

## **2.0 GENERAL REQUIREMENTS**

### **2.1 PREPARATION OF PLANS AND DOCUMENTATION**

Full design plans and specifications and any other required technical reports for all roadworks, stormwater drainage, water and sewerage reticulation, sewer pump stations, allotment filling and any associated works shall be prepared, signed and submitted by a Civil Engineer or Civil Engineering Company registered under the Professional Engineers Act or other approved persons hereinafter called the Consultant.

The Application shall include the completed “Application for Approval to Construct” form, the completed “Application Primary Checklist” and the prescribed application fee. Works on the site shall not commence until written approval is issued by Council.

#### **2.1.1 STANDARD SPECIFICATIONS AND STANDARD DRAWINGS**

All works shall be in accordance with Council’s standard specifications and standard drawings where available. Where no Council standard specifications or standard drawings exist for a particular type of work, the Consultant may use the Department of Main Roads specifications and drawings or their own standard specifications and standard drawings. Both options shall be subject to approval by Council.

### **2.2 THE APPLICATION**

The Application shall comprise, but shall not be limited to the following:-

- (i) Signed and completed Application for Approval to Construct form.  
(Refer Appendix 2.1)
- (ii) Design plans and specifications for the construction of the works, including any relevant LSC standard drawings and specifications to be used for specifying the works.

Preliminary submission - 1 set required

Final Submission - 3 sets required Refer to notes (a) & (b) below

- NOTES:-**
- (a) Plus 1 set of updated plans and document pages (loose) to update preliminary submission;
  - (b) 1 approved set shall be returned to the applicant.

- (iii) Completed Estimate of Cost detailing the separate work items and construction rates for all roadworks, drainage, water, sewerage, lot clearing and filling etc proposed for the site. The Estimate of Cost shall be subtotaled into Roadworks & Drainage and Water & Sewerage.
- (iv) Prescribed Application Fee.
- (v) Completed and Signed Application Primary Check List (Refer Appendix 2.2)
- (vi) Technical Reports specified in the relevant development conditions of approval (in preliminary format if necessary) - 2 copies of each final report shall be required to be submitted on receipt of approval of the preliminary report.

- (vii) Written covering submission from the Consultant advising the current status of each of the approval conditions for the development, including any modified conditions, explaining any departures from Councils standard requirements, practices and/or guidelines and any assumptions and /or the rationale used in the design process.
- (viii) Drainage discharge approvals where applicable.
- (ix) Letters of approval from relevant authorities where specified in the approval conditions. If such approval(s) are specified requirements but are not available at the time of submission, the Consultant shall outline the status of that particular approval process and request the overall design submission still be accepted and processed.

## 2.2.1 ACCEPTANCE OF APPLICATION

**The Application as required by the Local Government (Planning and Environment) Act 1990 shall not be taken to be duly made until all particulars and documents as Council may require (as required by this Act) have been provided to Council together with the appropriate fee. In the event of a significant omission of any of items (i) to (ix) above or for example incorrect completion of the Application Primary Checklist or the Application for Approval to Construct, the entire Application shall be returned to the Consultant and the Application deemed not to be duly made in accordance with the Act.**

## 2.3 DESIGN PLANS

- 2.3.1** The design plans shall be prepared and signed by the Consultant and shall be submitted for all roadworks, associated stormwater drainage, allotment improvement works, sewerage reticulation, sewer pump stations and water supply reticulation works required by the Council's Approval Conditions.

The design plans generally shall contain sufficient information to allow adequate checking of the plans and for the primary purpose of construction of the works. The plans shall in general incorporate as applicable the following:-

- Locality detail;
- Layout;
- Plan View of each new road;
- Longitudinal section of each new road;
- Detail plan of each intersection;
- Type cross section of each new road;
- Cross sections of each new road;
- Longitudinal section and plan view of each drainage line;
- Traffic control details;
- Detailed plan of proposed sewer reticulation;
- Environmental Management Plan;
- Longitudinal sections of sewer lines;
- Detailed plan of proposed water supply reticulation including preliminary layout of telephone, electricity and lighting and longitudinal sections for trunk water lines;
- Proposed Pump Station details if applicable;
- Composite Services Plan to allow conflicts to be checked.

