

PART B FRAMEWORK AND PROCEDURES

2. PLANNING FRAMEWORK

2.1 PLANNING HIERARCHY

Subdivision and development of land within growth areas sits within a planning hierarchy that comprises a framework of State, regional and local policies that enable decisions about the use and development of land to be made including:

- > The State and Local Planning Policy Framework
- > Growth Area Framework Plans
- > Precinct Structure Plans
- > Planning Permit Applications (i.e. subdivision)

2.2 STATE AND LOCAL FRAMEWORK

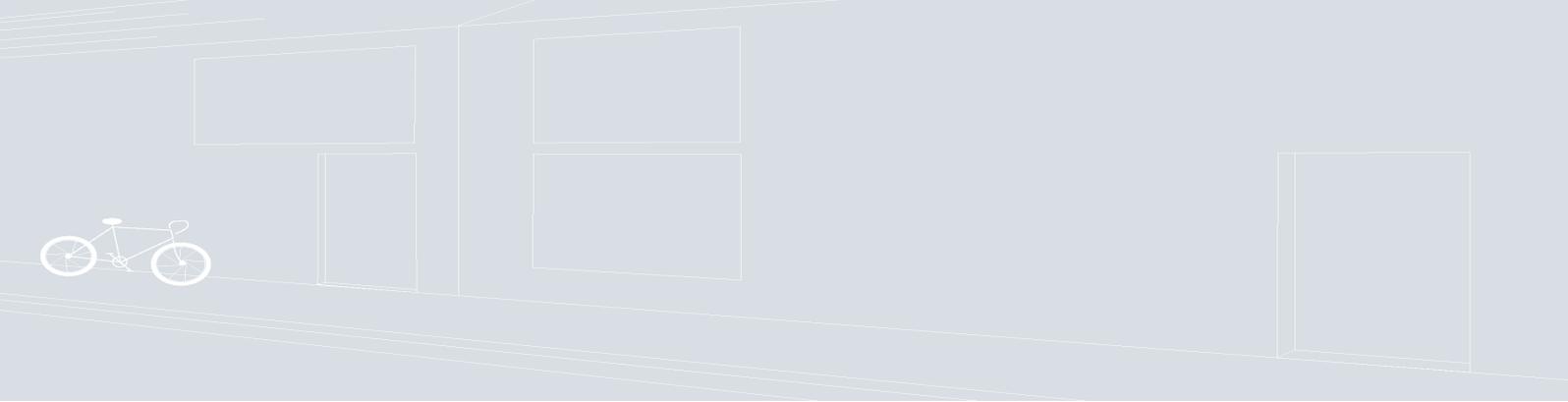
The **State Planning Policy Framework (SPPF)** within the Victoria Planning Provisions provides overarching policy to guide land use, subdivision and development in Victoria.

The **Local Planning Policy Framework (LPPF)** provides local policy context. Requirements for the layout and design of residential subdivision are set out in Clause 56 in all municipal planning schemes.

Growth Area Framework Plans set the regional framework for urban growth based on strategic directions of Melbourne's metropolitan strategy eg. "Melbourne 2030". They show broad land use patterns, committed and proposed transport networks and regional open space, significant waterways and areas of potential environmental sensitivity. Growth Area Framework Plans were approved for Melbourne's growth areas in September 2006 and are updated from time to time.

Precinct Structure Plans set the future structure for individual suburbs. They provide more detail on the land uses defined by the Growth Area Framework Plan. The Precinct Structure Plan shows how the objectives of Clause 56 of the local planning scheme will be achieved within the precinct. A permit application under a Precinct Structure Plan must meet particular Objectives set out in Clause 56 and should meet the Standards set out in Clause 56, as appropriate. The Precinct Structure Plan is incorporated into the local planning scheme to guide the use and development of land in the precinct over the long term.

Planning Permits can be issued in response to an application for a planning permit to subdivide, develop or use land. A planning permit must be generally in accordance with the Precinct Structure Plan and meet the requirements set out in the Precinct Structure Plan and the Schedule to the Urban Growth Zone.



2.3 LAND DEVELOPMENT OBJECTIVES AND GOALS IN GROWTH AREAS

Based on the planning framework and current government policies and strategies, overall **goals** for land development in Victoria's growth areas are:

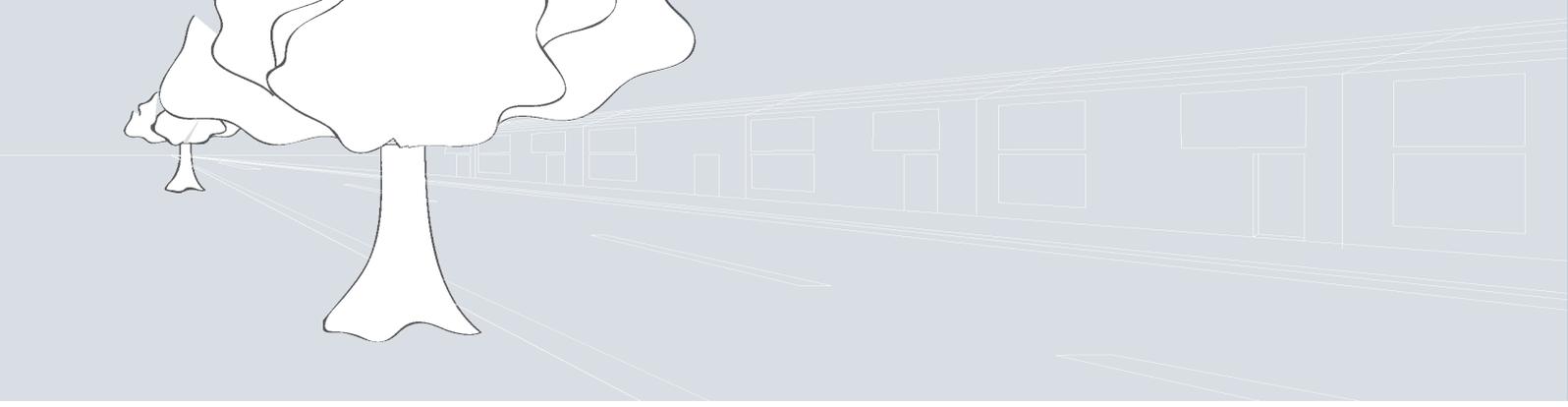
- > To create diverse, compact and well connected communities that are affordable and rich in local jobs, transport, access, services and culture; and
- > To protect valuable natural and historic features and use land more efficiently.

Objectives for growth area planning are:

- > To establish a sense of place and community
- > To create greater housing choice, diversity and affordable places to live
- > To create highly accessible neighbourhoods and vibrant activity centres
- > To provide for local employment and business activity
- > To provide better transport choices
- > To respond to climate change and increase environmental sustainability
- > To deliver accessible, integrated and adaptable community infrastructure
- > To establish safe communities.

2.4 LAND SUBDIVISION PROCESS

The land subdivision process is generally depicted in **Appendix A**.

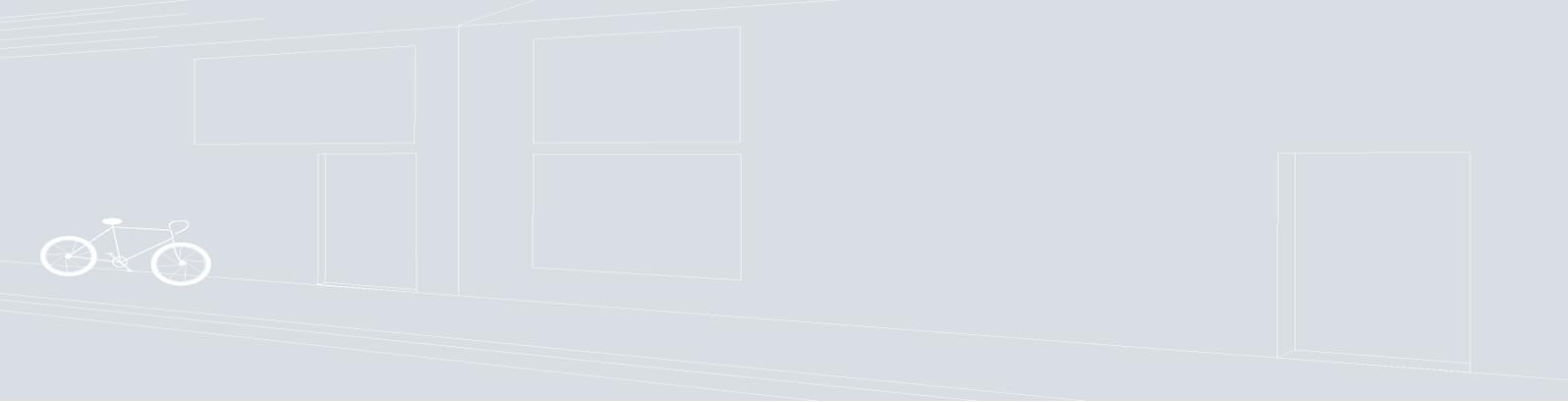


3. PLANNING PERMITS

3.1 PLANNING PERMIT APPLICATION FOR SUBDIVISIONS

All subdivision proposals will require an application for subdivision, except where the planning scheme or PSP or Schedule to Urban Growth Zone provides an exemption.

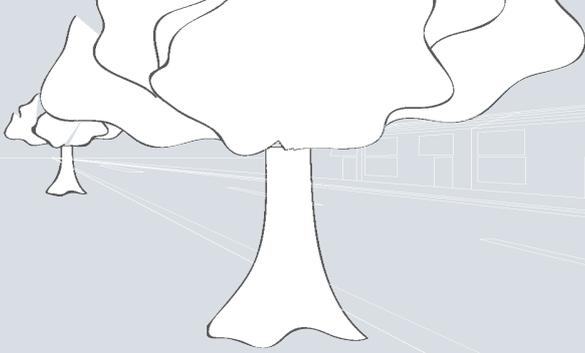
The information that should be lodged with a planning permit application for subdivision is set out in Clause 56 of the planning scheme. The Precinct Structure Plan or the Schedule to the Urban Growth Zone may modify the information required. Generally the information required will show how the permit application implements the Precinct Structure Plan.



3.2 DOCUMENTATION REQUIREMENTS FOR PLANNING PERMIT APPLICATIONS

The following documentation requirements for Planning Permit Applications are presented to provide a broad context to the engineering design and construction matters included in this manual. These issues should be addressed with the relevant Council or referral authority prior to progressing with subdivision design.

- > A copy of the title;
- > A written report including information on:
 - The subdivision’s compliance with strategic and Precinct Structure Plans for the area;
 - The number of lots, including the existing supply and demand for lots;
 - Lot size details (preferably in table format) including the range of lot sizes and average lot size details;
 - Existing road and drainage infrastructure;
 - The utility services to be provided and, where applicable a strategy for staging trunk distribution;
 - The adequacy of community services and facilities such as schools, health facilities and shopping centres; and
 - How the subdivision complies with the objectives of Clause 56 and other relevant sections of the Municipal Planning Scheme.
- > An appropriate permit application plan showing:
 - The location of the proposed lots and table of approximate lot areas;
 - The proposed internal road network (including traffic control devices);
 - Public open space (prescribed) and reserves for other purposes;
 - Community facilities (ie. Schools, activity centres, etc.);
 - How the subdivision connects with surrounding streets, regional path network, upstream drainage and open spaces proposed for adjoining estates;
 - The physical attributes of the land and affected adjacent land;
 - The Gross Development Area;
 - The Net Development Area;
 - Any existing and proposed easements;
 - Approximate road reserve widths as per the Traffic Report below;
 - Adjoining roads, including interim and ultimate intersection types at arterial roads;
 - Pedestrian footpath, shared path and cycle path networks;
 - Bus routes;
 - Identification by survey of all native vegetation on or overhanging the site;

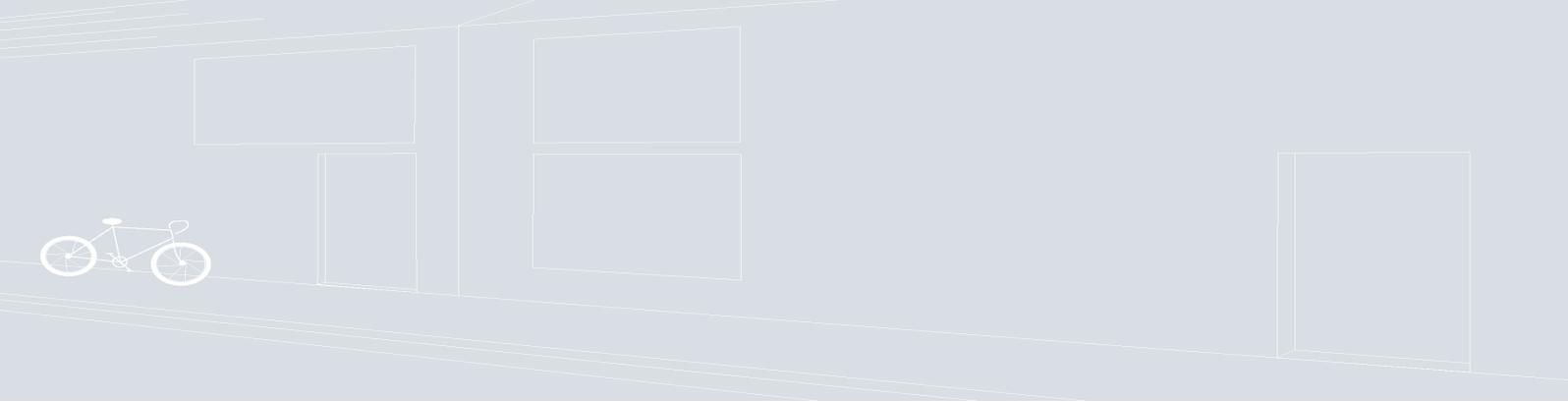


- Details of vegetation protection zones for trees to be retained and designation of trees proposed for removal recommended in a Native Vegetation Report prepared by a suitably qualified and experienced consultant;
 - The major drainage system, including large pipes, silt ponds, wetlands and waterways;
 - Overland flow paths for the 100 year ARI;
 - Drainage outfall system, interim and ultimate, from the land to defined outlets;
 - Location of works required external to the subdivision, including any access and trunk services identified.
- > An overall drainage management strategy including any proposed staging of the works and the methodology for satisfying Clause 56.07 of the Municipal Planning Scheme.
 - > A traffic engineering report designating street hierarchy, maximum predicted traffic volumes, traffic management methods, public transport routes, bicycle routes, typical cross section elements and other relevant information.
 - > A traffic plan showing sufficient notional (unmarked) on street parking spaces, at the rate of one space per lot, traffic control devices and large vehicle turning overlays to show that such vehicles can negotiate bends, laneways, nonstandard intersections and temporary 'dead ends' with clearance from parked cars.
 - > Environmental assessment reports (where appropriate) including Native Flora and Fauna (which may also include an existing vegetation survey), Aboriginal and Cultural Heritage studies, and any other investigations required to be undertaken on the site.
 - > An overall utility servicing strategy identifying works relevant and required external to the subdivision and the indicative alignment of major/trunk mains within the proposed street network.

Dependant on the proposed development, additional information may be required as deemed necessary by Council.

A planning permit application pursuant to a Precinct Structure Plan must meet the Objectives set out in Clause 56 and should meet the standards of clause 56, as appropriate.

If a development proposal is not generally consistent with a Precinct Structure Plan it is prohibited.



