

## **2.0 GENERAL**

### **2.1 DISCUSSION OF REQUIREMENTS**

It is recommended that the Consultant Contractor make appointments with Council's Manager Engineering Development prior to commencement of design/construction to discuss requirements, local conditions, intended design and construction methods and materials in order to clarify any points in regard to the following specification.

### **2.2 PROJECT MANAGER**

On all subdivisions and developments the owner or developer must nominate a specific person to act as Project Manager for the entire project. This person must be readily available and have sufficient authority and ability to discuss and resolve any operational problems that occur during the development.

### **2.3 DEFINITIONS**

- (a) Council's Engineer shall mean the Director Works or his appointed representative.
- (b) The Developer shall be the owner or subdivider or his agent who has applied for the development consent or has been appointed to supervise construction of works to satisfy the consent conditions. The developer shall be represented by a nominated person with authority to make decisions.
- (c) The Contractor shall be those engaged by the developer to carry out work for the developer to Council's requirements.
- (d) All references to appropriate materials or treatments, either approved, required, suitable or the like, shall be determined by Council's Engineer or in accordance with the relevant standards.

### **2.4 DESIGN**

Plans and specifications shall be prepared by suitably qualified and experienced consultants to satisfy the development conditions of consent and in accordance with this specification. These shall be submitted to Council for approval by the Director Works.

No work shall commence on the site until the plans, specifications and pavement designs have been approved in writing, bonds paid and the Development Engineer formally notified.

## 2.5 ENVIRONMENTAL PROTECTION/LANDSCAPE

Prior to development application, all aspects of the landscaping proposal should be investigated in order to incorporate the existing landscape and land forms with the proposed development. Once the development consent has been issued these opportunities will be restricted due to locations of roads, lot layouts, reserves etc. Some aspects to be considered are:

- (a) Tree preservation and removal of undesirable trees.
- (b) Areas to be left undisturbed, i.e. wetlands, proposed public reserves, buffer strips etc.
- (c) Natural landforms such as rock outcrops, steep land, tree stands etc. included in the areas to be left undisturbed.

It is important that all the relevant details of the landscape design be incorporated in the engineering plans. The landscape plan must be submitted to Council and approved prior to the release of the approved engineering plans.

Details of the landscape issues and suitable information will be required by Council and should be submitted together with lodgement of the development application.

## 2.6 CONTRACTORS & CONTRACT WORK

All work shall be carried out by appropriately trained and proficient contractors in a competent, workmanlike manner, and in accordance with the approved plan. No departure from the plan is to be made unless authorised in writing by Council's Engineer. This may require submission of a re-design for approval.

## 2.7 PERFORMANCE & QUALITY CONTROL INSPECTIONS & TESTING

It shall be the responsibility of the developer or his agent to produce or construct each element of the work to a standard complying with the approved plans and specification requirements herein. The developer is responsible for all facets of the developments, including day to day supervision.

Council's Engineer will not assume the role of supervisor during the construction phase. It shall be the developer's responsibility to present to Council completed works in accordance with the plans and specifications and any additional requirement advised in writing by Council's Engineer. The completed work must be capable of passing the required tests. These tests may be separately nominated within this specification, or the approved plans, or the appropriate Australian Standard, or shall be in accordance with the manufacturer's specification.

During progress of the work, uninterrupted access shall be given to Council's Engineer. Where necessary, the contractor's equipment or personnel are to be made available for the use of Council's Engineer for examination or testing purposes. Council's Engineer may instruct the removal or amendment of any such work or material considered to be unacceptable, whether fixed or not, and, in the event of dispute regarding material quality of completed work, the material concerned will be submitted for testing by an independent authority.

Requirement for testing, where not specified, shall be at the discretion of Council's Engineer and at the full cost of the developer.

## 2.8 MATERIALS

All materials used shall be in as new condition and of an approved standard, free of structural damage or defects, and if required, the contractor shall provide full information as to source of supply and mode and place of manufacture. Test results of the particular material proposed shall be submitted. Specific requirements are detailed in the relevant sections of this specification. Some suppliers have materials that are regularly tested and have been accepted by Council. Upon application, these materials may be accepted without further testing.

## 2.9 INITIAL CLEARING OF SITE

Initial under scrubbing of the site to enable survey set out will be permitted after Council's development approval. Council's requirements regarding tree preservation and soil will be maintained to minimise disturbance to natural Vegetation. Refer to Council's Tree Preservation Policy and Chapter 3 for specific details.

## 2.10 SETTING OUT

The developer shall be responsible for all pegging, levelling and setting out, and Council will not carry out any such work or accept responsibility for its accuracy. This will include the determination of all road and property boundaries.