**2.3.2** Typical plans shall include the following elements:-

**2.3.2.1 TITLE BLOCK**

Details on the title block shall include the following:-

- Estate name (if any) and Developers Name;
- Approved street name(s);
- Bar scales as a minimum, (however numerical scales are also permitted **in addition** provided the original plan size is stated);
- Plan number and sheet number;
- Schedule and date of amendments;
- Signed, checked and approved by the Consultant;
- Survey datum and identification of survey mark used in the design;
- Type of plan, ie. Layout, Cross-Section, Longitudinal Section etc.;
- Chainages as applicable.

**2.3.2.2 LOCALITY DETAIL**

The locality detail is to show the location of the subdivision or development in relation to adjacent towns, main roads, major streets, etc.

**2.3.2.3 LAYOUT (and Stage Plan if applicable)**

Details on the layout plan to include the following:-

- Relationship of all new roads to each other and to existing roads adjoining the subdivision;
- Where the development is to be carried out in stages, the boundaries of the proposed stages are to be shown, together with stage numbers;
- Lot numbers and approved road names are to be shown on the layout plan;
- Road Reserve and pavement widths are to be shown on the layout plan;
- Catchment plan (optional);
- All site cut/fill earthworks including existing and finished surface contours;
- Need to show the relativity to adjacent lands, road layout and/or land property description.

**2.3.2.4 PLAN AND LONGITUDINAL SECTION OF ROADS**

- Road reserve boundaries (plan only);
- Allotment boundaries, both existing and proposed at the road reserve boundary (plan only);
- Centreline, or other construction line (plan only);
- Chainages, on centreline or construction line (plan & longitudinal section);
- Bearings of the centreline or construction line (plan only);
- Offsets, if the construction line is not the centreline (plan only);
- Tangent point chainages of each horizontal curve (plan & longitudinal section);
- Deflection angle, radius, arc length, tangent length and secant distance of each horizontal curve (plan &/or longitudinal section);
- Road reserve boundaries, centreline and bearing of each intersecting road (plan only);

- Chainage of the intersection point of road centrelines (plan & longitudinal section);
- Kerb lines (plan only);
- Dimensioned road reserve, footpath and pavement widths, where these differ from the typical cross section (plan only);
- Location and details of signs and road marking to be provided (If not on separate plan, plan only);
- General location of existing utilities, significant features or other existing works within the site (plan only);
- Location and levels of bench marks, PSM and reference pegs (plan only);
- North point (plan only);
- Existing surface levels (longitudinal section only);
- Design road centreline levels (longitudinal section only);
- Design grades (longitudinal section only);
- Chainage and level of grade intersection points (longitudinal section only);
- Chainage and level of tangent points of vertical curves (longitudinal section only);
- Chainage and level of intermediate points on vertical curves (longitudinal section only);
- Lengths and/or radius of vertical curves (longitudinal section only);
- Sections on control lines on superelevated curves (ie. Pavement edges, kerb or lane edges), curve widening and superelevation details (plan & longitudinal section);
- Location of existing driveways where they impact (plan only);
- Location of all drainage lines (type & diameter), including drainage structures, suitably numbered including inlet and outlet treatment details (separate plan acceptable, plan only);
- Subsoil drain locations
- Location of existing and proposed easements and reserves (plan only) and/or sections as applicable;
- All allotments shall be numbered; Park areas to be denoted (plan only);
- Approved street names shall be shown (where available, plan only);
- Extent of construction work or stage work shall be shown (plan & longitudinal section);
- Where new works join, existing works shall be shown (plan & longitudinal section) to demonstrate matching geometry;
- Where there is no kerb and channel, the edge of seal shall be shown (plan only);
- Sufficient extent and length of intersection layout to enable review of visibility/sight distance check (plan and longitudinal section);