3.3 PRELIMINARY CONSULTATION

Prior to preparing a Planning Permit Application, the applicant should consider the **Precinct Structure Plan**, the **Schedule to the UGZ**, (or if the land is not zoned UGZ, the zone controls), and overlays to confirm that the subdivision is permitted. It is also necessary to become familiar with any restrictions or requirements of the Municipal Planning Scheme and Council policy. For these reasons, it is recommended that preliminary consultation is held with relevant Council officers. It is also recommended a subdivision permit plan be prepared at this stage for discussion purposes.

3.4 ENVIRONMENTAL ASSESSMENT

A Native Vegetation Precinct Plan (NVPP) will generally form part of a PSP. The NVPP identifies native vegetation that must be retained, native vegetation that can be removed and any conditions or requirements for planning permits that have an impact on native vegetation. A planning permit is not required to remove native vegetation that is identified for removal in a NVPP. The NVPP may also set out conditions for planning permits relating to development that may impact on native vegetation that is to be retained.

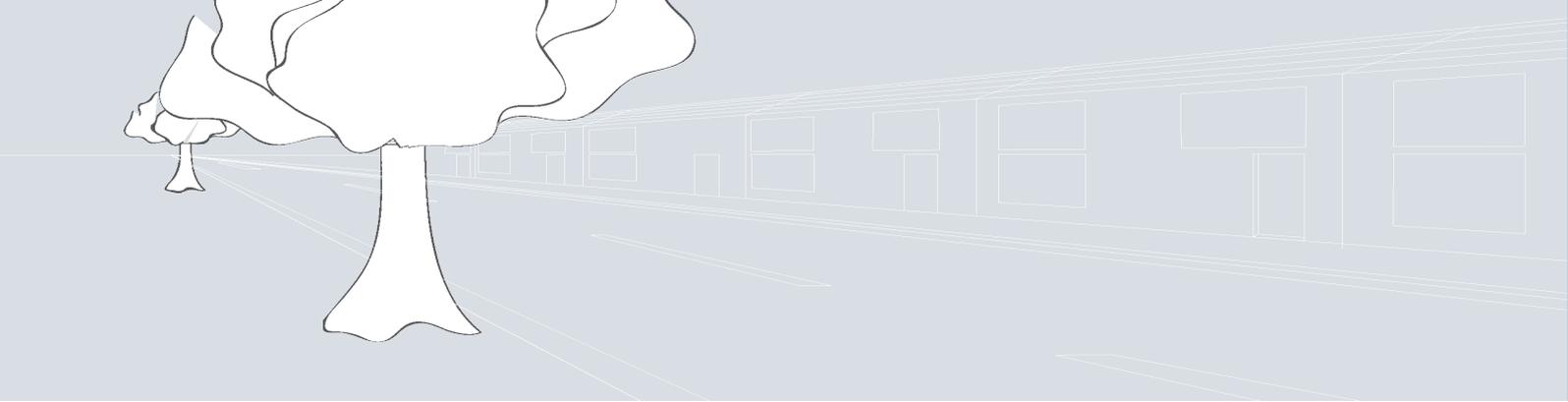
If an NVPP does not apply to the land a planning permit is generally required to remove, lop or destroy any native vegetation.

3.5 HERITAGE ASSESSMENT

A Cultural Heritage Management Plan (CHMP) will usually form part of a PSP. Any requirements set out in the CHMP must be met.

If a PSP does not include a CHMP, Aboriginal cultural heritage should be considered in the planning process. Any sites of Aboriginal carvings or relics, or sites identified to be significant to heritage for other reasons shall be identified in the planning permit application. **Aboriginal Affairs Victoria** can be contacted on **(03) 9208 3333** for details and verification.

The submission of an archaeological assessment may be required to identify any such significance. The need for such a report shall be determined when a planning permit is being sought.



3.6 PLAN OF SUBDIVISION

A licensed land surveyor should be contacted to prepare the necessary plans of subdivision and documentation for the subdivision application.

The plan of subdivision shall be in accordance with any approved Functional Layout Plan(s) prepared in accordance with this Manual.

3.7 DEVELOPER CONTRIBUTIONS

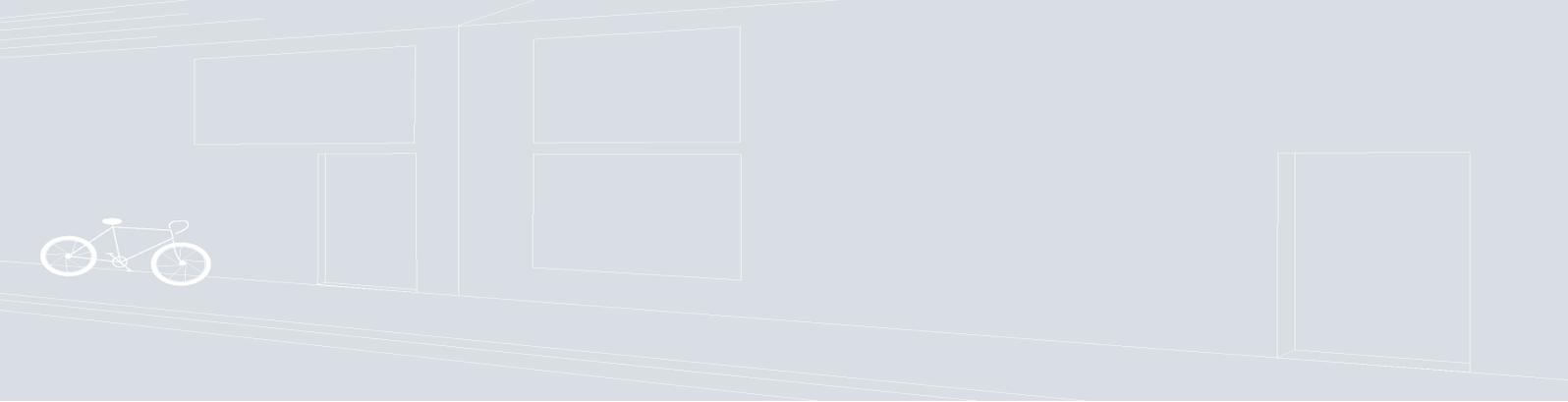
In most cases, the process of subdivision will trigger a requirement to pay development contributions as provided for under a **Section 173 Agreement or Development Contributions Plan** incorporated in the planning scheme. If a Section 173 Agreement applies to the land it will be registered on the title of the property.

3.8 PUBLIC TRANSPORT

The **Public Transport Guidelines for Land Use and Development (DOT, 2008)** should be considered when planning for land use developments. These guidelines set out a range of design principles that will better integrate public transport options in urban development. A copy of these guidelines is available at www.transport.vic.gov.au, or can be requested from the Department of Transport.

It is recommended that consultation is held with the Department of Transport for large scale developments, prior to submitting a planning permit application.

The Public Transport Guidelines for Land Use and Development should be considered in the preparation of a Precinct Structure Plan. Consultation should be undertaken with the Department of Transport in preparing the PSP. If the PSP sets out alternatives or guidelines, the alternative or guideline should be used.



3.9 STRATEGIC AND ARTERIAL ROADS

The Precinct Structure Plan will identify the relationship between proposed development and roads that are VicRoads controlled arterial roads or likely future strategic arterial or major roads.

It is recommended that early consultation is held with both VicRoads and Council regarding road development requirements to the extent that these matters are not addressed in the PSP, prior to submitting a planning permit application.

3.10 WATERWAYS AND MAIN DRAINAGE

The catchments of Melbourne's Growth Areas are managed by the regional catchment management authority, usually Melbourne Water, with jurisdiction over waterways and main drainage systems. Details of requirements, including the existence of prepared Drainage Schemes, can be found at <http://ldm.melbournewater.com.au/>.

Prior to submitting a planning permit application, it is recommended that early consultation is held with the relevant regional catchment management authority and Council to determine the extent of drainage and water quality requirements to the extent that these matters are not addressed in the PSP.

3.11 SEWER, WATER AND RECYCLED WATER

It is recommended that early consultation is held with the relevant water retailing authorities regarding their supply and treatment requirements to the extent that these matters are not addressed in the PSP, prior to submitting a planning permit application.

3.12 UTILITY SERVICES

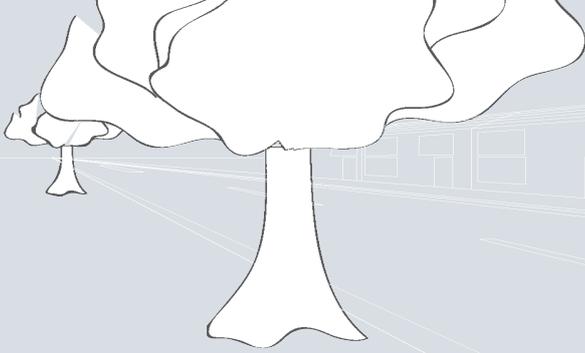
In new Growth Areas the planning and provision of all utility services can require considerable lead times to reach proposed levels of service.

It is recommended that early consultation is held with the relevant supply authorities regarding supply requirements to the extent that these requirements are not addressed in the PSP, prior to submitting a planning permit application.

3.13 TRAFFIC ASSESSMENT

Council may request submission of a detailed report on the traffic impact, both internal and external, to a proposed subdivision as part of the Planning Permit Application.

Where a Traffic Assessment report is required, it should be prepared in accordance with the requirements of **Section 4.4** of this manual.



4. ENGINEERING FRAMEWORK

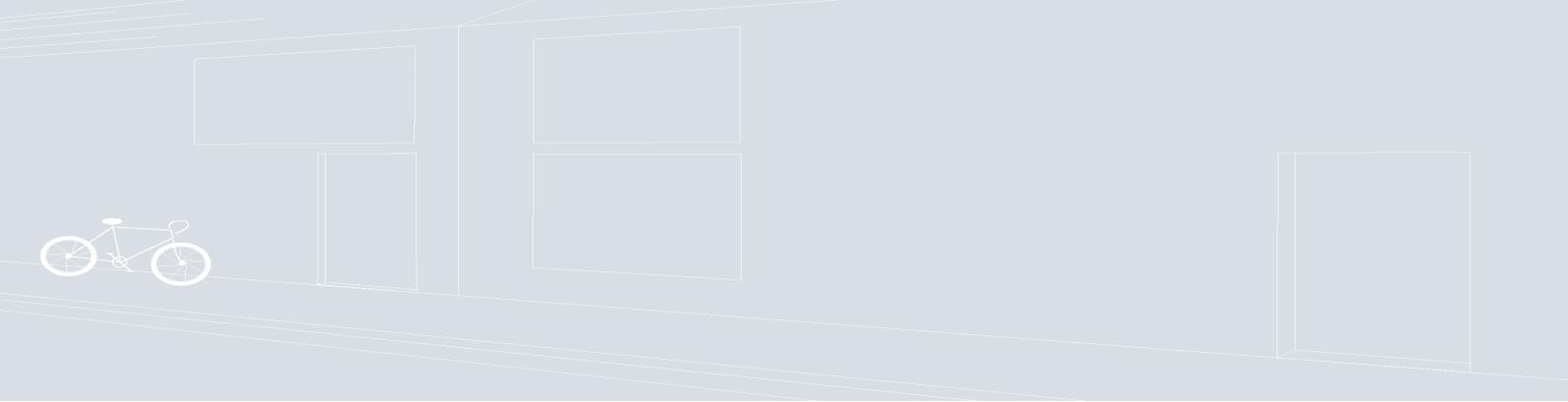
A robust engineering process can only be achieved by considering the context within which this needs to occur.

There are a variety of issues which need to be considered in developing engineering design plans and implementing these through a construction process.

Engineering proposals need to consider, but should not be limited to, the following matters.

4.1 PLANNING REQUIREMENTS

- > Contents of the **Precinct Structure Plan** for the area will include:
 - Metropolitan, regional and local **contexts** including transport, open space, heritage, biodiversity, topography, landform and drainage;
 - **Transport and movement** options and objectives including road hierarchy and layouts for connector and arterial roads, intersections, public transport, and the provision for pedestrians and cyclists;
 - **Standard road cross sections** for each category of street including features and dimensions;
 - **Open Space and natural systems** options and objectives including connectivity via network trails and the relationship of open space to water courses and the constructed network;
 - **Biodiversity objectives** for street trees, open space, drainage, ecological and fauna habitats;
 - **Image and Character** Objectives including street tree planting requirements;
 - **Native vegetation protection objectives** and requirements, including vegetation which may be removed, destroyed or lopped, and conditions which need to be included in a planning permit for the development of the land;
 - **Utility guidelines** including co-ordination of installation;
 - Guidelines for the appropriate **staging of development** within the Precinct;
 - A **bushfire risk management plan** where necessary to prescribe any potential wildfire risk both when the precinct is fully built out and during development, and setting out how these risks have been mitigated and how the Country Fire Authority has been involved;
 - **Integrated Water Management Plan** for the provision and integration of sewer, water and storm water facilities.
 - **Precinct infrastructure plan** which sets out the infrastructure and services required to support the development of the precinct.

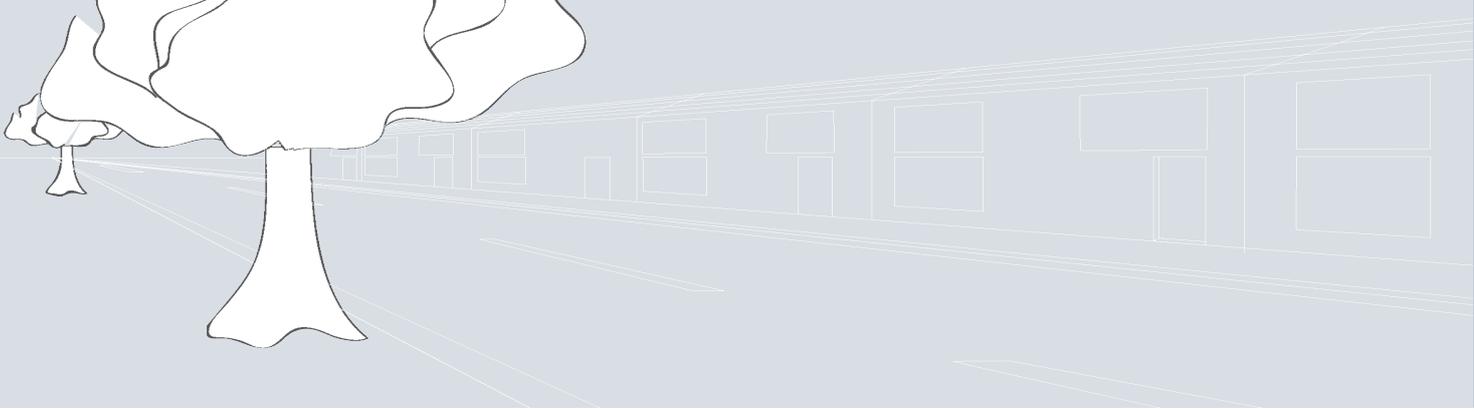


Individual proposals shall conform to the relevant Precinct Structure Plan for the area.

Applicants should contact the relevant Council where there is no PSP or where elements in the PSP require clarification, to determine the most suitable response.

