves and Landscape Services.

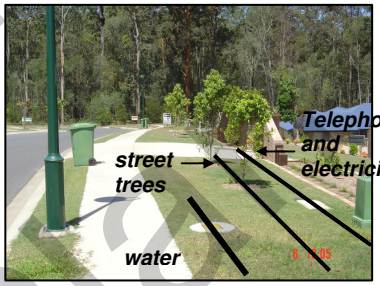
IP 2.1.2.2. The development proponent may seek to make a street tree contribution in lieu of installing street trees. All applications are to be in accordance with Appendix 4 of this policy.

IP 2.1.2.3. On urban subdivisions, allowance shall be made for a minimum average of one street tree per allotment to be provided.

IP 2.1.2.4. On rural subdivisions, trees are to be planted at centres representing 4/5 of expected mature canopy diameters in clusters or continuous bands.

IP 2.1.2.5. In commercial and retail centre development proposals, street trees will generally be limited to a species not expected to exceed 12 metres height unless:

(1) their placement allows them to be sited a mature height felling radius away from buildings;
(2) the planting site has been cultivated to a depth of >400mm over a surface area of 1.8m^2; and
(3) natural conditions or installed drainage provide adequate percolation to the bottom of the planting pit.
(4) within centres, such as Strathpine, street tree species are to be in accordance with Appendix 3 of this policy.



Landscape design must accommodate sustainable street trees
(Ken Duncombe Drive, Cashmere)

IP 2.1.2.6. Where concrete paths are not required as a consent condition and the location of installed services allows, trees will be located in the centre of frontage and mid-way between back of kerb and the property boundary.

IP 2.1.2.7. Trees are not to be planted between kerbs and paths unless the space is at least 1.5 metres wide. The kerb offset of one (1) metre must be met and the adjacent path is to be steel reinforced for the entire length of tree planting.

IP 2.1.2.8. Where space permits, trees will be located as far from roads, kerbs and paths as possible.

IP 2.1.2.9. Where trees are planted between flush-mount kerbs and private property or park boundaries, preference is to locate them close to or on boundaries. Where there is a swale between kerb and boundary, trees are to go between swale and boundary i.e. trees are not to be planted between swale and kerb.


Tree placement will maximise the opportunity for kerb off-set
(Ken Duncombe Drive, Cashmere)

IP 2.1.2.10. Where the location of driveways is not determined, trees will generally be located centre of frontage and at least one (1) metre behind back of kerb.

IP 2.1.2.11. Where driveway locations are known, trees will be located mid way between driveway and furthest side alignment.

IP 2.1.2.12. Where, bus stops and car drop off points are known, planting should not be located within the vicinity of these zones.

IP 2.1.2.13. In all cases the following minimum off sets from known features apply:

- streetlights – 9.0 metres;
- driveways – 4.5 metres; or
  2.5 metres with the installation of an encapsulating root barrier
- service pits/inspection boxes – 3.0 metres;
- stormwater kerb adapters - 1.0m;
- kerbs – 1.0 metres;
- pathways and bikeways within parks– 1.0m;
- pathways and bikeways along streets -0.5m;
- pedestrian crossings and bus-stops
  – 20.0 metres on approach; and
  – 6.0 metres on departure; and
- Energex pad mounted transformer
  – 3.0 metres.


Where space permits, trees will be located as far from roads, kerbs and paths where possible and within gardens where practical
(Ken Duncombe Drive, Cashmere)

- Fire hydrants – 3.0m
- Receding corner – 5.0m
- Approaching corner – 15.0m
- Power pole – 3.0m
- Water or sewerage – 1.0m from edge of main
- Traffic lights – as specified by Council's Traffic Engineer.

IP 2.1.2.14. Trees located under overhead powerlines are to be in accordance with the power suppliers requirements.

IP 2.1.2.15. Trees are not to be located in the triangular zone defined by the following distances: 20.0m and 6.0m from the intersection of the inner edge of the traffic lanes (parking lane is not classed as a traffic lane) on the approach side of the intersection road respectively.

PERFORMANCE CRITERIA 2.1.3. – ROUNDABOUT AND MEDIA STRIP DESIGN: Roundabout and median strip design must have regard for plant siting and potential maintenance requirements.