#### **2.3.2.5 DETAIL PLAN OF INTERSECTION/CUL-DE-SAC HEADS/BENDS/etc.**

The Plan View shall include the following details:-

- Sufficient extent and length to enable review and construction;
- Kerb levels at not less than quarter points(where applicable closer spacing may be necessary) or maximum of 5m on all kerb returns, providing spot levels where grades could be a problem for drainage;
- Channelisation details (if applicable);
- Drainage details;
- Pram ramps (if applicable);
- Kerb grades at or near minimum (0.5%) additional level control shall be specified;
- Signage locations;
- Pavement contours (either on plan or as an attachment)

### **2.3.2.6 CROSS SECTIONS OF ROADS**

A cross section shall be shown for each pegged chainage at maximum spacing of 25m on straights and curves for each urban residential road and a maximum of 50m on straights and curves for each rural road, except in flat country where all cross sections conform to the typical cross section. Where roads are in steep terrain (greater than 7%) cross sections may be required at closer intervals (10m or 12.5m for residential and 25m for rural).

Details to be shown on Cross-sections shall include:-

- Road reserve boundaries;
- Pavement centreline (or other construction line);
- Natural surface profile;
- Design Cross-section profile and grade line
- Crossfall of pavement and footpath, pavement and footpath widths and section, eg. Superelevation and curve widening);
- Chainage of cross section;
- Datum reduced level;
- Existing & proposed power poles and other structures on batters;
- Existing driveways;
- Existing services

### **2.3.2.7 TYPE CROSS SECTIONS OF ROADS**

A dimensioned type cross section shall be shown for each new road, including as applicable:-

- Road reserve width;
- Pavement widths, including medians (as applicable)
- Shoulder widths and surface treatment;
- Footpath widths;
- Pathway widths (as applicable);
- Crossfalls of pavement, footpaths, pathways and shoulders;
- Nominal pavement and shoulder depth;
- Type of kerb and channel;
- Type of pavement and surface details;
- Service locations are to be included, both proposed and existing;
- Details of widening requirements to existing road if applicable, including existing pavement width, proposed final width, construction join, details for pavement;
- Table drain details for rural (width, slope, depth below sub-grade measured at shoulders);
- Batter slopes;

### **2.3.2.8 LONGITUDINAL SECTION OF DRAINAGE NETWORK**

A longitudinal section of the drainage network shall be shown including:-

- Road chainage of structures (if not shown elsewhere);
- Existing surface levels and finished surface levels;
- Design invert levels;
- Pit chainages and type of structure;
- Distances between pits;
- Grade of each pipe in %;
- Diameter of each pipe reach;
- Class of pipe and type of joint (eg rubber ring, recessed butt) of each pipe reach;
- Hydraulic grade line;
- Location of all other services, existing and proposed, eg. Telephone, electricity, sewer and water, showing sizes and levels;
- Details of Inlet & Outlet treatments;
- Outlet profile for a minimum of 25m from outlet structure to demonstrate that the pipe has a free draining outlet;

### **2.3.2.9 TRAFFIC CONTROL DETAILS (TRAFFIC SIGNS AND PAVEMENT MARKING)**

The Traffic Control details submitted for approval shall be on a road layout plan and shall include all the signs, pavement markings and preliminary street lighting. In addition, it shall also include any other traffic control and management devices that shall be provided as part of the design of the road traffic network for effective traffic management. Sign locations shall be accurately detailed for location purposes.

The relevant information may be shown on intersection or layout drawings, or a separate dedicated plan or incorporated into the Environmental Management Plan or similar. The dates, times and locations of the erection of **all** regulatory signs shall be shown on the “As Constructed” details.

### **2.3.2.10 ENVIRONMENTAL MANAGEMENT PLAN**

The details to be shown on the plan shall accord with the Soil Erosion and Sediment Control Guidelines(IE Aust) and shall generally include:-

- Areas proposed to be cleared and/or trees removed;
- Extent of earthworks and allotment filling;
- Significant trees/vegetation to be retained;
- Siltation and erosion prevention measures such as the extent of turfing, location of sediment fences, haybales;
- Revegetation program.