The **Planning Permit** for the development area will usually include conditions relating to:

- > PSP requirements;
- > Bushfire management requirements where relevant;
- > Engineering plans;
- > Landscape plans;
- > Construction activities;
- > Storm water drainage;
- > Subdivision layout;
- > Vegetation protection requirements including measures to prevent the spread of noxious weeds, and vegetation which may be removed, destroyed or lopped;
- > Service and referral authority requirements;



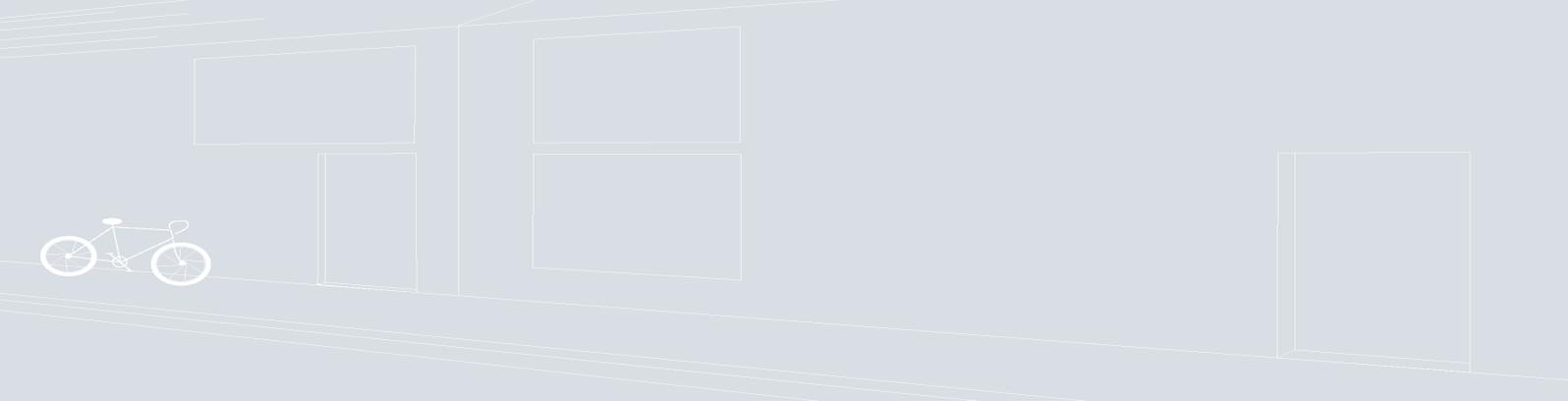
4.2 SUBDIVISION LAYOUT

Subdivision layout is determined by combining elements such as roads, streets and reserves, following consideration of the following factors:

- > Character of the neighbourhood;
- > Type of residential development;
- > Location and inter-relationship of schools, shops and public open space;
- > Bushfire management requirements to mitigate the impact of bushfire in accordance with any relevant bushfire management plan including buffer zones, landscaping and perimeter treatments;
- > Hierarchy of roads;
- > Ingress and egress from the subdivision;
- > Road safety;
- > Permeability;
- > Public transport system and routing;
- > Conveyance of flood flows;
- > Flood Prone land;
- > Treatment of stormwater flows including Water Sensitive Urban Design (WSUD);
- > Nature and contours of the terrain;
- > Environmental factors, specifically flora and fauna;
- > Special infrastructure requirements; and
- > Costs of works.

Awareness of the above engineering requirements is critical to avoid undue delays in the approvals process and the need to make major alterations to the subdivision layout at the Functional Layout Plan stage and/or the detailed engineering design stage.

Topographical and environmental information should be available to enable an accurate assessment of the suitability of the proposed road locations and the manner in which major drainage and utilities will be accommodated within the road reserve.



4.3 BUSHFIRE MANAGEMENT

4.3.1 Management of Bushfire Risk

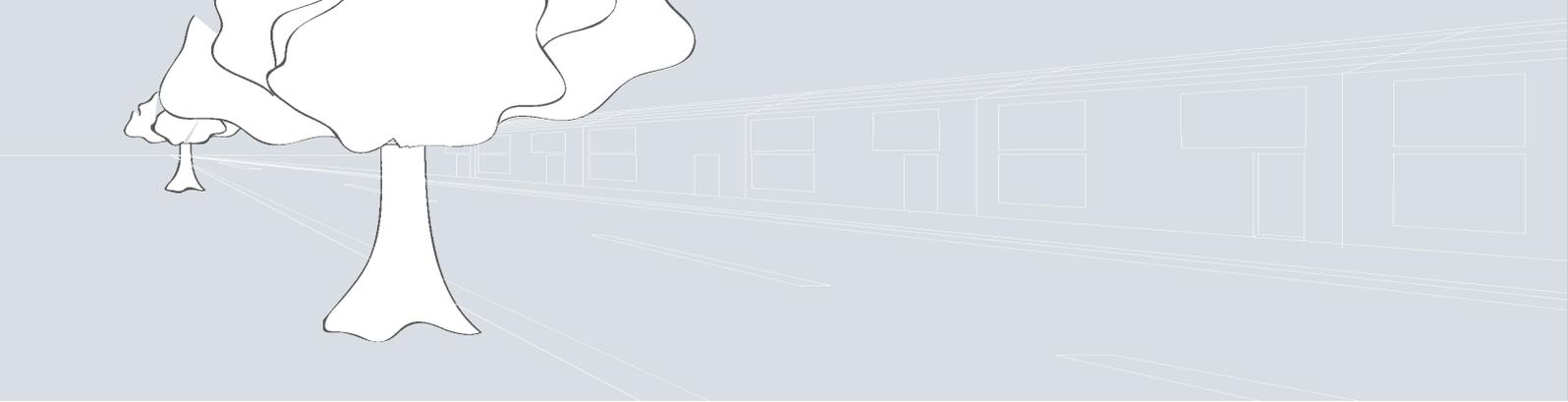
Management of bushfire risk is a consideration during the preparation of the **Precinct Structure Plans**, usually in cases where there is a relevant planning control (i.e. wildfire management overlay). Where bushfire management is a requirement, conditions will be included in **planning permits** to prepare a bushfire management plan.

Management of bushfire risk requires appropriate design and layout of the subdivision, and implementation of works to mitigate the impact of bushfire. Measures include landscaping, tree planting, estate entrance and exit treatment, static or reticulated water supplies, perimeter fencing and where applicable **Township Protection Plans** (TPP's).

4.3.2 Bushfire Management Plans

Where a bushfire management plan is required to be prepared, it must be prepared in accordance with CFA requirements and will generally contain the following items:

- > All identified bushfire risks, with ratings consistent with the Victorian Fire risk register;
- > The location, construction and performance details for any proposed fire separation solutions engineered to mitigate the impact of radiant heat and ember attack on properties (fencing, roadways, open space and fuel management zones);
- > The proposed lot sizes and lot densities on land adjacent to any open space or public land;
- > The defensible space requirements for any lots within a Wildfire Management Overlay;
- > The botanical name, height, width at maturity, and location of all existing and proposed plants, including trees;
- > The proposed ongoing fuel management plan, calculated against future vegetation full maturity, with estimated annual fuel management costs;
- > The location of any static water features (dams, lakes and wetlands) and the provision for emergency vehicle access to the water features;
- > The reticulated fire hydrant service plan, with calculated pressure and flows available during peak demand;
- > Where a Township Protection Plan (TPP) is required, a copy of the endorsed plans shall be included.



4.3.3 Approval of Bushfire Management Plans

Approval of bushfire management plans is the responsibility of the **Country Fire Authority**, which should be contacted regarding format and requirements for submissions (usually three sets of the final plans and one electronic copy in Adobe PDF format).

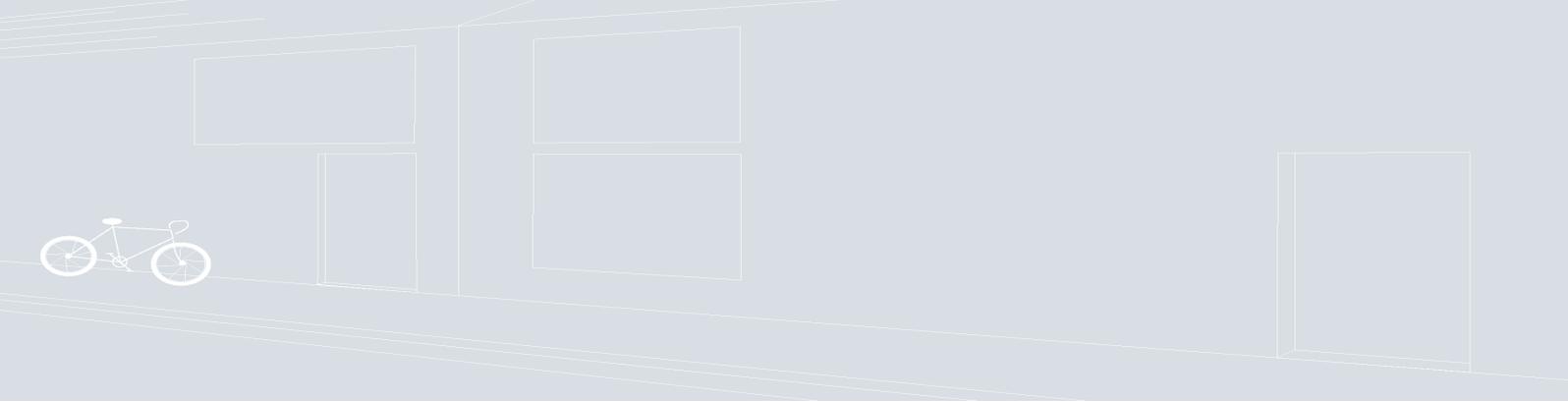
4.3.4 Approval of Engineering Plans

Where a bushfire management plan is required to be prepared, this must be approved by the CFA prior to the approval of the engineering design plans

4.3.5 Reference Documents

Policies, standards and guidelines to assist in the development of a BMP are available on the CFA website – www.cfa.vic.gov.au/publications/policy.htm.

Key references are included in **Appendix E**.



4.4 TRAFFIC ASSESSMENT

A traffic assessment is required to be prepared and submitted to council for approval where traffic has not been sufficiently detailed in permit application documentation.

Traffic assessments are application specific and reports should sufficiently detail the traffic impact, both internal and external, to a proposed subdivision.

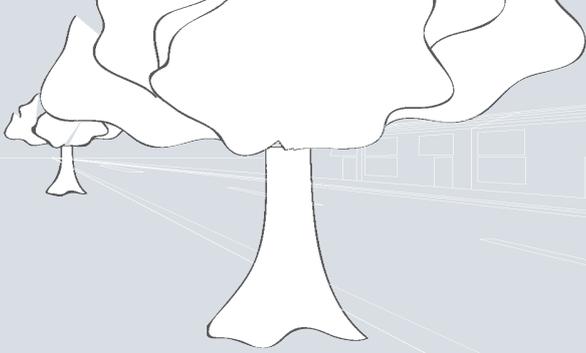
Traffic Assessment Reports should include:

- > An assessment of vehicle movements into, out of and through the subdivision;
- > A plan showing proposed traffic devices such as roundabouts (note that the use of speed deterrent devices such as speed humps within growth area subdivision developments is considered to be inappropriate and a re-design will be necessary). Unless otherwise approved, all cross intersections are to be controlled by traffic management devices such as a roundabout or traffic signals;
- > Bus routes;
- > Bicycle routes;
- > Pedestrian links;
- > Traffic Generation and Distribution; and
- > Provision for parking.

Traffic assessments should not revise decisions made by the Precinct Structure Plan relevant to the development.

Further information may be requested depending on the traffic assessment, including :

- > Loading and unloading information;
- > Intersection assessment information (SIDRA).



4.5 ROAD SAFETY DESIGN AUDITS

A road safety design audit is required in the following circumstances:

- > Where proposed or existing road features involve elements identified as potential safety hazards for road users;
- > Where road features involve elements that are potential safety hazards for persons with a disability.

These Audits may be requested at the time of submitting a Functional Layout Plan for approval, or at a later date, as considered necessary.

Design audits must be prepared and certified by an independent VicRoads pre-qualified road safety auditor and must comply with **“AustRoads Guide to Road Safety – Part 6: Road Safety Audit”**.

4.6 CLASSIFICATION OF ROAD AND NEIGHBOURHOOD STREETS

The classification, function and general composition of roads and streets within any new residential development should be in accordance with the PSP and Clause 56 of the Planning Scheme.

The various categories of roads referenced in this Manual are defined as follows. Further specifications for these roads are included in the engineering design sections.

Access Lane

A side or rear lane principally providing access to parking on lots with another street frontage. Lanes will generally serve up to 8 allotments.

Access Place

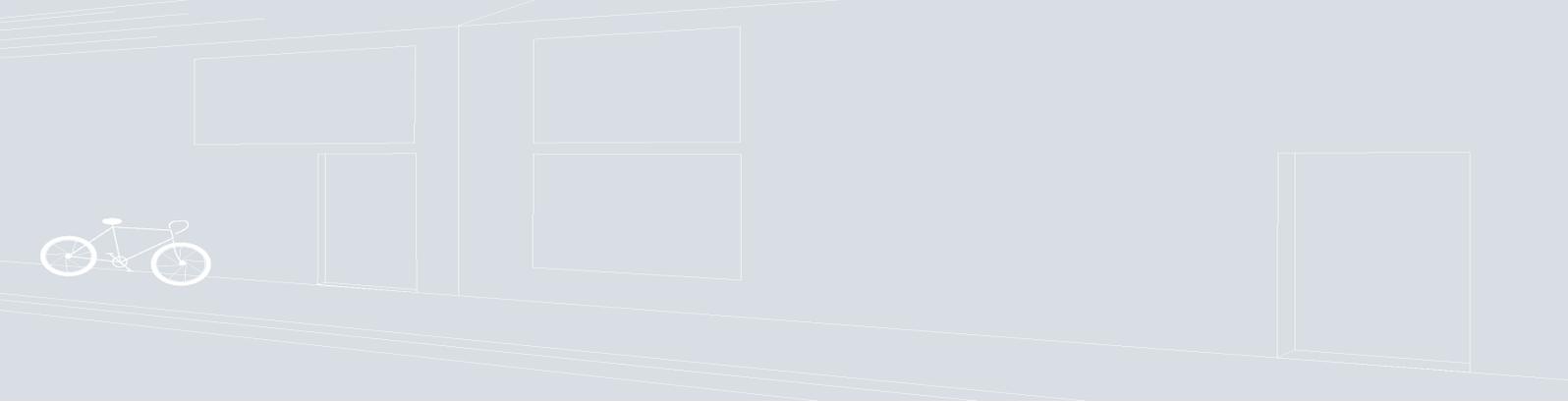
A minor street providing local residential access with shared traffic, pedestrian and recreation use, but with pedestrian priority.

Access Street – Level 1

A street providing local residential access where traffic is subservient, speed and volume are low and pedestrian movements facilitated.

Access Street – Level 2

A street providing local residential access where traffic is subservient, speed and volume are low and pedestrian movements facilitated.



Connector Street

A street that carries higher volumes of traffic. It connects Access Places and Access Streets through and between neighbourhoods.

The general location of Connector Streets should provide traffic routes as direct as possible between each “pocket” of a subdivision and nearby arterial roads, neighbourhood shopping centres, neighbourhood sporting facilities etc.

Trunk Connector

A street that carries higher volumes of traffic through and between neighbourhoods.

Arterial Road

An arterial road is one that provides direct access from one district to another. Generally speaking, arterial roads have restricted frontage development and have dual carriageway pavements. In general, the location of arterial roads will be determined by regional development plans, including Precinct Structure Plans.