Implementation Provisions:

IP 2.1.3.1. Planting in roundabouts is to be setback from the inside of the roundabout kerb edge and consist as follows:

(1) 0.0m – 1.0m setback – appropriate pavement material;
(2) 1.0m – 3.0m setback – shrubs/groundcovers only with a maximum mature unpruned height of 600mm above the road pavement (not top of kerb); and
(3) 3.0m – >3.0m setback – trees and shrubs/ground covers. Roundabouts of 6.0m in diameter in low speed zones of 50km/h or less, a small single trunked tree with a mature diameter of 100mm may be located in the centre of the roundabout, providing such achieves a clear trunk height at planting of 1.5m above the road pavement level.

Roundabout design must have regard for plant siting and potential maintenance requirements (Ken Duncombe Drive, Cashmere)

IP 2.1.3.2. Mown grass or turf is not to be used in roundabouts.

IP 2.1.3.3. Median strips with an internal width two (2) metres or less must not be planted.

IP 2.1.3.4. Medians with an internal width exceeding two and a half (2.5) metres will be designed to facilitate appropriate maintenance activity and meet appropriate work place health and safety requirements. Design should enable maintenance staff to walk amongst plantings, along outer edges and around planted finishes.

Median strips with an internal width less than two (2) metres must not be planted (Pine Rivers Drive, Murrumba Downs)

IP 2.1.3.5. Turf Grass should be avoided for use in median landscapes. Where it is unavoidable or necessary for safety reasons, areas of turf are to be in continuous strips for ease of maintenance access. Where planting is to be included in turfed medians, gardens are to be edged turf is to be set back a minimum of 600mm from back of kerb and turf areas are to be fully automatically irrigated.

IP 2.1.3.6. Planting in median strips is to be setback from the inside of the kerb edge as follows:

(1) 0.0m – 0.6m setback – appropriate pavement treatment;
(2) 0.5m – 1.0m setback – appropriate ground covers, 200mm high, with minimal pruning requirements;
(3) 1.0m – 1.5m setback – shrubs/ground covers only. Shrubs and ground covers to have a maximum maintained mature height of 900mm above the road pavement (not top of kerb);
(4) min. 1.5m setback – Trees and shrubs/ground covers. Trees are to be primarily single trunked species. Tree spacing will be determined depending on the species spatial requirements and clearance from service elements and light poles; and
(5) Trees will generally not be planted in medians with an internal width less than 3.0m.

IP 2.1.3.7. In median strips three (3) metres or wider trees may be located centrally or staggered provided such accords with traffic engineering visibility requirements. Tree species will be selected for appropriate canopy shape.

In median strips three (3) metres or wider trees may be located centrally or staggered provided such accords with traffic engineering visibility requirements. (Discovery Drive, North Lakes)

IP 2.1.3.8. Ends of median strips require special consideration and discussion with Council with regards to clear zones and safety requirements.

3.0.0 Landscaping in Parks and Reserves

3.1.0 ACCESS, SAFETY AND SECURITY

This section relates to any landscape works involving access, safety and security in parks and reserves.

PERFORMANCE CRITERIA 3.1.1. – LIGHTING: Lighting within parks and reserves is designed to minimise impact on existing and adjacent premises whilst maximising user safety.

Implementation Provisions:

IP 3.1.1.1. Light fixtures and fittings within Parks and Reserves must:

(1) be sited to minimise loss of residential amenity through glare associated with night time use;
(2) be sited to deter unsociable behaviour as far as practicable;
(3) not be visually intrusive;
(4) be appropriate to the setting;
(5) be designed and constructed to minimise vandalism; and
(6) be provided appropriate to the park category or at the discretion of Council.

IP 3.1.1.2. Parks and Reserves must be illuminated in accordance with current Australian Standards, lighting requirements, and associated Council requirements.

Lighting maximises user safety
(North Lakes Town Park)

PERFORMANCE CRITERIA 3.1.2. – PARK AND RESERVE ACCESS: Parks and Reserves must be designed to optimise public access; prevent the entry of unauthorised or inappropriate users; facilitate the access of maintenance vehicles, emergency vehicles, and other vehicles authorised by Council; and minimise adverse impacts on the cultural, ecological and landscape values of the site.