### **2.3.2.11 WATER SUPPLY RETICULATION PLANS**

The details to be shown on the plan shall include:-

- Water main alignment, depth;
- Hydrant and valve locations;
- Water service conduits under roads;
- Water main diameter, material and class;
- Details of individual services to each lot (or standard drawing may be used);
- Connection details to existing system;
- Construction notes;
- Electricity and telephone service positions.

### **2.3.2.12 SEWERAGE PLANS AND LONGITUDINAL SECTIONS**

Details to be shown on the plan shall include the following:-

- Sewer alignment;
- Sewer lines and rising mains clearly numbered showing class of pipe, type of material, diameter;
- Existing and proposed facilities;
- Connection details to existing system;
- Street names (where available);
- Lot numbers and property boundaries;
- Co-ordinate base identified (if applicable);
- Existing ground contours and where excavation and/or filling is being considered, the proposed finished surface levels;
- House connection junction details;
- Manhole position (dimensioned from each real property boundary where different from the standard alignment);
- Manhole and lamphole shall be numbered with a system that has a unique number for each manhole and lamphole within a pump station catchment and these numbers shall be advised by Livingstone Shire Council;
- Existing services and proposed services (eg Telstra, electricity, water, stormwater drainage etc.) in the vicinity of conflict points shall be included on these plans for information.

Details to be shown on the longitudinal section shall include the following:-

- Sewer invert levels (AHD) & depth to invert;
- Sewer lines and rising mains clearly numbered showing class of pipe, type of material, diameter, length, grade;
- House connection junction details (if not on plan);
- Proposed manhole top levels;
- Manholes and lampholes shall be numbered with a system that has a unique number for each manhole and lamphole within a pump station catchment and these numbers shall be advised by Livingstone Shire Council;
- Existing services and proposed services (eg Telephone, electricity, water, stormwater drainage etc).

### 2.3.2.13 PUMPING STATIONS AND RISING MAINS (WATER AND SEWERAGE)

Where pump stations and rising mains are involved, details shall be in accordance with WRC Guidelines and include pump design rate, rising main sizing and velocity, type of pumps, characteristic pump and system curves, equivalent person numbers and flow rates, longitudinal sections showing hydraulic grade and rising main.

Details shall also include a site plan showing access roads, turnarounds, water and electrical services and overflow position and structural details of pump stations where applicable.

In the case of sewerage pump stations, details shall include wet well volume and starts per hour, rising main detention time at average and minimum flow, odour control measures (oxygen or air injection to rising main, activated carbon filter for station) etc.

### 2.3.3 PLAN SIZE

All engineering plans shall be drawn on standard size sheets, the following sheet sizes only being acceptable:-

SIZE	OVERALL DIMENSIONS
A3	420mm x 297mm

All working plans are to be submitted in A3 format for approval and for ease of handling, however the drawings must be legible if reduced from an original A1 format.

### 2.3.4 SCALES

Scales used for all plans shall be those recommended by the Standards Association and AUSTROADS.

The following scales should be used in the preparation of the engineering plans:

	A1		A3	
	URBAN	RURAL	URBAN	RURAL
Plan	500	1 000	1 000	2 000
Longitudinal Section				
Horizontal	500	1 000	1 000	2 000
Vertical	50	100	100	200
Intersection details	250	500	500	1 000
Cross Sections	100	100	100/200	200

Other details may be drawn to the following scales:-

1:1, 1:2, 1:25 & 1:5 and multiples of 10 of these scales.



## **2.3.5 UNITS FOR DIMENSIONS AND QUANTITIES**

Linear dimensions on all drawings shall be in metres, with the exception of some detail drawings of small structures (eg manholes) and some standard drawings (eg kerb and channel) which may be in millimetres. Plans shown in millimetres must be noted as such.

Details of methods and dimensioning shall be in accordance with AS 1155 - Appendix A - Metric units for use in the construction industry.

All schedule of quantities shall be in metric units as follows:-

Length	metre (m)
Area	square metres (sq m)
Volume	cubic metre (cu m)
Mass	tonne (t)
	kilogram (kg)

## **2.4 SURVEY DETAILS**

### **2.4.1 CHAINAGES AND PEGGING**

Chainages on plans shall be expressed to 0.01m. Chainages shall commence at the intersection point of abutting road centrelines. Where internal intersections occur, the chainages identifying these internal intersections shall also be shown on plans and longitudinal sections where the road centrelines intersect.