An arterial road need not necessarily become a VicRoads ‘declared arterial road’ however, existing declared arterial roads and roads identified as arterial roads on a Growth Area Framework Plan must be designed and constructed to standards acceptable to VicRoads.

Service Road

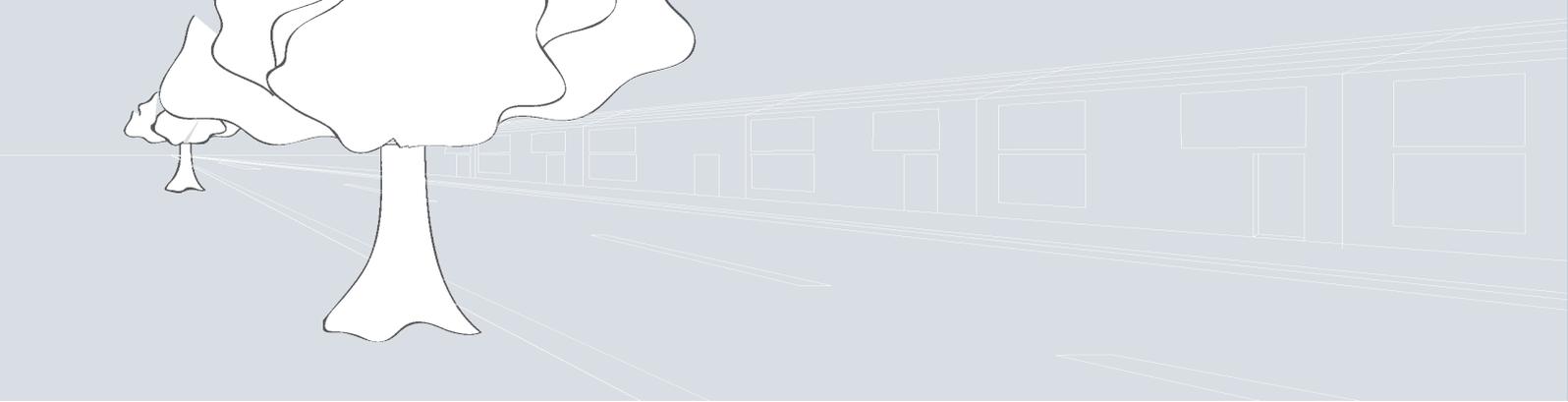
A service road is one located at the side of a through carriageway, usually on an arterial road, to provide frontage access to the adjacent properties.

Pathway Reserves – Pedestrian and Bicycle

A pathway reserve is generally a narrow open space reserve located between private property and linking reserves such as roads and open space on either side. Provision of pathway reserves shall be to the satisfaction of Council, and should address the objectives of Council’s Open Space and Bicycle Strategies.

Pathway Reserve width shall provide for both infrastructure and landscape amenity.

Where provision is required for pedestrian access or utility service provision to allotments which front open space, a suitable easement or right of way shall be created for this purpose – referred to elsewhere in this manual as a “paper road”.



4.7 ROAD RESERVES

Residential road reserves in growth areas will usually need to accommodate the following elements:

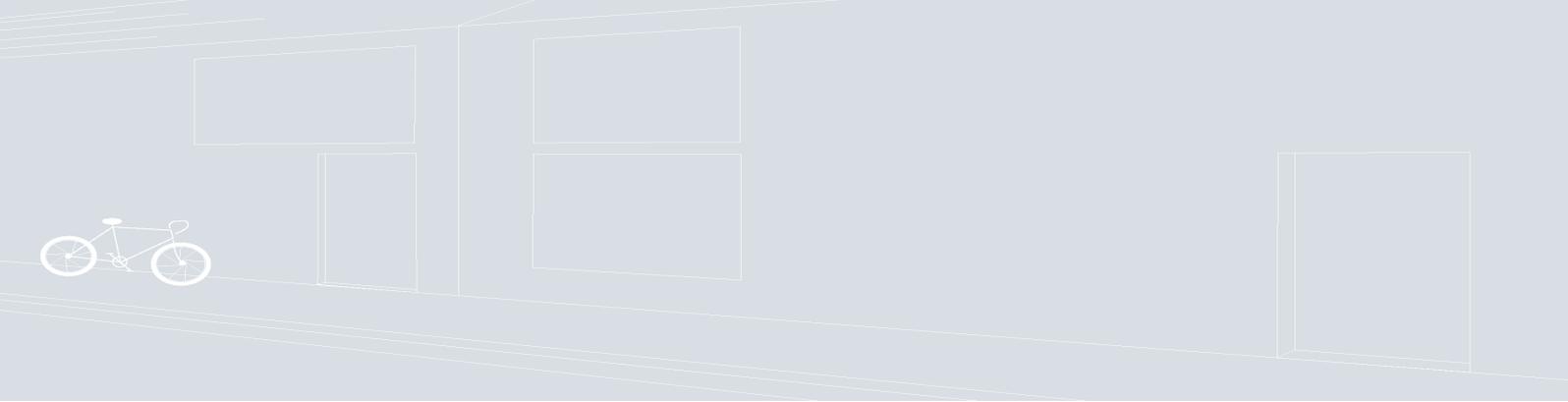
- > road carriageway with appropriate kerbing
- > Services with approved clearances in accordance with the Code of Practice for Street Works Coordination (but also including provision for services not contemplated in the Code of Practice, such as recycled water and data cables)
- > Pedestrian and bicycle access
- > Parking
- > Landscaping
- > Drainage
- > Bus routes.

4.7.1 Road Reserve Widths

Road reserve widths will usually be specified in the PSP.

Actual widths shall be based on all of the required elements such as lanes, pedestrian and bicycle movement, landscaping and the orderly spacing of utilities in accordance with the standard elements of **Section 10** and **Appendix D** of this Manual.

Where additional or non-standard elements are to be incorporated for specific landscaping, utilities or urban design purposes these proposals should be discussed with the relevant Council during pre-application meetings to encourage the development of innovative cross sections and ensure these are well understood.



4.7.2 Intersection Splays

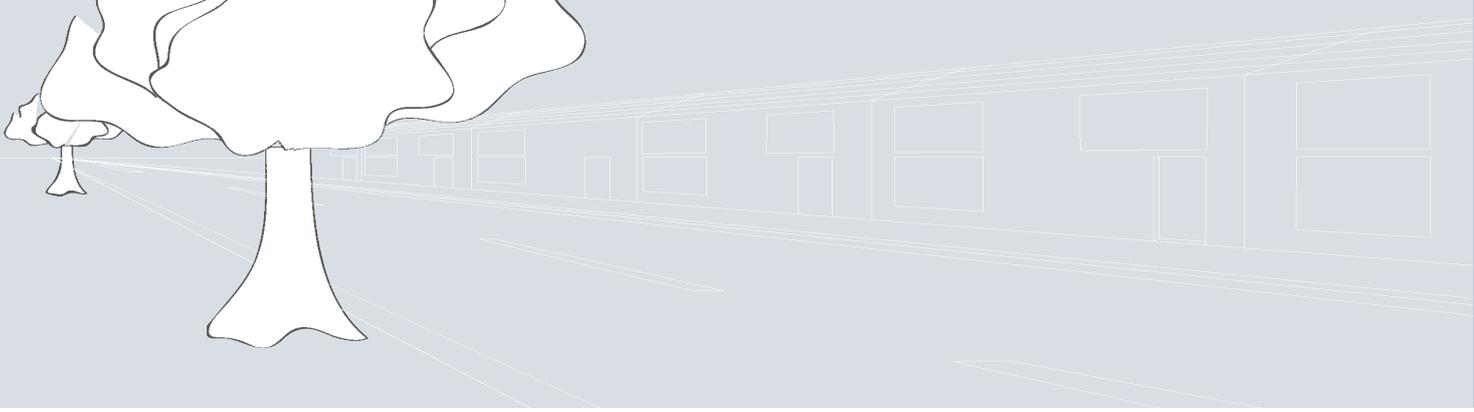
Splays of the property line at intersections of streets must be provided to ensure safety by maintaining sufficient sight lines. This will be achieved by complying with the AustRoads Guidelines.

In residential areas, minimum splays at the intersection of streets without traffic islands shall be 3 metres by 3 metres. Intersections at the ends of access lanes may have splays reduced provided conditions satisfying **AS/NZS 2890.1 – Parking Facilities (Figure 3.3)** can be demonstrated.

Intersections of all other roads requiring local widening or traffic control devices shall be designed to preserve the 'mid-block' verge width.

4.7.3 Culs de Sac and T-head Courts.

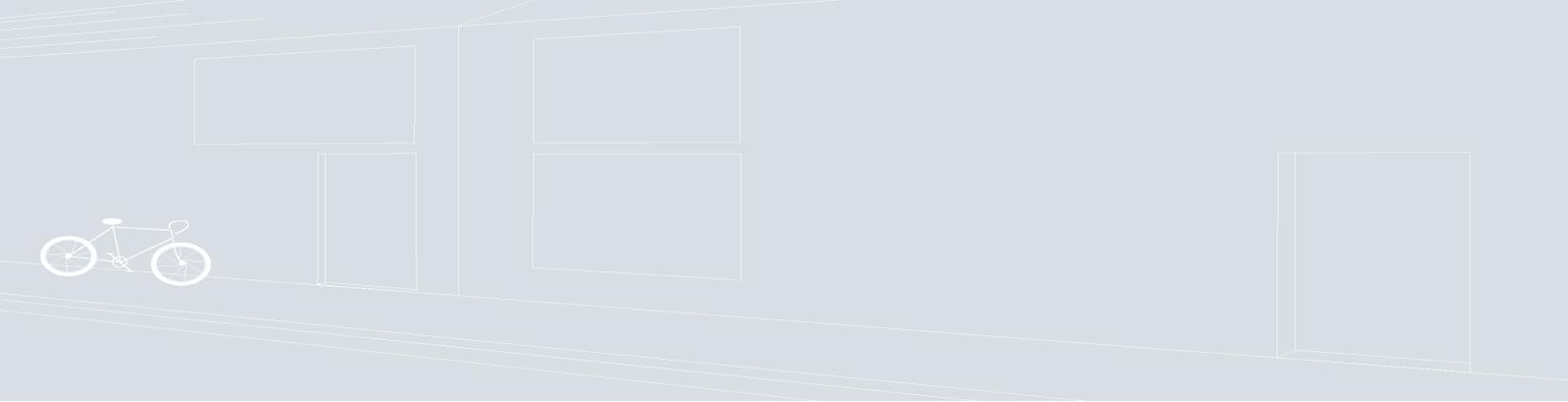
Circular and T head courts are permitted in residential subdivisions provided that they can accommodate continuous and/or three point turning movements using the AustRoads standard truck templates with a 10.5m radius.



4.8 PUBLIC OPEN SPACE REQUIREMENTS

In most subdivisions, the creation of public open space will be provided for in the relevant PSP.

Opportunities for multiple usage of open space should be investigated and built into designs where appropriate, i.e. drainage management with walking trails or other recreation uses.



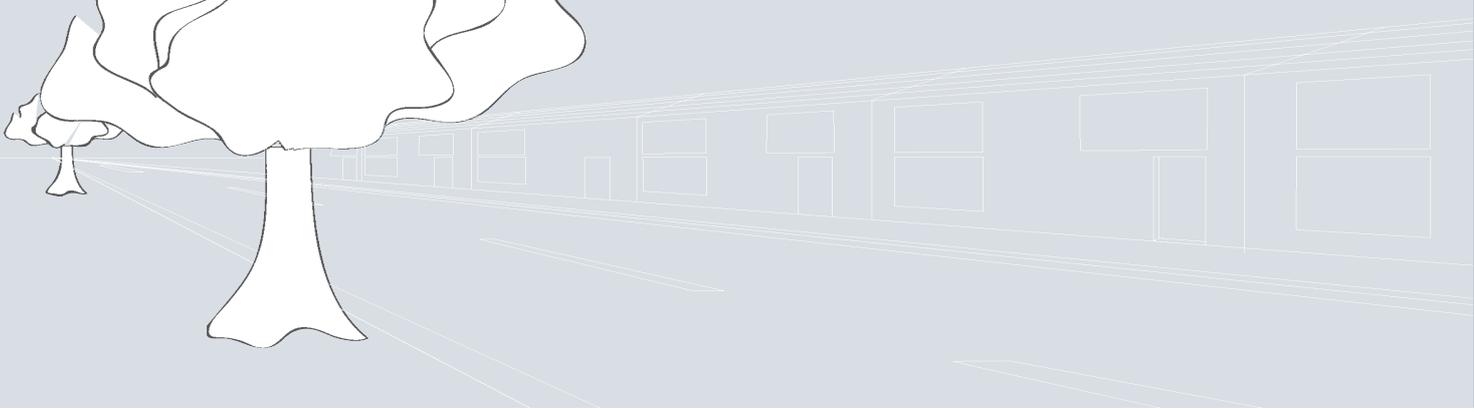
4.9 DRAINAGE PROVISION

Council is the responsible authority for all drainage works outside the authority of the relevant regional catchment management authority. Design for drainage is outlined in **Section 13** of this manual.

As part of the engineering documentation, the developer shall submit an overall catchment plan and drainage strategy plan showing:-

- > Contour lines;
- > Total catchment;
- > Zoning;
- > Identification of existing drainage schemes and any scheme requirements;
- > Proposed property boundaries and construction stages;
- > Drainage layout, including any major drainage structures (e.g. retarding basins, floodways);
- > Overland flow paths;
- > Preliminary sizes of major lines, supported by computations (where appropriate); or Regional Water Authority Drainage Scheme details;
- > Calculations confirming gap flows are either contained within road reserves or floodways;
- > Proposed drainage works upstream and downstream of the proposed development, including provision for the outside catchment and provision for a legal point of discharge;
- > Proposed arrangements for conveyance over other property to a legal point of discharge;
- > Water quality treatment measures, including Music models where appropriate; and
- > Post development and pre-development flows and levels.

The drainage strategy plan shall include quality modelling results to demonstrate sufficient provision for the proposed treatment elements.



4.9.1 Drainage Available to All Lots

The low point of every lot, including reserves and balance lots shall be drained to the legal point of discharge nominated by the relevant Council in either the adjoining street drainage or a drainage easement.

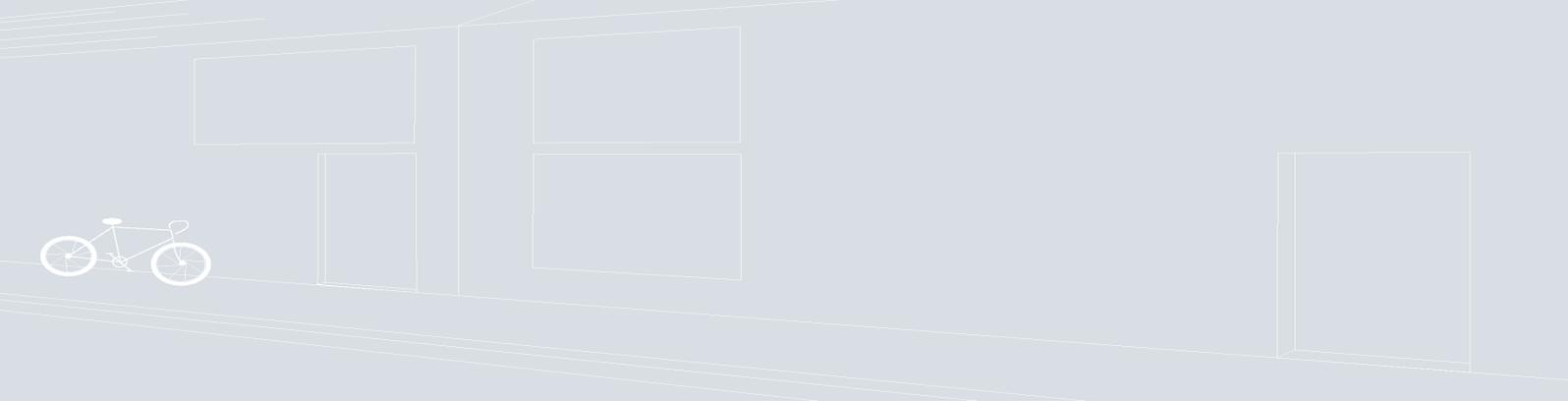
4.9.2 Provision for Gap Flows

Provision shall be made to ensure gap flows are able to pass through the subdivision along streets and drainage reserves to reduce the risk of inundation of dwellings. It is desirable that a road or a drainage reserve is located along each natural drainage line, to provide a pathway for gap flows.