Implementation Provisions:

IP 3.1.2.1. Where maintenance vehicles may place themselves and other motorists or pedestrians at risk whilst gaining access from the carriageway into a Park or Reserve, a different design approach may be required. It may be necessary to offset the sliprail and boundary delineation into the park or reserve so that the vehicle is clear of both the carriageway and road verge before coming to a stop facing the slip rail or vehicle gate. The alignment of this approach does not need to be perpendicular to the kerb but should accommodate the safest approach angle for all users.

Vehicle exclusion devices must be provided along road frontages
(Settlers Park, North Lakes)

IP 3.1.2.2. Vehicle exclusion devices must be provided along road frontages to prevent the entry of unauthorised users. Devices must be provided in accordance with Council specification.

IP 3.1.2.3. Parks and Reserves are designed to have due consideration for the movement of maintenance vehicles through the locality by providing access for vehicles to all parts of the park. Links across drainage and waterway corridors must be designed for access during wet periods. Where practicable and where loss to park or reserve amenity is minimised formal corridors for maintenance vehicles must be provided.

Parks and Reserves are designed to have due consideration for the movement of maintenance vehicles
(Pine Rivers Park, Strathpine)

IP 3.1.2.4. Bushland Reserves must be designed to exclude:

(1) unauthorised vehicles (including trail bikes); and
(2) horses, where their potential for environmental degradation is significant. Horse exclusion measures must be provided in accordance with Council specification.

IP 3.1.2.5. Where horse access is permissible, Council's standard horse gates are to be used.

IP 3.1.2.6. Parks and Reserves must be designed to provide access for emergency vehicles. In Bushland Reserve design, emergency access must comply with an approved Fire Management Plan (FMP).

IP 3.1.2.7. Clear zones must be provided for along park and reserve boundaries to accommodate maintenance vehicles and activities in accordance with Council specification.

IP 3.1.2.8. Areas of high ecological value, as directed by Council, will be protected from public access.

IP 3.1.2.9. Removable access sliprails or bollards or vehicle gates must be provided at vehicle and pedestrian/ access points. These exclusion measures must be provided in accordance with Council specification.

Council specified removable access sliprail (Pine Rivers Park, Strathpine)

Council specified bollards (Pine Rivers Park, Strathpine)

3.2.0 PLANT SELECTION AND PLANTING

This section relates to any landscape works involving new planting and/ or the preparation of growing media or planting beds in parks and reserves.

PERFORMANCE CRITERIA 3.2.1. – PLANT SITING: Plant siting within Parks and Reserves must maximise community benefit whilst recognising growing and maintenance requirements.

Implementation Provisions:

IP 3.2.1.1. The location of planting will be sufficiently offset from side and rear boundaries to provide for:

- mature growth size;
- clearance for maintenance vehicles along boundaries;
- falling dead wood; and
- boundary safety requirements.

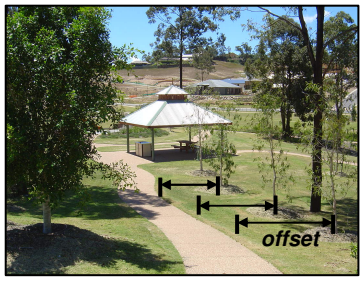
IP 3.2.1.2. Trees planted along pedestrian/ cycle corridors will have regard for the growth requirements of the tree from infancy to maturity. Generally the minimum offset from path edge will be four (4) metres.

IP 3.2.1.3. Single tree planting proposed in grassed/ turfed areas within recreation land are to be spaced so that self-propelled mowing equipment can manoeuvre freely around trees (minimum 2metres). Spacing generally will be determined by the mature open grown drip line diameter.

IP 3.2.1.4. Planting along park frontages will generally be designed to include vehicle exclusion into mulched areas.

IP 3.2.1.5. Newly established groups of trees in grassed/ turfed areas are to be placed in mulched garden planting beds to reduce post maintenance requirements.

IP 3.2.1.6. Trees planted within grassed/ turfed areas are to have a minimum distance of 2m between the edges of adjacent mulch rings or hard surfaces.



Shade trees must be sufficiently offset from footpaths (Rosmarin Ave Park, Eatons Hill)

Group mulching of newly established trees (Peter Curtain Park, Petrie)

3.3.0 UTILITIES, SERVICES AND IRRIGATION

This section relates to any landscape works involving the provision of water electricity and sewerage in parks and reserves.