Chainages shall be pegged and levelled along road centrelines (or other construction lines) at maximum 25m intervals for urban roads and 50m intervals for rural roads with further division (10m or 12.5m for urban and 25m for rural) where necessary, due to horizontal or vertical curvatures.

Prior to commencement of design preparation, the Consulting Engineer shall obtain from Council's Design Office the chainage datum of existing adjoining roads for continuation of the through chainages in the proposed works, or the origin of chainages to be used.

### **2.4.2 LEVELLING**

All levels shall be reduced to Australian Height Datum and indicated on the plans. The use of other datum (in rural areas only) shall be approved by Council prior to submission of the Application for Approval to Construct stage. The levels shall be expressed to 0.01m, except in special circumstances, then they shall be expressed to three decimal places.

Reduced levels of bench marks and reference pegs shall be expressed to 0.001m.

### **2.4.3 SITE CONTOURS**

For urban developments contours of the whole site shall be shown at not more than 2m vertical intervals or 30m horizontal intervals with spot levels where 0.5m contours are more than 30m apart. In steep terrain (exceeding 10%), contour intervals may be increased to 5m vertical intervals.

As a minimum, contours shall be shown on the following:-

- (a) Stormwater catchment plans;
- (b) Sewerage layout plans;
- (c) Roof drainage plans;

For rural developments suitable levels may be shown on stormwater catchment diagrams and flood analyses.

#### **2.4.4 SURVEY MARKS**

##### **2.4.4.1 BENCH MARKS**

All bench marks shall be levelled to Australian Height Datum and shall be “Approved Marks” where level connection distance is 1km or less.

##### **2.4.4.2 PERMANENT SURVEY MARKS**

All permanent survey marks shall be levelled to Australian Height Datum and their placement shall be within the Australian Map Grid Co-ordinate Base.

The PSM’s shall be shown on the As Constructed plans for Council’s approval. They shall be located by a licensed Surveyor, in accordance with the requirements of the Department of Natural Resources and also be acceptable to Council.

Generally this shall result in one standard permanent survey mark provided for each twenty (20 ) lots of urban size, or for each 3 hectares or part thereof. There shall be at least two of such PSM’s where the number of lots exceeds forty (40), or the area exceeds 4 hectares or where the layout of a subdivision of a smaller size would need more than one mark for practical purposes. Rural lots and Park Residential lots shall be determined on merit.

Generally PSM’s shall be located such that they are:

- Intervisible;
- Within the road reserve, normally between the actual formed road surface and the fence line, clear of all likely future work and sited to minimise potential interference and damage from construction works and service repairs;

A locality sketch (**Department of Natural Resources Form 6**) for each PSM is to be submitted to the Council, showing measurements from the PSM to a least two (2) cadastral survey marks, plus buildings, fence posts kerbs and similar features as practicable (not less than three measurements are acceptable). The PSM shall be linked to the AMG co-ordinates network where required by Council and the Form 6 sketch shall show the AMG values for the PSM.

## **2.5 APPROVAL OF DESIGN PLANS AND DOCUMENTATION**

- 2.5.1** Following submission and assessment of design plans and documentation or final amended plans and documentation, Council shall issue the **approval of these submissions** and the **Approval to Construct** once these are considered satisfactory by Council. The design review shall be issued within 50 days of the date of receipt of the Application for Approval to Construct or the date of receipt of the final amended plans and documentation, whichever is later (in accordance with the Local Government (Planning and Environment) Act, 1990).
- 2.5.2** The approval shall include one (1) set of stamped “Approved” plans and documentation to be returned to the Consultant for use in construction together with the details for the ‘As Constructed’ drawings information and inspection requirements.
- 2.5.3** Council’s approval of the plans and documentation shall not imply that Council is responsible for the correctness and/or accuracy etc. of the submission. The total responsibility shall lie with the Consultant to ensure that the designs detailed in the submission are workable and conform to good established engineering principles and practices. Errors or omissions in matters considered essential to the design detected after the issue of approval shall be corrected during construction and shall be notified to Council immediately such information comes available.
- 2.5.4** Consultants shall ensure that the documentation submitted contains specifications setting appropriate levels of materials and construction practices and which are consistent with the intent of the design and current industry standards. Out of date and inappropriate specifications and contract administration documentation shall not be acceptable.
- 2.5.5 AMENDED DESIGN DURING CONSTRUCTION**

Should it become obvious that the approved design should be amended during the construction process the consultant should immediately notify Council of the need to amend and submit an amended design for urgent approval prior to construction of the variation.