Gap flows that result in overland flow through allotments shall not be permitted.

4.9.3 Provision for Freeboard

The road reserve shall have sufficient gap flow capacity to ensure that the available freeboard complies with the requirements for drainage (**Section 13 – Drainage Design**).



4.10 EASEMENTS

4.10.1 Easement Provision

Where it is necessary for drains, sewers, electricity cables, telecom cables etc., to be located within a lot or Council Reserve, an easement in favour of the relevant authority is to be provided.

4.10.2 Easement Width

Except where the minimum width of the easement is specified in the PSP, minimum widths shall be as indicated in Table 1.

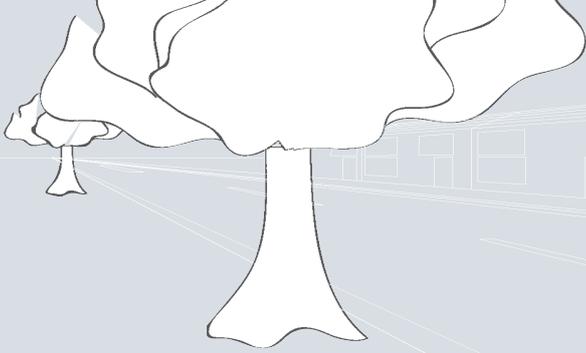
Table 1: General Minimum Easement Widths

Type	Width
Drainage	2.00 metres
Combined Drainage and Sewerage	3.00 metres

In all cases, easement widths greater than the minimum shall be determined by the relevant utility authority subject to the size and type of infrastructure to be installed within the easement.

4.10.3 Easement Location

Where practicable, easements shall be matched and aligned with those existing on adjacent properties to provide continuity for utility services and ensure the proposed use for which the easement is created can be achieved.



5. FUNCTIONAL LAYOUT PLANS

5.1 REQUIREMENT FOR FUNCTIONAL LAYOUT PLANS

Where preparation of a Functional Layout Plan (FLP) is required as a planning permit condition, the preparation of the FLP is mandatory and shall form part of the planning process.

Alternatively, an FLP may be prepared by agreement between the Council and the developer/consultant, as a pre-cursor to the detailed engineering design process.

5.2 PRINCIPLES

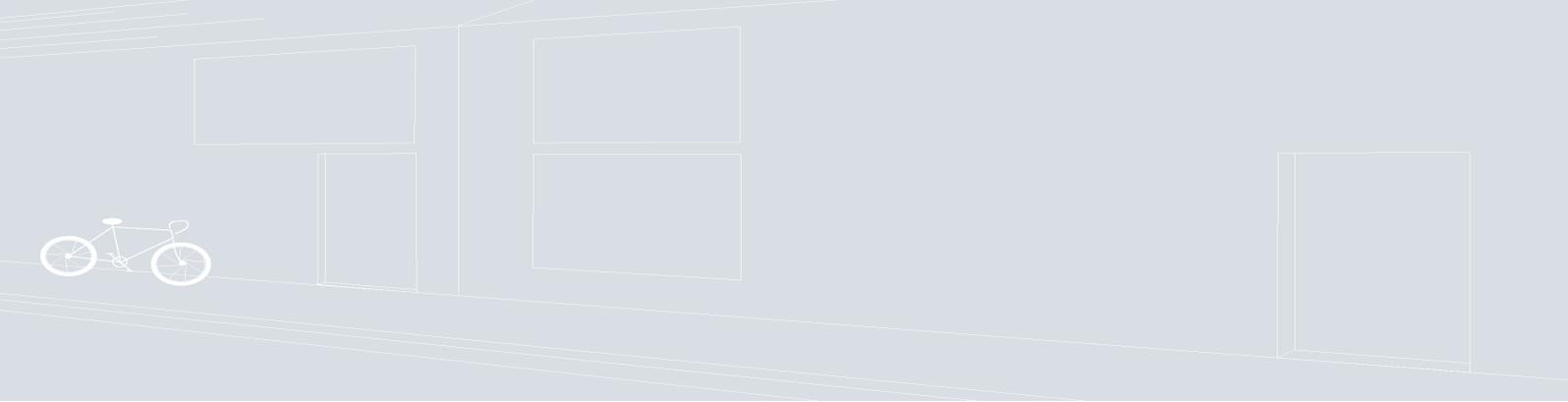
The FLP process is aimed at improving outcomes and reducing timelines for approvals. It may require more work upfront to ensure that time is saved in the later stages of approvals. While the FLP should be consistent with the PSP, it will also ensure that both designers and Council have confidence in proceeding to the development of detailed engineering and landscape designs and plans.

The preparation of functional layout plans is therefore considered to be part of a best practice approach to the documentation of subdivision developments, and as such it is highly recommended in cases where there is no specific requirement on a planning permit.

Functional Layout Plan(s) should show all engineering elements which may influence either the dimensions of the plan of subdivision, the functionality of civil infrastructure, the achievement of an acceptable landscaped area or the preservation of prescribed features on the site.

Once the FLP is approved, the subdivision layout and the infrastructure shown must be delivered in accordance with the approved plan. However, the approved FLP is not a definitive statement of all construction requirements. Detailed engineering plans provide this information.

Approval does not provide consent to the omission of infrastructure that is not shown on the FLP nor can it be final acceptance of items that are incidental to fixing dimensions on the plan of subdivision or drawn only for the purpose of clarity.



5.3 FLP PROCESS

When a planning permit requires the approval of a FLP for any stage of a subdivision the submitted layout shall have no force or effect until it is endorsed as part of the permit.

The Responsible Authority shall where necessary refer the FLP to any relevant authority, and will :

- > approve the FLP; or
- > specify the alterations it requires; or
- > refuse to approve the FLP,

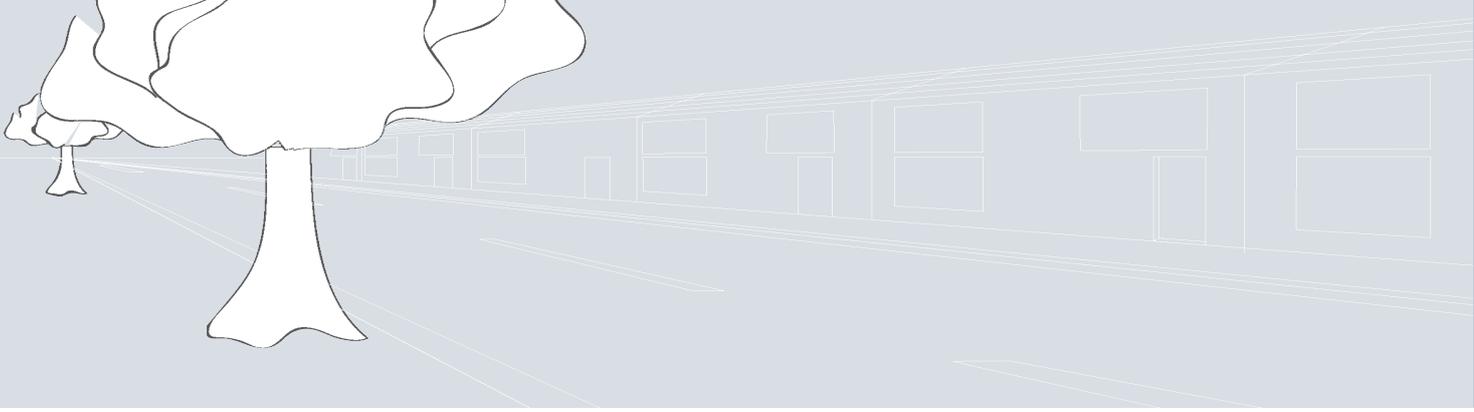
If the Responsible Authority requires alterations or refuses to approve the FLP, it will at the same time give written reasons to the applicant.

5.4 FLP RESPONSE TIMELINE

Response timeline for Responsible Authorities to FLP submissions shall be:

- > within **21 calendar days** of receipt of a submission.

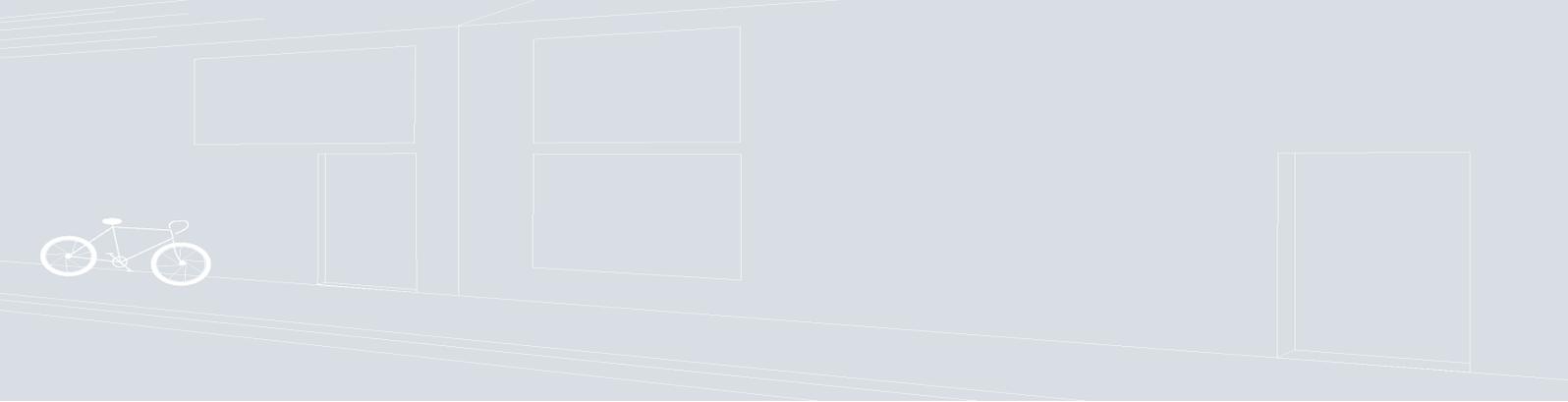
If the Responsible Authority requires additional information or an alteration to the FLP, the time for consideration and response is suspended until the amended FLP is submitted.



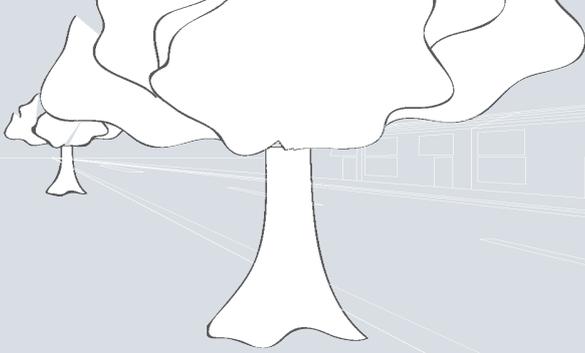
5.5 FLP SUBMISSION CONTENT

The FLP(s) should be consistent with the relevant PSP and shall show:

- > A fully dimensioned subdivision layout, including proposed street names, approximate lot areas, lot numbers and street reservation widths;
- > Topography and existing features, including contours for the subject land and any affected adjacent land, water bodies, vegetation (including significant ground cover or noxious weeds) and structures of historic or cultural significance;
- > Identification by survey of all trees (or groups of trees) existing on the site, including dead trees and those that overhang the site from adjoining land or that may be affected by the proposed work;
- > Details of tree protection zones for all trees to be retained, designed in accordance with any Council tree protection zone guidelines;
- > A Landscape Concept Plan showing all trees proposed for removal from the site, all new plantings and any additional landscape structures proposed for the development;
- > Typical cross-sections for each street type, dimensioning individual elements such as carriageway and pavement widths, services offsets and any other spatial requirements identified in the Precinct Structure Plan (e.g. medians, future bus lanes, on-road bicycle lanes, shared paths, large drains, WSUD elements, distribution/trunk service mains, etc.);
- > Location and alignment of kerbs, parking spaces, footpaths, shared paths, vehicle crossings, bus stops (where they are able to be identified) and traffic controls (signals, roundabouts, splitter islands, slow points, etc.) including critical vehicle swept paths;
- > The minor drainage network and any special features requiring access (e.g. structures, gross pollutant traps, swales and rain gardens) which will have a significant spatial impact on the plan of subdivision;



- > The major drainage system, including water courses, lakes, wetlands, silt ponds and/or piped elements showing preliminary sizing (from the Regional Water Authority Drainage Scheme details, etc.);
- > Overland flow paths (100 year ARI), supported with sufficient preliminary data to indicate how excess runoff will be safely conveyed to its destination;
- > Drainage outfall system (both interim and ultimate), indicating legal point of discharge and any access requirements for construction and maintenance;
- > A table of offsets for all utility services (sewer, water, recycled water system, gas, electricity, lighting poles, telecommunications and Council's optical fibre conduits) and street trees;
- > Preliminary location of reserves for electrical kiosks.
- > Location of proposed reserves and proposed vesting body or authority.



5.6 SPECIFIC SITES – OUT OF SEQUENCE

For sites that are out of sequence and/or not adjacent to existing or approved infrastructure the following information is required in the FLP in addition to the above standard requirements:-

- > Locality Plan or Permit Application Plan indicating the relationship between the subject subdivision stage and surrounding land;
- > Proposed linkages to future streets, open space, regional path network and upstream drainage;
- > Works external to the subdivision, including both interim and ultimate access requirements;
- > Intersections with VicRoads Main Roads showing interim and ultimate treatments; and
- > Drainage and sewerage outfalls, including any easements required over other property.

5.7 APPLICABLE STANDARDS

In the absence of specific information in this Manual and associated checklists or standard specifications, the relevant standard or authority requirements shall apply.