PERFORMANCE CRITERIA 3.3.1. – UTILITIES, SERVICES AND IRRIGATION: Water, electricity and sewerage connections must be provided where there is a present or future need, where development is within the headworks area; and in accordance with the intended function of the park or reserve category.

Implementation Provisions:

IP 3.3.1.1. Parks and Reserves within the Priority Infrastructure Area, or where town water is available under and Infrastructure Agreement, are to be provided with a metered water supply to a nominated position on the boundary.

IP 3.3.1.2. All Parks and Reserves within the Priority Infrastructure Area, or where town water is available under and Infrastructure Agreement, are to be provided with a bubbler/s, QCV's and backflow prevention devices in accordance with Australian Standards and Council specification.

Note: Irrigation off takes are to be isolated from potable supply by non return valves.

IP 3.3.1.3. An electricity connection point is to be made available at a nominated point on the boundary.

IP 3.3.1.4. A sewerage point is to be made available at a nominated point on the boundary in accordance with Council specification, where parks and reserves are within the Priority Infrastructure Area, or where sewer services are available under and Infrastructure Agreement.

3.4.0 FIRE MANAGEMENT

This section relates to any landscape works involving the provision of fire management in parks and reserves.

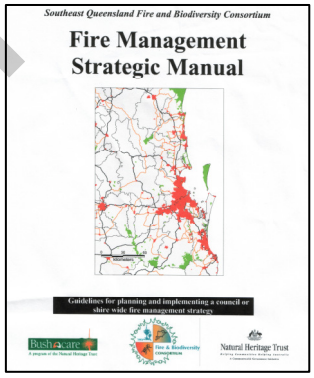
PERFORMANCE CRITERIA 3.4.1. – FIRE MANAGEMENT: Fire management is provided for in Bushland Reserves.

Implementation Provisions:

IP 3.5.1.1. Fire management must comply with the site specific Fire Management Plan (FMP) accepted by Council.

IP 3.5.1.2. Fire management should have regard for the principles of ecological fire and fire ecology (of wildlife and vegetation) as specified by the SEQ Fire and Biodiversity Consortium and the latest information available and approved by the EPA. Consideration should be given to the State Planning Policy: Mitigating the adverse impacts of Flood, Bushfire and Landslide SPP1/03, AS3959 and SEQ Fire and Biodiversity Consortium produced publications including but not limited to:

(1) *'Fire Management Operation manual: Guidelines fire planning and conducting fuel reduction and ecological burns on your property; and*
(2) '*Fire Management Strategic Manual: Guidelines for planning and implementing a council or shire wide fire management strategy'*.



Fire Management Strategic Manual (SEQ Fire and Biodiversity Consortium)

IP 3.5.1.3. Fuel free zones and management trails must be provided within reserves. Where possible, a ten (10) metre clear zone along reserve boundaries should be provided. This zone must be clear of shrubs and trees such that it is capable of being mown with a tractor/ slasher and should be designed to have a maximum 10% grade. Clear zone widths may vary depending on the requirements identified in the FMP.

Fuel Free zones must be appropriately provided within Reserves (Peter Campbell Park 4, Bray Park)

IP 3.5.1.4. Landscaping is designed to reduce fire hazard and risk to personal safety. Design should include as far as practicable the use of plants or vegetation of least flammable characteristics, while having regard for the protection and enhancement of prominent visual features and ecological features or processes.

3.5.0 REVEGETATION

This section relates to any revegetation works within parks and reserves.

PERFORMANCE CRITERIA 3.5.1. – REVEGETATION: Revegetation is to be provided for along ecological corridors, waterways, riparian areas, wetlands, gullies, around habitat trees, or as otherwise specified by Council.

Implementation Provisions:

IP 3.5.1.1. Revegetation areas will be prepared by clearing and treating all weed species.

IP 3.5.1.2. Slow release fertilizer suitable for native plants and water saving devices, such as water crystals, will be required for all plantings as determined by the Manager Parks, Reserves and Landscape Services.

IP 3.5.1.3. Unless otherwise approved by the Manager Parks, Reserves and Landscape Services, revegetation areas will be blanket mulched with organic mulch with a minimum settled depth cover of 100mm.