## **2.6 CONSTRUCTION WORKS**

### **2.6.1 NOTICES**

In accordance with the Local Government (Planning and Environment) Act, 1990 Clause 5.2 (7A), no works shall be commenced until the Application for construction of works has been approved. The Consultant shall submit the name of the successful Contractor for Council’s records, together with a copy of the Contractor’s Public Liability Insurance Policy for a minimum of \$5 Million and give Council seven (7) days written notice of intention to commence work.

A minimum of twenty four (24) hours notice for site inspections and testing shall be required unless otherwise stated in these Guidelines. Urgent request for these services with less than twenty four (24) hours notice shall require the applicant to fund the actual cost, if staff are unable to attend within normal working hours. Refer to Council’s current Rates and Charges Register for the amount payable.

A minimum of forty eight (48) hours notice for inspections for “Onto Defects Liability” and “Off Defects Liability” shall be required. Urgent request for these services with less than forty eight (48) hours notice shall be subject to a higher inspection charge.

## **2.6.2 PROVISION FOR SAFETY ON SITE**

### **2.6.2.1 TRAFFIC SAFETY**

The Developer shall be responsible for the safety of the public during construction of the works. In this regard, the requirements for traffic control set out in the Department of Transport Qld Manual of Uniform Traffic Control Devices Part 3 and Workplace Health and Safety Act Regulations shall be observed. If the provisions considered necessary by Council are not implemented within twenty four (24) hours following the direction by Council Officer, Council shall make the necessary provisions and the cost shall be recovered from the Developer.

### **2.6.2.2 EMPLOYEE SAFETY**

The safety of the employees on site shall conform to the requirements of the Workplace, Health and Safety Act (as amended) and Regulations. Application shall be made prior to commencement of construction. Refer Section 2.9.

## **2.6.3 SUPERVISION AND ACCESS**

The construction works shall be supervised by competent staff and the supervision shall be the responsibility of the Consultants. A Supervision Certificate (Appendix 2.3) shall be submitted on completion of the works as required by Councils Local Laws and prior to the inspection for the purpose of commencement of the Defects Liability Period.

- (i) The construction of the works shall be regularly inspected by the Consulting Engineer and/or his representatives. The Consulting Engineer shall ensure that sufficient inspections and tests are carried out during the course of the construction to ensure the works are in accord with the design intent as approved by Council and in particular that critical items of the works meet the specified requirements.
- (ii) Uninterrupted access to the works shall be available at all times to Council personnel provided such personnel report to the Contractor’s site representative immediately they wish to access the site. Personnel safety issues shall be the responsibility of the Contractor in such instances. Refer Clause 2.6.2

## **2.6.4 ENVIRONMENTAL MANAGEMENT**

Consultants shall be required to prepare an Environmental Management Plan to protect the soil and vegetation on the development site both during construction and post construction.

The Environmental Management Plan shall be prepared in accordance with:-

- (i) **SOIL EROSION AND SEDIMENT CONTROL**  
Engineering Guidelines for Queensland Construction Sites - June 1996 (The Institution of Engineers, Australia, Queensland Division); and
- (ii) **QUEENSLAND URBAN DRAINAGE MANUAL**

#### **2.6.4.1 CLEARING AND DISPOSAL OF CLEARED MATERIAL**

Vegetation which is approved by Council for removal shall be cleared and disposed of in accordance with Council Policy No. 6.16.