## 2.11 TEMPORARY ROAD CLOSURE

No part of a public road shall be closed to traffic without the prior consent of the Director Works. Council has a statutory obligation under the Roads Act, 1993, to publicly notify road closures at least seven (7) days before works commence. Accordingly, the developer or contractor is to submit appropriate application, together with advertising fee as listed in Council's Fees and Charges, at least ten (10) days prior to the required closure.

## 2.12 FINAL CLEANING UP OF SITE

Upon completion of the works, all buildings, plant, excess and discarded material assembled or used for the development shall be removed and the site shall be left in a clean and tidy state.

## 2.13 PROTECTION OF PROPERTY

The developer shall take adequate precaution to prevent deterioration of or damage to private property, public roads and reserves during progress, and Council's Engineer may direct the provision of temporary works or measures considered necessary to provide such protection.

Where works or accesses may be necessary on other properties, the developer is responsible for gaining consent to enter and ensuring any damage/impact on other property is rectified.

## 2.14 HAULAGE ROUTE

For all developments, the route for haulage of materials to or from the development shall be subject to approval by Council's Engineer prior to the commencement of the haulage. The developer shall ensure these haulage routes are used. Damage to roads by trucks serving the development will be repaired at developers cost.

## 2.15 REPAIR OF DAMAGE

The developer shall restore to original condition, at his own expense, any property or roads altered or damaged by him during the course of construction, or caused as a direct consequence of the development,

## 2.16 DISRUPTION TO ACCESS & SERVICES TO EXISTING PROPERTIES

Where access or services to any property is interrupted by development works, the developer shall provide satisfactory alternative access for the duration of construction and suitable permanent access on completion. Written approval shall be gained from Council's Engineer.

## 2.17 STATE SURVEY MARKS

Adequate precaution is to be taken to protect and preserve any state survey marks relative to or affected by the development. The developer shall be responsible for the subsequent replacement by a Registered Surveyor prior to the commencement of construction. An appropriate plan of survey showing the relocated marks shall be provided by the surveyor and lodged with the Surveyor General's Office.

## 2.18 SAFETY

The developer shall be responsible for adequate safety precautions during progress of the works, including the provision and erection of any signs, lights and barricades necessary for pedestrian and traffic safety in public roads or places, and Council will not be held responsible for any consequence arising from developers failure to take such precaution, whether specifically instructed or not, Refer to Clause 5.1 for details.

## 2.19 WORKING HOURS & SUNDAY WORK

No work shall be performed outside the hours that apply under the Noise Pollution Act. No subdivision construction works shall be carried out on Sunday, by or on behalf of the developer, without the express approval of Council. Inspections outside normal working hours can be arranged refer to Clause 2.39 for details.

## 2.20 PRACTICAL COMPLETION

Practical Completion shall be deemed that stage in the execution of the work when it is complete, except for minor omissions and minor defects:-

- (a) Which do not prevent the works from being reasonably capable of being used for its intended purpose, and
- (b) In relation to which there are reasonable grounds for not promptly rectifying them, and
- (c) Rectification of which will not prejudice the convenient use of the works.

A maintenance period of six months shall commence from the date of practical completion.

It is essential that the developer gives Council at least 48 hours notice of the departure of a contractor from a section of work that is proposed for practical completion.

## 2.21 REMEDIAL WORK

If it becomes necessary for remedial work to be performed, the maintenance period for such remedial work shall commence on the day on which the remedial work is completed. The maintenance period on any remedial work shall be six months, unless otherwise approved by Council.

## 2.22 MAINTENANCE PERIOD & BOND

Prior to final written acceptance of satisfactory completion of works and release of linen plan, a Bank Guarantee or cash shall be lodged with Council to provide for maintenance and/or rectification of any work found to be faulty or suffering deterioration within a period of six months from the date of such acceptance. The rate for this maintenance bond is assessed in accordance with Council's Annual Fees and Charges.

To recover the bond it will be the responsibility of the developer to arrange a final inspection with Council's Engineer approximately one week before the end of the maintenance period.

No monies will be refunded unless such an inspection has been carried out in the presence of the developer or his agent and all defects subsequently repaired.

#### 2.23 RECTIFICATION OF DEFECTS

Rectification or defects shall be completed within one month of written notification or work will be carried out by Council and deducted from bond monies.

#### 2.24 PROVISION OF OTHER SERVICES

Electricity, telephone and gas services shall be provided in accordance with the requirements of the relevant authorities and any conditions set by Council. Engineering design plans will not be approved until the service authorities have been provided with a copy. Receipt of lodgement will be required. The developer shall also be fully responsible for repairs to any damage caused by other authorities in providing electricity, telecom, gas or other services to the development.