IP 3.5.1.4. Species are to be selected from the appropriate Regional Ecosystem list for the site and sourced from the local Shire provenance. Regional Ecosystem species lists are available from Council's Environmental Services Department.

IP 3.5.1.5. Tubestock is the minimum acceptable size of plant stock for revegetation areas.

IP 3.5.1.6. Unless otherwise approved by the Manger Parks, Reserves and Landscape Services, plants are to be randomly spaced (not in rows), with a minimum density of:
(1) 1 tree per 5 m^2
(2) 1 shrub per 3m^2
(3) 2 groundcovers per 1m^2

IP 3.5.1.7. Where requested by Council, erosion prone areas will be required to be treated with a Jutemat and planted at a higher density than that of IP 3.5.1.6 above.

IP 3.5.1.8. Grow tubes/tree bags will be required on sites as determined by the Manager Parks, Reserves and Landscape Services. Each plant will be bagged and staked with 3 stakes. All stakes and bags shall be removed prior to the 'off maintenance' inspection.

Revegetation works by Council using grow tubes (Days Road, Highvale)

3.6.0 DEWATERING OF DAMS

This section relates to the dewatering of water bodies located within new development sites.

PERFORMANCE CRITERIA 3.6.1. – DEWATERING OF DAMS: The intent of this condition is to ensure that non-native species are controlled through appropriate management measures, and that native aquatic species are removed to other habitats in a humane and safe manner.

Implementation Provisions:

IP 3.6.1.1. During dewatering, the following actions are to be undertaken:
(1) The protection and recovery of all aquatic fauna during the dewatering operation is managed by engaging a qualified wildlife "spotter-catcher" to relocate recovered native fauna.
(2) Appropriately manage exotic species in accordance with the relevant authority's recommendations.

REVIEW TRIGGERS

This policy is reviewed internally for applicability, continuing effect and consistency with planning scheme and other legislative provisions when any of the following occurs:-

(1) the planning scheme is amended;
(2) the planning scheme is replaced by a new planning scheme;
(3) amendments which affect the allowable scope and effect of a planning scheme policy are made to the *Integrated Planning Act 1997*; and
(4) other circumstances as determined from time to time by a resolution of Council.

RESPONSIBILITY

This policy is to be:-

(1) implemented by the Senior Manager, Parks; and
(2) reviewed and amended in accordance with the "Review Triggers" by the Senior Manager, Regional and Environmental Planning in consultation with the Senior Manager, Parks.

APPENDIX 1 PAVEMENT FINISHES FOR CENTRES

CENTRE NAME	DOMINANT PAVEMENT FINISH	SECONDARY PAVEMENT FINISH
Strathpine	In situ concrete, coloured plain and exposed aggregate finishes with Porphry inlays	Segmental concrete paving units in large format size consistent with established colours
Petrie	Plain concrete pavement	Segmental paving units format, size and colours consistent with established theme.
Albany Creek	Plain concrete pavement	Segmental paving units format, size and colours consistent with established theme.
Warner	Plain concrete pavement	Segmental paving units format, size and colours consistent with established theme.
Arana Hills	Segmental paving units format, size and colours consistent with established theme.	Plain concrete pavement
Kallangur	Segmental paving units format, size and colours consistent with established theme.	Plain concrete pavement
Dayboro	Segmental paving units format, size and colours consistent with established theme.	Plain concrete pavement
Samford	In situ concrete, coloured plain and exposed aggregate finishes with stone inlays	Plain concrete pavement
Mt Glorious	Coloured plain concrete pavement	Segmental paving units format, size and colours consistent with established theme.
Mt Nebo	Coloured plain concrete pavement	Segmental paving units format, size and colours consistent with established theme
Pavement finishes for new development proposals on private property which has an interface with public open space in Centre landscapes will be assessed on individual merit at the discretion of the Manager Parks, Reserves and Landscape Services.		