#### **2.6.4.2 VEGETATION TO BE RETAINED**

Consultants shall identify the type and the extent of vegetation on the site, the vegetation proposed to be removed and the vegetation to be retained. Unnecessary removal of vegetation shall not be approved or permitted by Council. Remnant Vegetation as defined in the Remnant Vegetation Register and vegetation listed in the Tree Preservation Catalogue are to be retained where possible. Consultation with Council is necessary prior to any proposed removal of these types of vegetation. Special consideration should be given to retain ground cover on slopes steeper than 10% and on shaded areas or steep slopes with a southern aspect.

#### **2.6.4.3 EROSION CONTROL AND SEDIMENT LOSS**

Consultants shall demonstrate that the control of erosion and sediment loss has been addressed in detail for the development particularly in steeply sloping terrain and both during and after construction. The control of erosion and sediment loss shall be in accordance with the approved Environmental Management Plan. Measures (eg. revegetation, silt traps etc) shall be required for initial and long term protection of the development site and adjacent properties.

A nominal 600mm width of turfing alone behind the kerb to control erosion shall not be considered sufficient.

Where revegetation is proposed for erosion control, the minimum top soil depth shall be between 40mm and 60mm for slopes exceeding 1 in 4 and between 75mm and 100mm for flatter surfaces. The minimum revegetation cover of 70% (plan view) shall be achieved prior to acceptance for off defect liability. This includes all disturbed surfaces.

#### **2.6.4.4 SITE RESTORATION**

Generally on completion of construction works the Developer shall leave the whole of the site in a clean and tidy state. For example:-

- (i) The surfaces of footpaths and allotments shall be even and free of stones and debris sufficient to permit the use of a domestic lawnmower to maintain the areas safely.
- (ii) All grub holes within the road reserve shall be filled with approved materials and compacted to Council's requirements;
- (iii) All depressions or grub holes not within the road reserve shall be filled with approved material and compacted to Council's requirements. All site filling shall be in accordance with Section 2.6.6 of these guidelines;
- (iv) All damage to private properties including fences due to the execution of the works shall be made good to the satisfaction of the property owner and Council;

### **2.6.5 NOXIOUS WEEDS**

The Developer shall eradicate any noxious weeds or declared plants in a proposed residential subdivision in accordance with Council Policy 6.15. Thirty (30) days notification is required prior to inspection by Council of the completed works. Should the time and weather constraints prohibit the works from being carried out, Council may agree to a provision of security in accordance with Council Policy No. 6.19.

### **2.6.6 SITE FILLING**

All site filling shall require a submission from the applicant's Consulting Engineer. The submission shall include drawings and/or specifications which shall clearly indicate the location and depth of proposed filling, site drainage, services, fill material standards, compaction standards, dust control, impact on adjacent lands and the stabilisation and revegetation in accordance with the approved Environmental Management Plan.

All site filling shall be in accordance with the current edition of AS 3798 (Guidelines on Earthworks for Commercial and Residential Developments).

Where site filling exceeding 0.75m in depth has been carried out, the "As Constructed" plans shall indicate the contours after filling and also the compaction test results.

### **2.6.7 INSURANCE**

Contractors shall be required to have Public Liability Insurance for a minimum value of \$5 Million prior to commencement of work. Evidence of the policy documents shall be submitted to Council prior to commencement of site works.

### **2.6.8 BUSHFIRE RISK**

Consideration shall be given to the development planning and construction to reduce bushfire risk. Reference to guidelines of "Bushfire Hazard Planning in Queensland" and the Fire Service Department is suggested for inclusion in design.

## **2.7 BONDING**

Under Section 6.4 of the Local Government (Planning and Environment Act), incomplete works may be bonded. The bonding shall be in accordance with Section 6.4 of the Local Government Planning and Environment Act and Council's Policy 6.19. The applicant is to enter into a formal (signed and sealed) agreement with Council. The works must have commenced and be completed to the following stage:-

- (a) All earthworks for the construction works shall be completed;
- (b) Any drainage works and sewerage works within the proposed lots shall be completed;

All the incomplete works are required to be completed within three (3) months of the date of sealing the agreement. Certification by the Developers' Consultant Engineer shall be required of the completed works plus the estimated costs of works remaining to be completed.