5.8 PRESENTATION

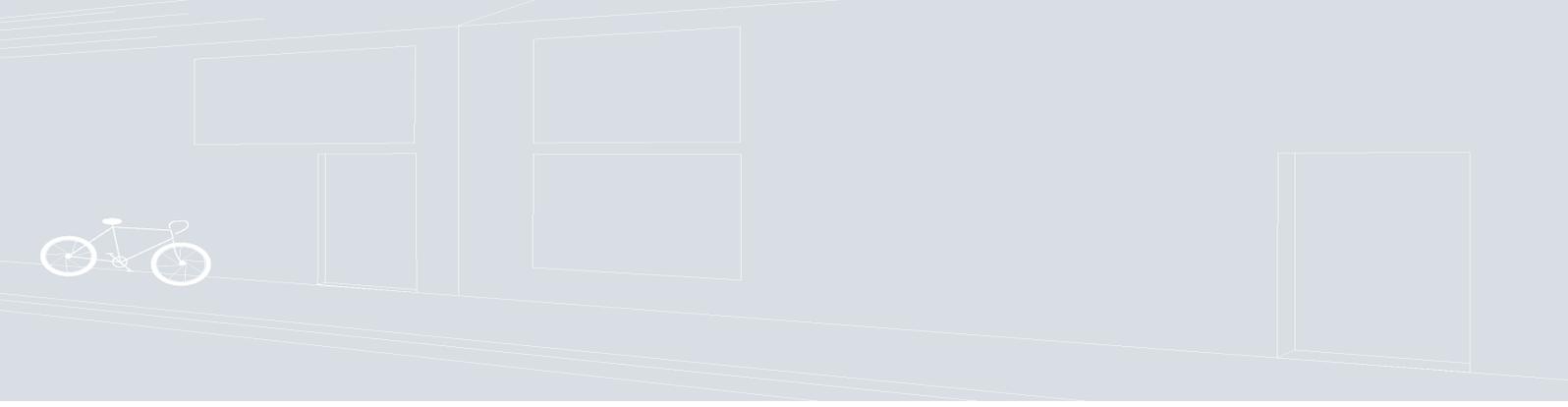
The FLP plan(s) should be:

- > clear and legible
- > drawn at a scale of 1:500
- > drawn to acceptable drafting standards.

5.9 FORMAT FOR FLP SUBMISSION

Submissions of FLP plan(s) to the Responsible Authority for approval should be in the following formats:

- > One paper copy on A1 standard size sheet(s).
- > one electronic copy (PDF) forwarded via e-mail or alternatively provided in disc format.

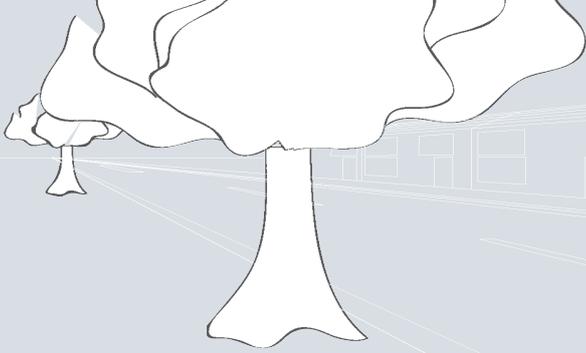


6. ENGINEERING DESIGN PLANS

6.1 DETAILED ENGINEERING DESIGN

Detailed engineering design shall be prepared in accordance with:

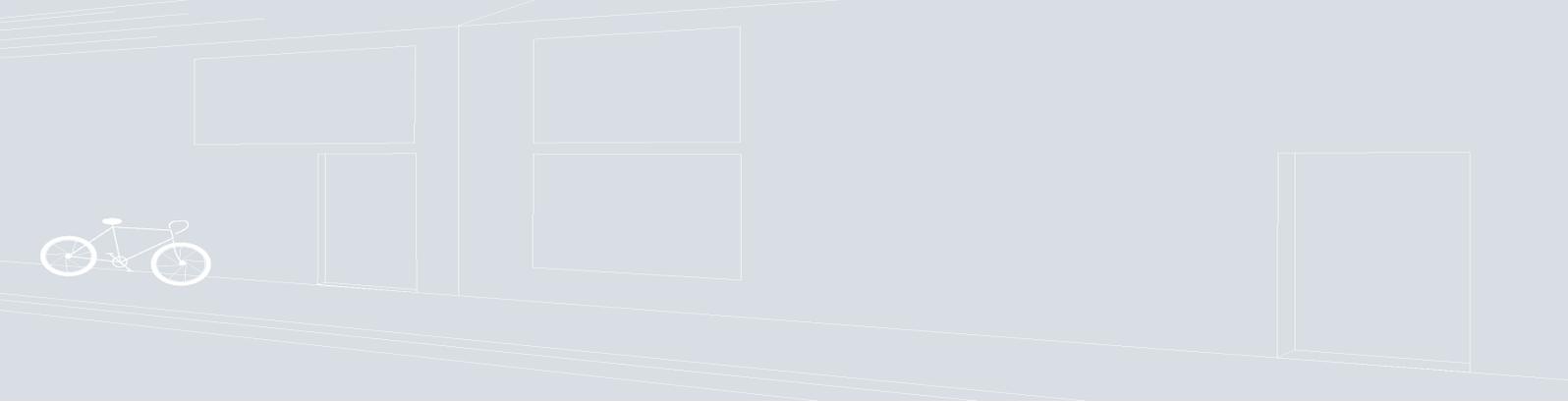
- > The requirements of the **PSP**;
- > The conditions specified in the **Planning Permit**;
- > The requirements of this **Manual**;
- > The approved **Functional Layout Plan**.



6.2 DESIGN SUBMISSION CONTENT

The detailed engineering submission shall include:

- > One complete set of A1 engineering drawings, including:
 - Detail Engineering Plans;
 - Reproduction of the applicable Plan of Subdivision;
 - Typical Details, including pavement details;
 - Signage and Line marking Plan;
 - Road Longitudinal Sections;
 - Road Cross Sections;
 - Intersection Details;
 - Drainage Longitudinal Sections and Pit Schedules;
 - Plans showing existing vegetation to be protected or removed; and
 - Telecommunications pits and conduits.
- > Public Lighting Plans submission for Council approval.
- > Overall drainage concept for the entire development (if not provided in the planning permit or FLP submission).
- > A coloured catchment plan showing Q100 for the entire development.
- > A coloured catchment plan showing Q5 sub-catchments.
- > Drainage computations for Q5 and Q100.
- > Melbourne Water Scheme drainage plans (where applicable), including water quality treatment systems
- > A Traffic Assessment Report including a road hierarchy plan (if not provided in the planning permit or FLP submission).
- > Geotechnical report and pavement design.
- > Water main reticulation plans including the location and capacity (pressure and flow) of fire hydrants and hydrant mains.
- > Sewer main reticulation plans.
- > Recycled water reticulation plans (where applicable).
- > Tree removal/retention plans (where applicable).
- > Weed Management Plan (where applicable) identifying the presence of any noxious weeds and the proposed measures to prevent their spread.
- > Copy of current approved Permit Plan.
- > A completed design submission form (refer to **Appendix C**).
- > Road Safety Design Audit Report (**refer Clause 4.5**).



6.3 SUBMISSION PRESENTATION

Format for Engineering Plans

All engineering drawings submitted for approval must be provided in the following formats

- > A1 standard sheet sizes unless otherwise agreed.
- > Electronic copy in PDF (or disc or via email).

Drawing Scales

Standard engineering scales for layout plans are:

1:50, 1:100, 1:200, 1:250, 1:500, 1:1000

Selection of scale/s should ensure that all details are clear and legible at the presentation sheet size/s.

Longitudinal sections

For all long section plots (including drainage), a ratio of 10:1 shall be applied (i.e. the vertical scale is 10 times the horizontal scale applied in plan view).

For example:

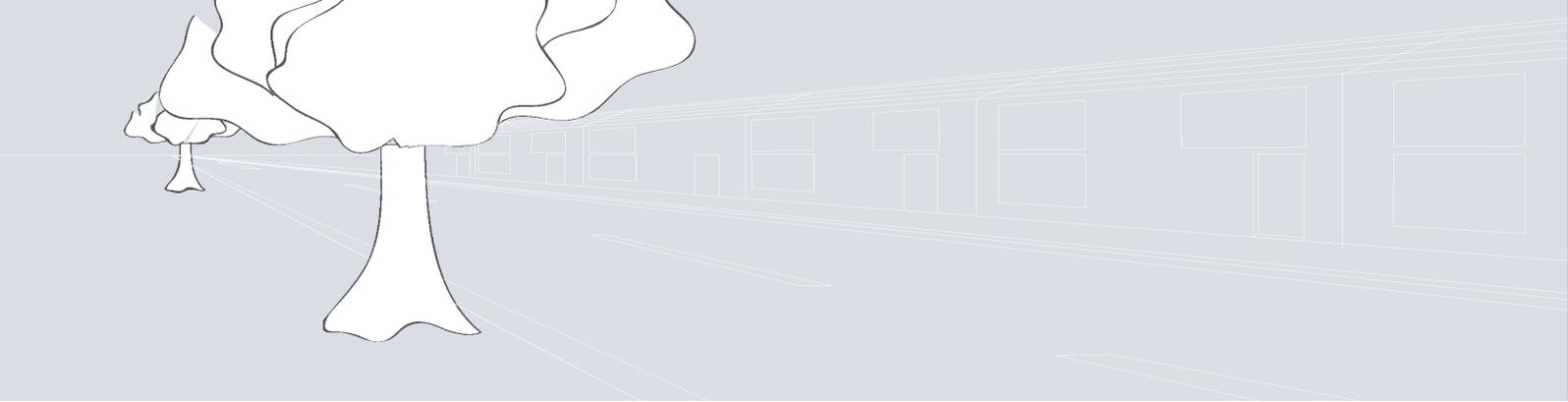
Horizontal Scale	1:500
Vertical Scale	1:50

Cross Sections

For all cross section plots, a ratio of 2:1 shall be applied, (i.e. the vertical scale is two (2) times the horizontal scale).

For example:

Horizontal Scale	1:100
Vertical Scale	1:50



6.4 CO-ORDINATES AND LEVELS

Co-ordinates

Map Grid of Australia (MGA) shall be used as the co-ordinate system. All co-ordinates shall be expressed in metres to three (3) decimal places.

All CAD data provided to Council is to be georeferenced to MGA55 (GDA94).

Reduced Levels

Australian Height Datum (AHD) shall be used as the reference system. All reduced levels and invert levels shall be expressed in metres to three (3) decimal places. Allotment levels in detail plan shall be expressed to two (2) decimal places.

The origin (Permanent Bench Mark) of level datum for the subdivision shall be identified on the plans.

6.5 APPROVED DESIGN PLANS

For purposes of endorsing approved plans, the following shall be provided to Council:

A1 size plans	one set
A3 size plans	two sets
Electronic copy in Adobe PDF format	one copy

A schedule of works and costs must be provided prior to endorsement of the approved design plans by the Responsible Authority.

Payment of the Plan Checking Fee in accordance with **Clause 6** of the **Subdivision (Permit and Certification Fees) Regulations 2000** (currently to the value of **0.75%** of the total estimated cost of constructing the works proposed on the engineering plan) is required at the time of endorsing the approved engineering plans.

6.6 ENGINEERING SUBMISSION PROCESS

Engineering submissions should generally follow the process outlined below in Figure 2.

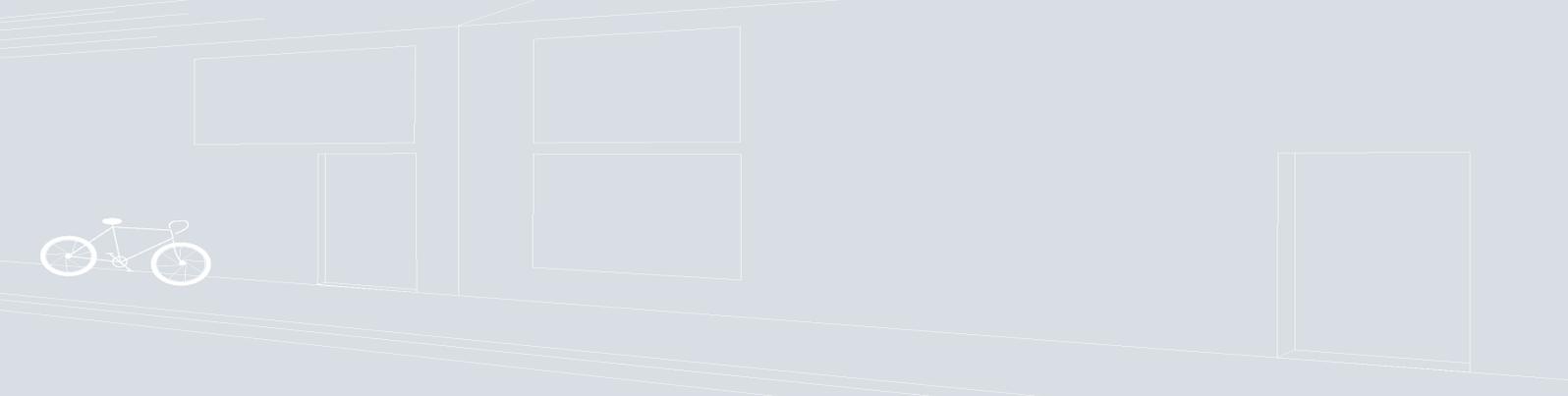
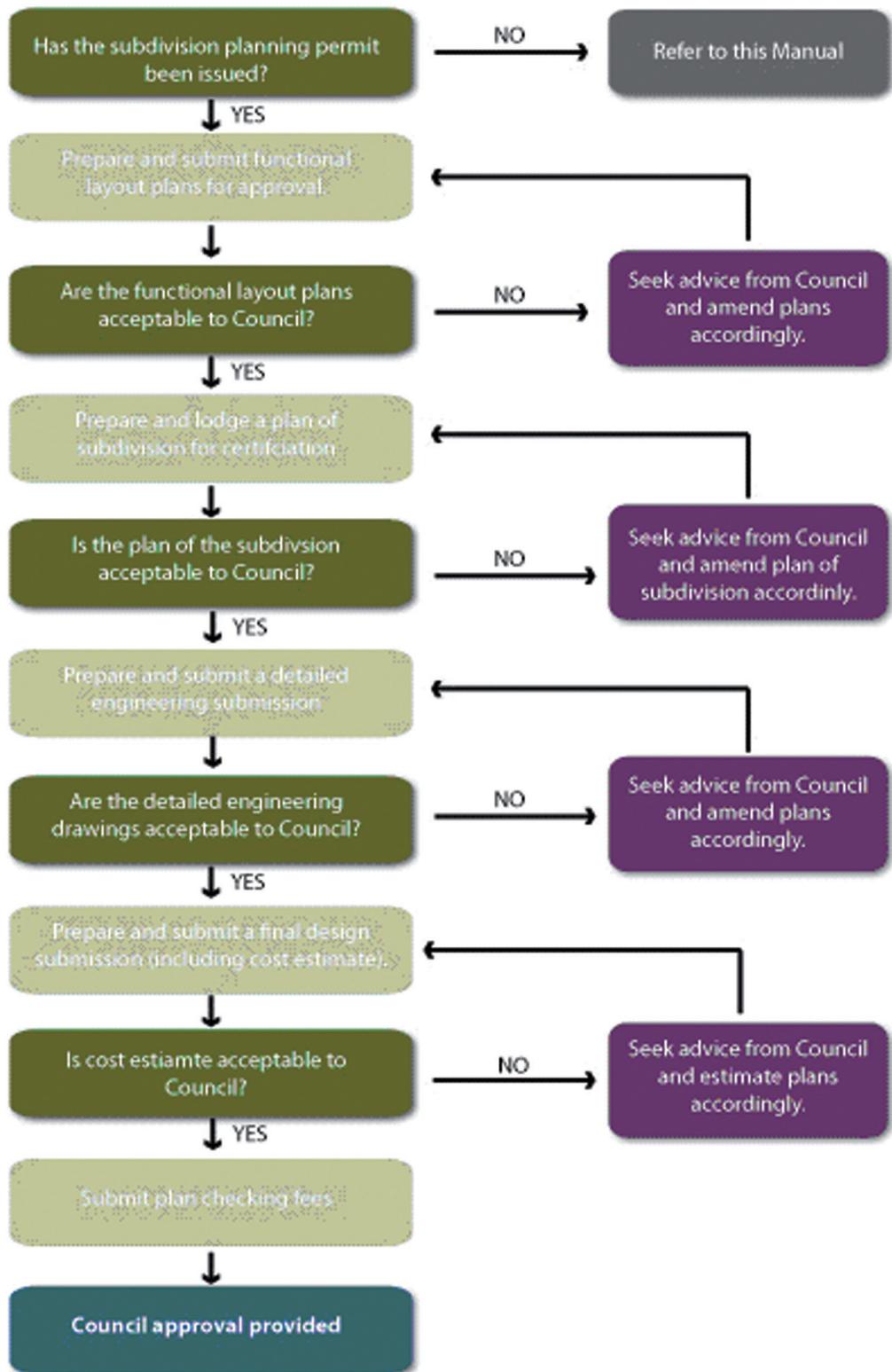
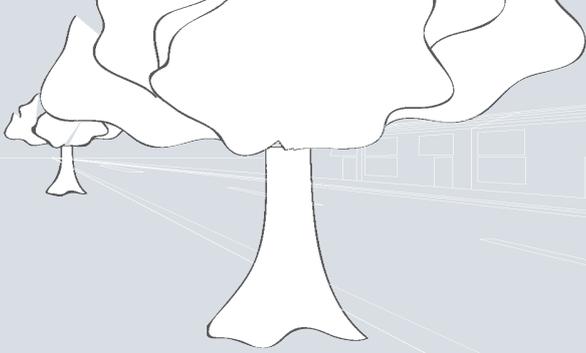


Figure 2: Figure 2 – Engineering Submission Process





6.7 TIMELINE FOR RESPONSES TO DESIGN PLANS

Timeline for responding to a design submission is prescribed in the **Subdivision (Procedures) Regulations 2000** and is currently **30 days** from the date on which the engineering plan is received by the Council or referral authority.