It will also be the developers responsibility to ensure that all trenching is carried out to Council's requirements - refer to Clause 7.2 for details. Backfill shall be adequately compacted to prevent subsequent settlement or damage to the development's roads. Services shall be located in the allocated footpath areas in accordance with Council's standards, refer Drawing No. SD5. All works in public roads affecting other services shall be carried out in accordance with the Code of Engineering Practice for Street Openings - Public Utility Service Committee, 1989,

#### 2.25 STORAGE OF MATERIALS

Storage of pipes, gravel and other materials in public roads or reserves will not be permitted unless the express approval of Council is obtained. All materials shall be stored in a safe and tidy manner and shall not cause a nuisance. It may be necessary to erect signposting and safety barriers.

#### 2.26 ROAD OPENING PERMITS

Road crossings for services across existing roads shall require a road opening permit. The cost of the road opening permit is determined by the area of the trench and Council's schedule of fixed fees. The trench shall be backfilled in accordance with the Code for Backfilling Trenches as adopted by the Public Utility Committee, 1989. Permits will also be required where tunnelling or boring methods are used.

## 2.27 COUNCIL RESERVES

Reserves dedicated to Council shall be left in a safe and tidy condition, free from all hazard to public safety such as wells, shafts, dams, dangerous ruins or building remnants. The areas should be managed and protected as set out in the Environmental Protection Section Specific requirements are to be detailed on Council's Engineering plans.

Where considered a fire hazard by the Fire Control Officer, necessary hazard reduction shall be incorporated in engineering works.

## 2.28 BONDS TO SECURE INCOMPLETE WORK

Generally, bonds will not be accepted to enable early release of the linen plan, but due consideration will be given in cases where major works are substantially complete and minor item are delayed by circumstances beyond the reasonable control of the contractor. However, all services to each allotment should be completed before any bonding will be considered. Reference should be made to Council's policy regarding bonding.

## 2.29 SUB-CONTRACTORS

Identity of sub-contractors and their proposed works are to be supplied to Council's Engineer prior to engagement, and Council reserves the right to preclude any such sub-contractor.

Council must be notified at least 48 hours prior to the departure of any sub-contractor from the site.

## 2.30 EXTRA WORK

Ancillary requirements, such as batter stabilisation, soil erosion and sediment control, benching, sub-soil drainage etc., shall be indicated on the plan. However, variation in procedure and extent of work may be identified during construction, and these works shall be completed as directed by Council's Engineer. Further designs and plans may also be required. Provisions should be made for possibility of such extras when preparing estimates.

## 2.31 EROSION PREVENTION

For developments requiring fill or regrading or projects where there is probability of dust or water erosion problems, the advice of the Department of Conservation and Land Management should be sought, and in such cases the requirements of that Authority will be endorsed by Council as the minimum requirement. The cost of implementing erosion control procedures is generally slight, but will be of benefit. The most efficient means of stabilisation will be recommended and work shall be protected from erosion during construction and the maintenance period.

### 2.32 ADJUSTMENT OF SERVICES

It will be the responsibility of the contractor to give adequate prior notice and information, and make satisfactory arrangements with the respective authorities for any necessary alteration or extension of existing services and installations. Any adjustments shall be completed at the full cost of the developer unless otherwise agreed by Council's Engineer.

### 2.33 INSURANCE

- (a) Public Liability Insurance Policy - Contractors engaged on development or subdivisional works shall take out Public Liability Insurance to the value of \$5 million before commencing work. The policy will include the interests of indemnifying Cessnock City Council.
- (b) Workers Compensation - Contractors engaged on development or subdivisional works shall carry a current Workers Compensation Insurance on all employees as required by Statute.

### 2.34 OTHER AUTHORITIES

All work will be carried out in accordance with the provisions of relevant Authorities such as Department of Conservation and Land Management Environmental Protection Authority, Board of Fire Commissioners and Work Cover Authority.

### 2.35 ENVIRONMENTAL PROTECTION

Environmental protection measures shall apply to all development works, and to all persons, contractor and sub-contractors, where the works involve any disturbance to vegetation, which shall include grasses, shrubs and trees.

### 2.36 BUSH FIRE PRECAUTIONS

Careful consideration must be given to the possible bush fire hazard associated with a subdivision. Generally, the subdivider should follow the various recommendations of the Bush Fire Council and the Department of Bush Fire Services in their publication "Planning for Bush Fire Protection", available from Council's Fire Control Office.