APPENDIX 2 FURNITURE ELEMENTS FOR CENTRES

Location	Seats	Bollards	Bins
Strathpine	Backrest Seat Bench seat Custom Stainless Steel / Timber unit 'Strathpine Streetscape' *Manufacturer* – Street Furniture Australia	Custom Stainless Steel unit 'Strathpine Streetscape' *Manufacturer* – Street Furniture Australia	Stainless Steel unit - Code *Manufacturer* – Street Furniture Australia
Petrie	Backrest Seat, Bench seat Cleveland Range *Manufacturer* – Street and Garden Furniture Co	200 x 100mm treated HWD bollard with custom windmill blade panel *Manufacturer* – Pine Rivers Shire Council	Code – Milk Urn Bin *Manufacturer* – Kassulke Welding and Fabrication
Albany Creek	Backrest - Riverside Seat Bench seat – Spectator Bench *Manufacturer* – Gossi Park, G James Furniture	200 x 100mm treated HWD bollard *Manufacturer* – Pine Rivers Shire Council	EF 7027 Litter Bin *Manufacturer* – Emtek Furniture
Warner	Backrest - Riverside Seat Bench seat – Spectator Bench *Manufacturer* – Gossi Park, G James Furniture	200 x 100mm treated HWD bollard *Manufacturer* – Pine Rivers Shire Council	EF 7027 Litter Bin *Manufacturer* – Emtek Furniture
Arana Hills	Backrest - Riverside Seat Bench seat – Spectator Bench *Manufacturer* – Gossi Park, G James Furniture	200 x 100mm treated HWD bollard *Manufacturer* – Pine Rivers Shire Council	EF 7027 Litter Bin *Manufacturer* – Emtek Furniture
Kallangur	Backrest Seat Cleveland range *Manufacturer* – Street and Garden Furniture Co. Bench seat Cleveland range *Manufacturer* – Street and Garden Furniture Co	Code – Cleveland Range *Manufacturer* – Street and Garden Furniture Co.	Code – Cleveland Range *Manufacturer* – Street and Garden Furniture Co.
Dayboro	Windmill Backrest seat *Manufacturer* – Street and Garden Furniture Co.	200 x 100mm treated HWD bollard with custom windmill blade panel *Manufacturer* – Pine Rivers Shire Council	Code – Milk Urn Bin *Manufacturer* – Kassulke Welding and Fabrication
Samford	Backrest Seat, Bench seat Cleveland Range *Manufacturer* – Street and Garden Furniture Co.	200 x 100mm treated HWD bollard with custom windmill blade panel *Manufacturer* – Pine Rivers Shire Council	Custom Milk Urn Bin *Manufacturer* – Kassulke Welding and Fabrication
Mt Glorious	Backrest - Riverside Seat Bench seat – Spectator Bench *Manufacturer* – Gossi Park, G James Furniture	200 x 100mm treated HWD bollard *Manufacturer* – Pine Rivers Shire Council	Custom Milk Urn Bin *Manufacturer* – Kassulke Welding and Fabrication
Mt Nebo	Backrest - Riverside Seat Bench seat – Spectator Bench *Manufacturer* – Gossi Park, G James Furniture	200 x 100mm treated HWD bollard *Manufacturer* – Pine Rivers Shire Council	Custom Milk Urn Bin *Manufacturer* – Kassulke Welding and Fabrication
Furniture elements for new development proposals on private property which has an interface with public open space in Centre landscapes will be assessed on individual merit at the discretion of the Manager Parks, Reserves and Landscape Services.			

APPENDIX 3 STREET TREES FOR CENTRES

Centre	Tree Species	
	Dominant	Secondary
Strathpine	*Aruacaria cunninghamiana* 'Hoop Pine'	*Harpullia pendula* 'Tulipwood'
Petrie	No dominant species (1930's theme desired using appropriate native species)	New tree planting must complement the existing neighbourhood character, typically a random mix of species
Albany Creek	*Eucalyptus* species to Albany Creek Road verges and service road medians	*Ficus* species to centre medians *Xanthostemon chrysanthus* to peripheral landscapes of Centre Core area
Warner	*Agathis robusta* 'Kauri Pine' to major road corridors	*Cupaniopsis anacardioides*
Arana Hills	*Caesalpinea ferrea* (infill planting to CBD core area only)	*Aruacaria cunninghamiana* 'Hoop Pine' to major nodes
Kallangur	*Caesalpinea ferrea* (infill planting to CBD core area only)	*Buckinghamia celcissima* 'Ivory Curl'
Dayboro	No dominant species	*Buckinghamia celcissima* 'Ivory Curl'
Samford	*Buckinghamia celcissima* 'Ivory Curl'	*Eucalyptus* species of appropriate scale with no high risk branch shedding tendencies
Mt Glorious	No dominant species (Native species only)	*Eucalyptus* species of appropriate scale with no high risk branch shedding tendencies
Mt Nebo	No dominant species (Native species only)	*Eucalyptus* species of appropriate scale with no high risk branch shedding tendencies