If the Council or referral authority requires additional information or an alteration to the design plans, the consulting engineer should endeavour to make these changes as soon as practicable. In accordance with Clause 15 of the **Subdivision Act 1988**, the time for consideration and response to revised design plans is **suspended until the altered engineering plan is submitted**.

6.8 REVISIONS

6.8.1 Design Revisions

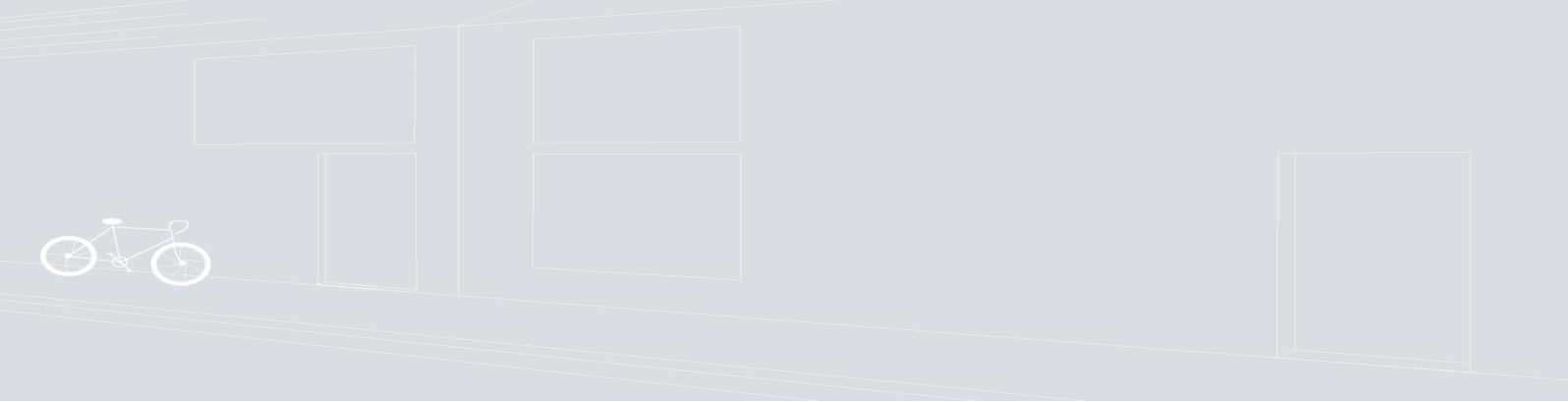
Should it be necessary to revise the detailed engineering drawings following approval of the design, amended drawings must be re-submitted to Council for its approval. All revisions shall be documented, including (where appropriate) the use of revision clouds and labelling within the title block, provided clarity is maintained on the drawings. Where drawing clarity would be compromised, separate documentation of revisions will be considered.

6.8.2 Plan of Subdivision Revision

Should the Plan of Subdivision be altered after the Detailed Engineering Design approval, it shall be the responsibility of the designer to resubmit a copy of the Certified Plan (as amended) together with amended engineering drawings to Council for approval.

6.8.3 Limitation of Approval Life

Except with the written agreement of the Council, approval of engineering plans shall lapse if construction of works shown on the approved engineering plans is not commenced within **12 months** of approval.



7. LANDSCAPING PLANS

7.1 GENERAL

All landscape works including streetscapes, landscaping of open space areas, tree planting and estate entrance treatments shall be documented and provided in accordance with this Manual, the planning permit conditions, and relevant documentation including Council Standards.

Landscape designs shall be developed in conjunction with the engineering design to ensure there are no conflicts between landscape and engineering elements.

7.2 CONTENTS OF LANDSCAPE PLANS

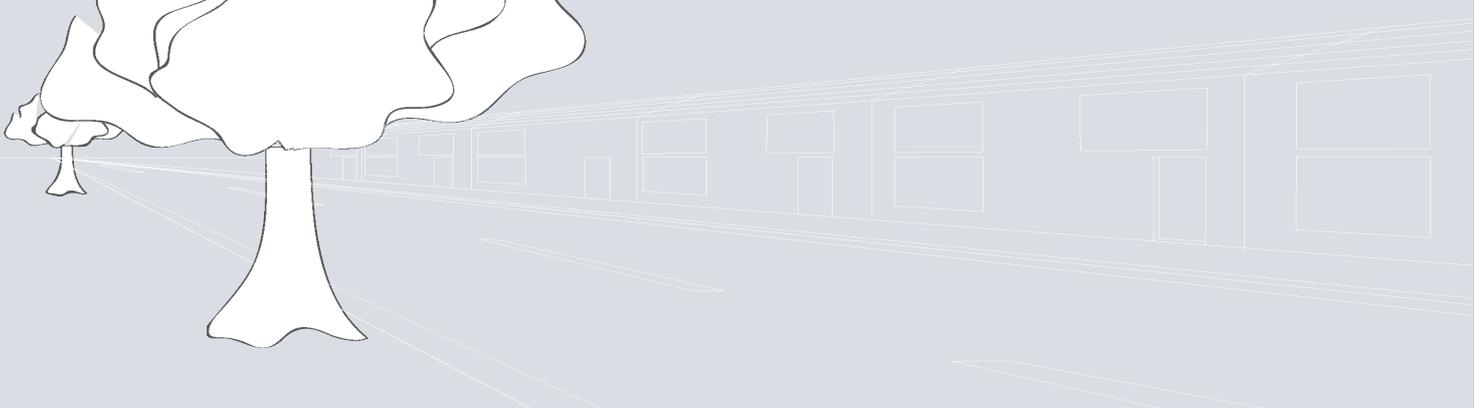
Landscaping plans shall be prepared and submitted to Council for approval, showing:

- > All surface treatments.
- > The location, height and construction details for any proposed fencing (including fencing treatments abutting native grassland reserves consistent with the approved Environmental Management Plan).
- > Any entrance features or estate feature retaining walls.
- > The botanical name, height and width at maturity, and location of all existing and proposed plants, including trees.
- > The location of all proposed garden beds or feature plantings, including construction details.
- > Any park or street furniture including lighting, BBQ facilities, seating, shade shelters and play equipment.
- > A works specification, including the method of preparing, draining, watering and maintenance of all planting and landscape elements.

7.3 FORMAT OF LANDSCAPE SUBMISSIONS

Submissions of final landscaping plans to council for approval shall be in the following formats:

- > 3 sets of paper versions
- > An electronic copy in Adobe PDF format.



8. CONSTRUCTION REQUIREMENTS

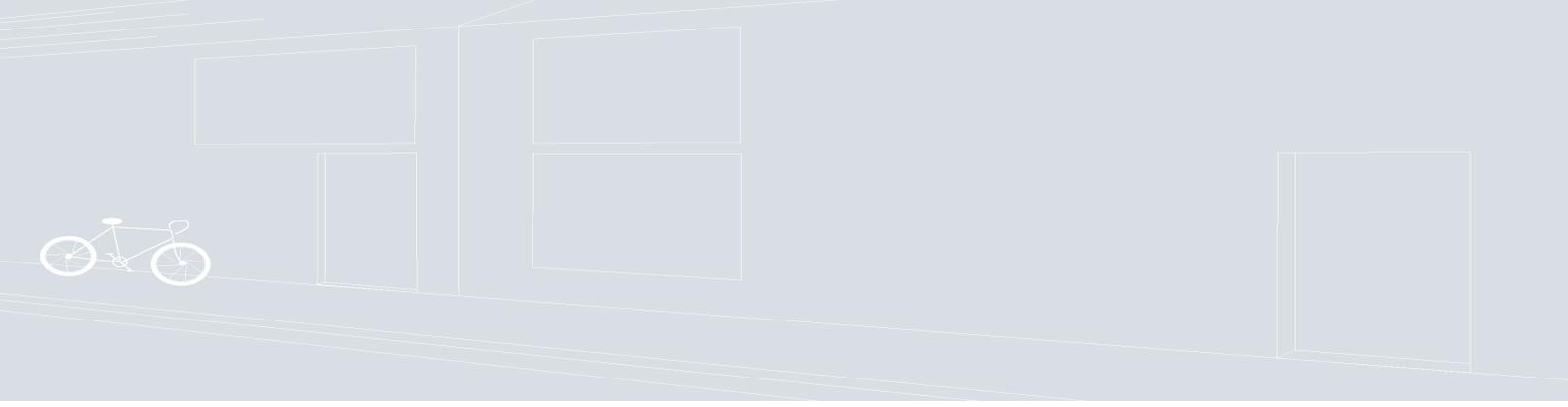
8.1 APPROVALS PRIOR TO COMMENCEMENT

The **Subdivision Act 1988** (Clause 17) requires that works shall not be commenced until:

- > The plan of subdivision has been certified;
- > The engineering plans and specifications have been approved;
- > All applicable planning permit conditions have been satisfied; and
- > All agreements required by other authorities have been made.

8.2 CONSTRUCTION PROCESS FOLLOWING APPROVALS

Construction process and requirements following the approval to commence are outlined in “**Part D - Construction**” of this manual.



9. CERTIFICATION AND COMPLIANCE

9.1 CERTIFICATION OF PLAN OF SUBDIVISIONS

Certification of a Plan of Subdivision must only occur if the plan of subdivision is in accordance with the requirements of the **planning permit** and any approved **Functional Layout Plan**.

9.2 CERTIFICATION OF STRUCTURES

A Certificate of Compliance for Design and a Certificate of Compliance for Construction is required for the following infrastructure items constructed as a part of a subdivision development:

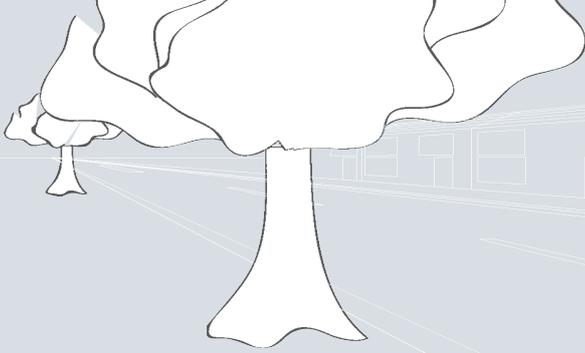
- > Retaining walls along property boundaries(>1.0m high);
- > Entrance structures;
- > Gazebo's;
- > Bridges;
- > Boardwalks/elevated walkways/jetties; and
- > Other structures as applicable.

In particular circumstances, Building Permits may be required, as well as Certificates of Compliance.

9.3 PROVISION OF AS CONSTRUCTED DATA

Upon completion of the works "as constructed" measurements of all newly constructed drainage assets shall be provided to Council as digital data in the "D-Spec" format. Refer to website www.dspect.com.au for specifications.

Where a planning permit specifically requires additional data, i.e. for roads or open space, the provision of this additional data shall be mandatory and shall be provided as digital data in accordance with the relevant Council requirements.



9.4 ENGINEERING INFRASTRUCTURE COMPLIANCE

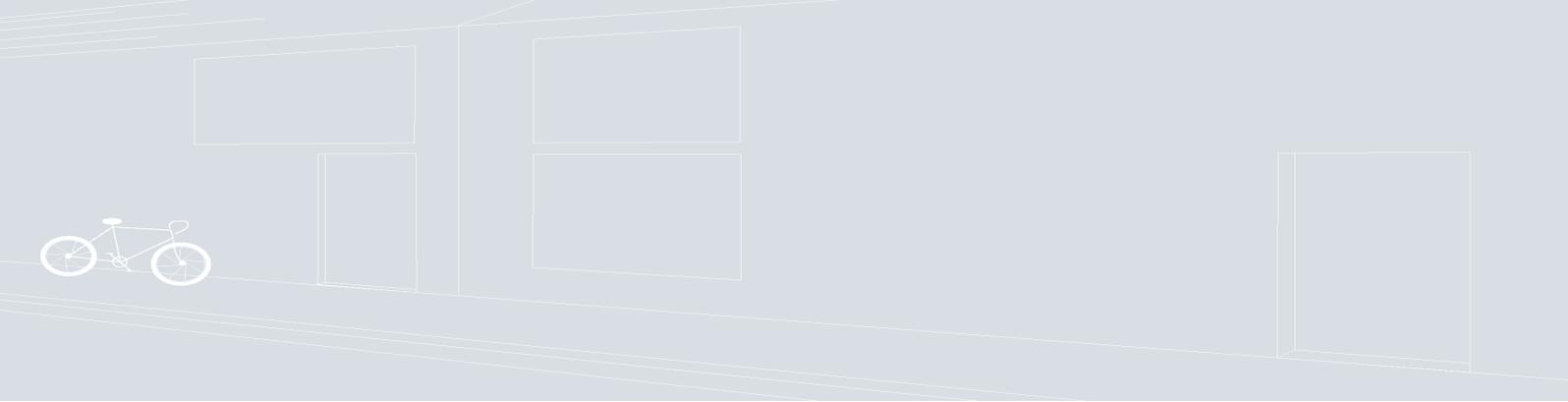
9.4.1 Practical Completion of Engineering Works

“Practical Completion” is that stage in the execution of the work when :

- > The Works are complete except for minor outstanding works and minor defects —
 - which do not prevent the Works from being reasonably capable of being used for their intended purpose; and
 - where there are reasonable grounds for the outstanding works and minor defects not being promptly rectified; and
 - rectification of which will not prejudice the convenient use of the Works; and
- > Those tests which are required to be carried out and passed before the Works reach Practical Completion have been carried out and passed; and
- > Provision of documents and other information required which are essential for the use, operation and maintenance of the Works.