#### 2.36.1 General

Where a subdivision will abut bushland in a bushfire prone area (as classified by Council), perimeter roads are to be located immediately between the created allotment and the bushland, with a minimum cleared width of six metres, and a minimum trafficable width of four metres. Such roads are to be adequately drained to provide all weather access for fire fighting vehicles.



The perimeter road is to be contained within a nominated reservation (width to be determined by Council's Fire Control Officer) which borders those allotments abutting the bushfire prone area. Such a reserve will serve as a basis for fire protection measures to be undertaken and will not be considered as part of the public reserve dedication applicable to the subdivision. The developer may be required to identify and provide safe building zones within a designated development.

Access is to be provided from the above described reservation from the focal road system at regular intervals (to be approved by Council's Fire Control Officer).

Provision of all sediment and erosion control measures must be undertaken during and after construction in accordance with Council's requirements.

For those subdivisions receiving reticulated water, fire hydrants are to be situated near where potential fire hazard areas exist as determined by Council's Fire Control Officer and as specified by the Hunter Water Corporation.

Where a potential bush fire hazard exists, applicants should also consult with Council's Fire Control Office prior to final preparation of engineering plans.

#### 2.36.2 Bush Fire Emergency Access

In rural subdivisions of areas historically subject to bushfires or areas likely to experience an increase in fire hazard arising from development and increased public access, Council will require the provision of an alternate emergency means of vehicular access to the subdivision or development.

In this regard, the submission to Council or a relevant history of recorded incidence of bushfires in the area and a report from a suitably qualified Fire Officer will assist in determining the need or otherwise for the alternate means of vehicular access to the subdivisions.

#### 2.37 INSPECTIONS/SUPERVISION

Will be required by Council's Engineer for the following items:-

- (a) Erosion/sediment control & environmental/heritage protection measures.
- (b) Clearing
  - Before commencement of survey work.
  - When completed.
- (C) Road Formation
  - At excavation to subgrade.
  - Before filling.
  - During progress.
  - When completed.
- (d) Subsoil Drainage
  - Before placement of pipes.
  - Before backfilling.
- (e) Drainage pipes after bedding and before backfilling, and after as required for testing as specified.

- (f) Subgrade before and after compaction.  
Note: - Assessment is also required by a geotechnical engineer prior to compaction,
- (g) Sub-base gravel when compacted.
- (h) Base course gravel when compacted.
- (i) Concrete work before and during pouring in formwork.
- (j) Priming and sealing before commencing and during work.
- (k) Upon completion of the work a final inspection,
- (l) Other inspections as detailed in this specification or as required by Council's Engineer.

#### 2.38 NOTICE FOR INSPECTIONS

Forty eight (48) hours notice (facsimile preferred) shall be given for any of the above inspections. Failure to notify the need for inspection may lead to the portion of the work not being approved by Council's Engineer.

It will be necessary for the developer's representative to meet Council's Inspector on the site at each inspection to receive written approval to proceed or instructions to amend any work.

#### 2.39 INSPECTIONS OUTSIDE NORMAL COUNCIL HOURS

It may be possible to arrange inspections of work outside of Council's normal working hours. The cost of the inspection shall be borne by the developer or his contractor. This cost shall be determined by Council and must be paid to Council's cashier prior to the inspection.

#### 2.40 WRITTEN STAGE APPROVAL FOR WORKS

Approval to proceed from stage to stage of the various components of works must be obtained in writing by the developer in order to receive approval to the completed subdivision. The developer is responsible for obtaining the written approval from Council's Engineer.

Approval to proceed from one stage to the next in no way absolves the developer from responsibility of defects or failure.

#### 2.41 LIMITATION OF STAGE APPROVAL

During construction, stage approval of any work will be given in regard to structural standard only at the time of inspection, but does not absolve the developer of responsibility for any damage or deterioration occurring before final inspection and approval, or before expiry of maintenance period.

## 2.42 WORK AS EXECUTED PLANS

Prior to linen release, final inspection and written approval of overall development works to enter maintenance period, a Surveyor's statement and "Work as Executed Plans" will be required to verify that all work is constructed and located in accordance with the plan, especially in regard to line and level of kerb and guttering and level and location of piped and open drainage and fill levels. The "Work as Executed" plans shall be certified as correct by a registered surveyor and submitted on copies of the approved originals.

These copies are required to replace Council's originals, and as such will be retained by Council.

"Work as Executed" plans are to show all relevant engineering construction details, including variations to the pavement details from the original pavement report. Full details of the constructed pavement, including subgrade details, subgrade replacement details, stabilised subgrade areas, layer thicknesses, the number of layers, type and source of material, quantity and type of stabilising agent (if applicable) will be required. The size and accurate location of all subsoil drains is to be shown.