The bond shall be a unconditional bank guarantee in accordance with Council's Policy No. 2.10 amounting to 125% of the approved estimate of costs of the incomplete works.

## 2.8 DEFECTS LIABILITY PERIOD

An inspection and approval of the works by Council shall be required before Council shall accept the work and set the date for commencement of the Defects Liability Period.

- (i) On completion of the works and forty eight (48) hours notice prior to the inspection, the Consulting Engineer shall submit to Council the following:-
  - (a) As Constructed data in the specified format;
  - (b) Computer disk of the design data in the specified format;
  - (c) Film copies of all design drawings;
  - (d) Supervision Certificate signed by the Supervising Engineer certifying compliance with the approved design and any departures from the approved design which shall also be so noted on the “As Constructed” drawings; (Refer Appendix 2.3).
  - (e) Construction Certificate signed by the Contractor certifying construction compliance with the approved design drawings and any departures from the design; (Refer Appendix 2.4)
  - (f) Test certificate results for all tests specified in the approved Testing Schedule and/or certified testing summary;
  - (g) Allotment Fill Report if applicable;
  - (h) Retention Money amount and the form in which it shall be submitted;
  - (i) Written submission covering the status of each of the approval conditions including those conditions imposed at the time of design approval.
- (ii) At the inspection to be attended by a representative of the Consulting Engineer and Council, for the purpose of Council’s acceptance of the works and hence commencement of the Defects Liability Period, the following matters shall be addressed, noted and recorded:-
  - (a) The defects and omissions to be rectified before the works shall be accepted by Council;
  - (b) The minor defects and omissions (if any) that Council shall permit to be rectified during the Defects Liability Period;
  - (c) Those items which Council shall expect to be monitored during the Defects Liability period **and** which may require remedial action during or at the end of the Defects Liability Period.
- (iii) The Contractor shall be given the option of attending the inspection for the commencement of the Defects Liability Period by the Supervising Engineer.
- (iv) Council shall require submission of 5% of the Estimated Cost of the works in a form acceptable to Council (Bank Guarantee not cash) for the full period of the Defects Liability. For small projects, at the discretion of the Council, the 5% Retention may be held by the Supervising Engineer. Small projects in this instance shall be generally regarded as having the 5% retention less than \$1000. The Council in this instance may have further specific requirements (such as certification from the Consultant that they are holding the Retention) before permitting such a procedure.
- (v) The Council shall duly notify the Consulting Engineer in writing of the date of commencement of the Defects Liability Period and the defects noted in 2.8 (ii), (b) and (c) above.

- (vi) At the end of the Defects Liability Period the Consulting Engineer shall notify Council of the expiration of the time, advise in regard to the status of the items notified in 2.8(ii) (b) and (c) above and request release of the retention money. In addition, the Consulting Engineer shall ensure that any other defects that arise due to the actions of the Contractor in regard to workmanship or materials are rectified before Council reinspects the works at the end of the Defect Liability Period. The Contractor shall not be required to attend to damage arising from normal “wear and tear”, or due to the actions of builders, land owners or the public or as a result of deliberate acts of theft or vandalism unless works were required to be implemented by others due to the failure of the contractor to complete works to a satisfactory standard.
- (vii) The length of the Defects Liability period shall be as determined by Council by resolution from time to time.
- (viii) In the event of a significant defect requiring rectification, Council may require an additional Defects Liability Period over the rectified works. The length of time for the additional Defects Liability Period shall be approved by Council.

## **2.9 NOTIFIABLE PROJECTS**

Any proposed works may be a Notifiable Project under the Workplace, Health and Safety Act (as amended). It is the responsibility of the Consultants to observe the requirement under the Act prior to commencement of works and evidence of the approval of the Notifiable Project shall be submitted to Council. As defined in the Act, the Principal Contractor is responsible for the worksite which can include existing road reserves if the road reserves form part of the worksite. When Council grants the Approval to Construct, it will nominate the consultant who has lodged the Application for Approval to Construct as the Principal Contractor under the Workplace, Health and Safety Act(as amended).