Prior to Council’s consent to Practical Completion, Council will require:

- > An electronic copy of all “as constructed” engineering drawings in suitable format on agreed media;
 - Suitable formats are generally PDF together with DWG files; and
 - The preferred media is CD or DVD.
- > “As constructed” asset information for drainage in electronic format in accordance with the “D-spec” specification.;
- > Completed Inspection and Test Plans;
- > Certificates of Compliance for any structural works; and
- > Practical Completion inspection attended by the Council Supervisor and the Superintendent. Written advice shall be provided to the Superintendent:
 - Confirming the outcome of the Practical completion inspection; and
 - Itemising any minor outstanding works remaining and/or defects observed.



9.4.2 Uncompleted Works Bond

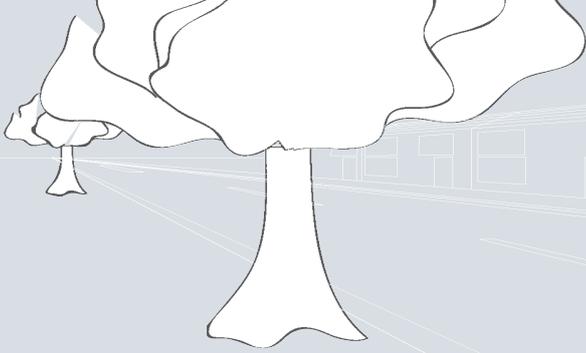
Where considered appropriate to facilitate the issue of a Statement of Compliance, Council may permit the developer to bond uncompleted works subject to the developer and Council entering into an agreement dealing with the uncompleted works.

Uncompleted works bonds:

- > will be **150%** of the value of the uncompleted works based on the Consulting Engineer's estimate of the construction cost and agreed by Council;
- > may be in the form of either a cheque or a bank guarantee or other approved form (i.e. insurance bond); and
- > will be returned to the developer upon satisfactory completion of the works.

In considering the appropriateness of uncompleted works bonds, the following criteria should be considered:

- > The development works as a whole have reached practical completion and can be used for their intended purpose;
- > It would otherwise be unreasonable to withhold consent to statement of compliance;
- > Deferral of the works will assist in the staging of future works; and
- > Deferral will avoid undue wear and tear or possible damage to the works taking into account other development works (i.e. housing construction) which will follow.



9.4.3 Defects Liability Bond

Prior to Council issuing a Statement of Compliance for a stage of development, the applicant is required to submit a bond in the form of a cheque or a bank guarantee or other approved form (i.e. insurance bond), to be held and used to maintain the works at the end of the defects liability period, should the applicant fail to do so.

Where the amount of bond has not otherwise been specified (i.e. in a planning permit) the amount shall be to the value of **5%** of the final cost of road and drainage works.

All defects liability bonds will be returned to the developer at the end of the defects liability period, provided that the works have been maintained to the satisfaction of Council, and all documentation has been provided as per Council's conditions of approval.

9.4.4 Commencement of Defects Liability

Defects Liability will commence on the issue to Council of the title(s) for roads created on the Plan of Subdivision when Council is then deemed the Road Manager as defined by the Road Management Act, or on 'Practical Completion' of works that have been the subject of an 'Uncompleted Works Bond', whichever is the later.

Written advice shall be provided to the Superintendent:

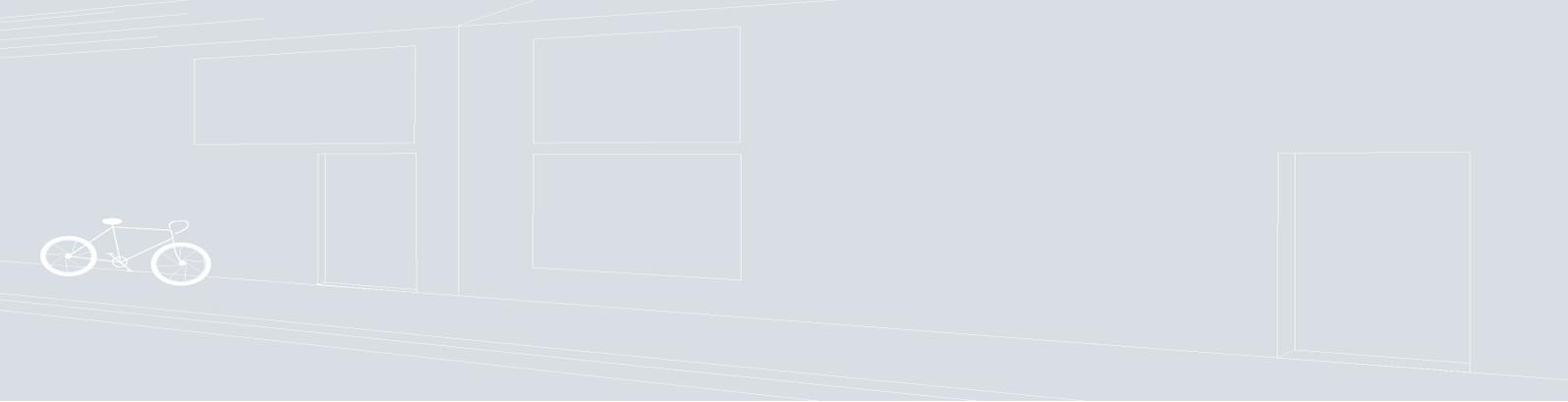
- > Confirming the "Date of Commencement" of the defects liability period; and
- > Itemising any work remaining to be completed prior to the end of the defects liability period.

All works undertaken in the Road Reserve after commencement of Defects Liability will require a Road Opening Permit.

9.4.5 End of Defects Liability Inspection

The works shall be maintained for a period of **3 months**, or other agreed period, from the date of the commencement of defects liability. At the end of this period, the Superintendent shall request Council to undertake a final inspection. All outstanding items shall be addressed and completed prior to the inspection.

After the works have been satisfactorily maintained, written advice shall be provided to the Superintendent, and Council will assume the ownership and ongoing maintenance of the works.



9.5 LANDSCAPE WORKS COMPLIANCE

9.5.1 Uncompleted Landscape Works Bond

Where considered appropriate to facilitate the issue of a Statement of Compliance, Council may permit the developer to bond uncompleted hard and/or soft landscaping or planting works subject to the developer and Council entering into an agreement dealing with the uncompleted works.

The bond will be based on **150%** of the value of the uncompleted landscape works based on the Landscape Architect's or Consulting Engineer's estimate of the landscape works and agreed by Council.

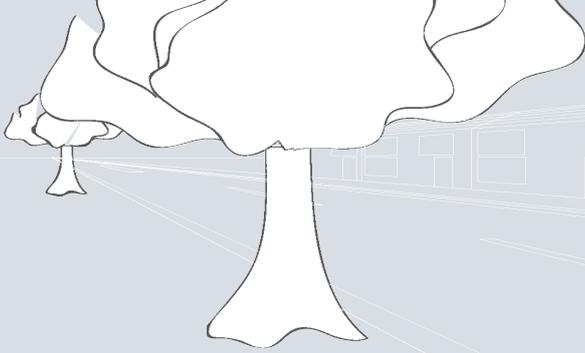
The bond may be in the form of either a cheque or a bank guarantee or other approved form (i.e. insurance bond), and will be returned to the applicant upon satisfactory completion of the works.

In considering the appropriateness of uncompleted landscape works bonds, the following matters should be considered:

- > Where it would otherwise be unreasonable to withhold consent to statement of compliance;
- > To provide the opportunity for growth and development during appropriate planting seasons;
- > Where deferment of the landscape works will assist in the staging of future works; and
- > Where deferment will avoid undue wear and tear or possible damage to the landscape works taking into account other development works (i.e. housing construction) which will follow.

If agreement is provided by Council, the uncompleted landscape works bond must be lodged following the approval of landscape plans and detailed documentation and before statement of compliance.

Uncompleted landscape works bonds will be returned to the developer following the completion of all required landscape works to the satisfaction of Council.



9.5.2 Landscape Maintenance Bond

The applicant shall submit a landscape maintenance bond in the form of either a cheque or a bank guarantee or other approved form (i.e. insurance bond) for all completed landscape works.

All landscape maintenance bonds will be returned to the developer at the end of the defects liability period, provided that the works have been maintained to the satisfaction of Council, and all documentation has been provided as per Council's conditions of approval.

Landscape maintenance bonds will be utilised by Council to maintain the landscape works at the end of the defects liability period, should the applicant fail to do so.

Where the amount of bond has not otherwise been specified (i.e. in a planning permit) the amount shall be to the value of 35% of the total cost of all completed landscaping works.

9.5.3 Landscape Defects Liability Period

Where the landscape defects liability period has not otherwise been specified (i.e. in a planning permit) the maintenance period will be a minimum of **24 months**.

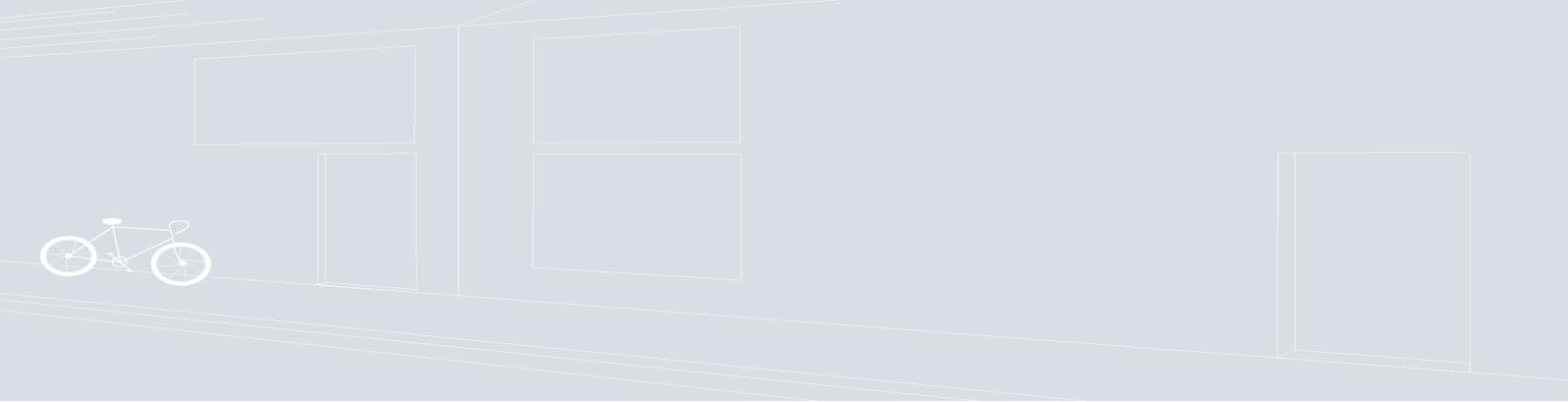
9.5.4 Practical Completion of Landscaping and Handover Procedures

At the completion of landscape works, the Superintendent shall contact Council to arrange an inspection for certification of practical completion of the works.

Prior to the end of the maintenance period, the landscape designer shall provide copies of the "**as constructed**" landscape drawings in the following formats:

- > AutoCAD DWG file format; and
- > Adobe PDF file format.

Prior to the end of the maintenance period, Council shall be contacted to arrange an inspection for certification of final completion of the works.



9.6 BUSHFIRE MANAGEMENT WORKS

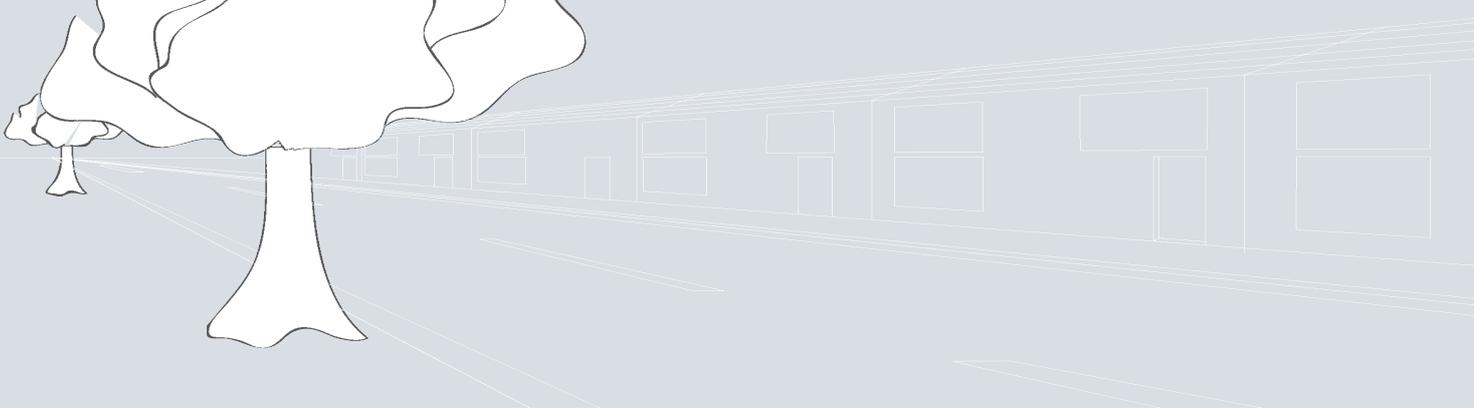
9.6.1 Bushfire Maintenance Management Bond

Where a Bushfire Management Plan (BMP) and works are required under a planning permit, the following requirements will apply to maintenance of the works.

- > Following the approval of the BMP and before Statement of Compliance, the applicant will be required to submit to Council an outstanding maintenance bond to the value of **100%** of the estimated annual cost of ongoing fuel maintenance works for a period of **24 months**, including both hardscape (fencing) and softscape (vegetation management) works.
- > This bond is held until the end of the agreed maintenance period, which will be a minimum of **24 months**. The bond may be in the form of either a cheque or a bank guarantee, and is refunded to the applicant upon completion of the maintenance period.
- > Bushfire Management Plan maintenance bonds will not be released until such time that all required works have been maintained to the satisfaction of **Country Fire Authority**.

9.6.2 Practical Completion and Handover Procedures

At the completion of works relating to bushfire mitigation, the Superintendent shall contact Country Fire Authority to arrange an inspection for certification of practical completion of the works.



9.7 STATEMENT OF COMPLIANCE

Prior to consenting to the Statement of Compliance, the following is required:

- > The engineering and landscape works must have either reached **Practical Completion** or Council has accepted a **bond** for uncompleted works;
- > Payment of construction **supervision fees** in accordance with Clause 5 of the Subdivision (Permit and Certification Fees) Regulations 2000 (currently to the value of 2.5% of the total estimated cost of constructing the works which are subject to supervision);
- > Payment of any **non-standard public lighting fees** in accordance with this manual or the Planning Permit. Where non-standard public lighting fees apply, a public lighting plan approved by the current Service Provider shall also be submitted.
- > **“As constructed”** survey data and asset information in electronic format in accordance with this Manual and other documentation required by the Planning Permit;
- > Completed **Inspection and Test Plans**;
- > **Certificates of Compliance** for any structural works;
- > **Completed reports**, maintenance plans and other documentation required by the Planning Permit;
- > Payment of any required **maintenance bonds** for the infrastructure or bushfire management works.