APPENDIX 4 STREET TREE CONTRIBUTION

Purpose

(1) To prescribe those circumstances under which Council may accept a monetary contribution towards provision of street trees in lieu of the development proponent providing them;

(2) To provide details of the contribution charges rates and the methods of determining the amount of contribution payable; and

(3) To state the time for payment of the contributions.

Application

Where the development proponent makes a request to pay Council a monetary contribution in lieu of the installation of street trees required under the planning scheme and this policy.

Use of Council's Discretion

It will be at Council's discretion to determine whether to accept a monetary contribution in lieu of the development proponent installing street trees as required by the planning scheme and this policy.

Time for Payment of Contributions

If Council accepts a monetary contribution the contribution shall be paid by the developer before the new use commences or prior to the plan of subdivision being endorsed by Council, whichever is the earlier date.

Escalation of Contributions

The contribution charge rates effective from 1 July 2008 are shown below. The contribution charge rate shall be adjusted to provide for inflationary factors in line with movements in the Consumer Price Index (All Groups – Brisbane) from the effective date (1 July 2008) to the time of payment.

Street Tree Contributions – Charge Rates Effective 1 July 2008

(1) The charge rate from 1 July 2008 is $425.00 per tree, subject to escalation as provided for in the section above.

(2) The charge rate applies to all localities and has been calculated to include the following costs:

- Purchase of 45 litre tree
- Installation of tree
- Mulching and staking
- Water and maintenance for 24 months, removal of stakes

(3) The developer is required to submit for Council's approval an approved street tree planting plan showing spacings appropriate to species, size and maturity.

(4) The street tree planting plan is to be prepared and signed by a Registered Landscape Architect and is to be in accordance with the conditions of the relevant development approval/s, the planning scheme and this policy.

The charge rate for street tree contributions is to be applied at a rate of not less than one tree per allotment (except where otherwise specified in an approved street tree planting plan) and in accordance with the approved street tree planting plan.

ENDNOTES

Amendment No – 3/2008	Date Adopted – 18 November 2008	Effective Date – 28 November 2008

Planning Scheme Policy Reference	Description of Amendment
Page 1 Head of Power	Reword statement.
Page 1 Application	Amend "planning scheme for the Shire" to "*PineRiversPlan*".
Page 1 Definitions	• Remove the word "shire" from the definition of Centre. • Amend to refer to *PineRiversPlan* rather than individual section.
Page 2	Correct the names of PSP33 and PSP28.
Page 8 IP1.5.1.13	Insert a point (9).
Page 8 Performance Criteria 1.5.2	Insert 2 new implementation provisions IP1.5.2.5 and IP1.5.2.6.
Page 10 Performance Criteria 1.5.6	Insert new implementation provision IP1.5.6.8.
Page 13 under image next to IP1.7.1.7	Delete the words after "movement" and insert "and comply with AS1428 Design for Access and Mobility".
Page 14 IP1.8.1.1	Reword point (1).
Page 22 Performance Criteria 2.1.1	Insert new implementation provision 2.1.1.4.
Page 23 Performance Criteria 2.1.2	Insert a further sentence into performance criteria.
Page 23 IP2.1.2.2	Reword IP2.1.2.2 to allow for a contribution to street trees.
Page 23 IP2.1.2.3	• Remove word "residential". • Insert "allowance shall be made for"
Page 23 IP2.1.2.4	• Remove word "residential". • Amend word "may" to "are to".
Page 23 IP2.1.2.13	Insert further offset in the "driveways" point
Page 29	Insert new section 3.6.0 Dewatering of Dams, including performance criteria and implementation provisions.
Page 29 Responsibility	Amend position names.
	Insert new Appendix 4 Street Tree Contribution.
	Amend formatting across document.
	Amend Pine Rivers Shire Council to Moreton Bay Regional Council where applicable.