BLUE MOUNTAINS CITY COUNCIL
DEVELOPMENT CONTROL PLAN No. 31

Public Infrastructure Works In Subdivisions and Developments

Adopted: 11 May 1999.
In Force: 19 May 1999.
Amended: 6 March 2002.

Contents

Introduction

THE AIMS OF THE PLAN

The Development Control Plan for Public Infrastructure Works in Subdivisions and Developments aims to:

- Ensure roads are designed and constructed for the safe movement of vehicles, cyclists and pedestrians.
- Ensure that all construction works recognise the sensitivity of the Blue Mountains environment and that any adverse impact on neighbouring properties and the environment is minimised.
- Provide standards for new public infrastructure works that recognises the long-term maintenance responsibilities of the Council.
- Provide clear administrative procedures during the construction phase of a project.

DEFINITIONS

In this DCP Public Infrastructure Works are defined as any works that are either:

- In an existing road, public reserve or drainage reserve,
- In a proposed road, public reserve or drainage reserve, or
- Expected to be maintained by the council.

The following documents form part of this Development Control Plan:

- Blue Mountains City Council Specification for Dwelling Driveways,
- Blue Mountains City Council Specification for Minor Road Openings,
- Blue Mountains City Council Specification for Public Infrastructure - Design,
- Blue Mountains City Council Specification for Pubic Infrastructure - Construction, and
- Blue Mountains City Council Specification for Access to New Development.

WHAT DOES THE PLAN APPLY TO?

This Development Control Plan (DCP) applies to all forms of development within the Blue Mountains City Council area.

The Plan applies to land zoned under Local Environmental Plan 4 and Local Environmental Plan 1991**.** With the adoption of Draft Local Environmental Plan 1997**,** the DCP will cover development under this instrument.

The Public Infrastructure Works in Subdivisions and Developments DCP should be read in conjunction with existing DCPs applying to specific types or classes of development and specific sites, to ensure that infrastructure works are appropriately designed and constructed as part of the development.

In addition, this plan applies to any work or approval required under Section 138 of the Roads Act, 1993.

NEED FOR CERTIFICATION

The Council is designated as the roads authority for the majority of roads within the City of the Blue Mountains, and as such has an on-going maintenance responsibility for the public infrastructure constructed within it.

Accordingly, Council needs to be satisfied that all stages of the construction of a public infrastructure project for which it will have a long term responsibility, are constructed properly.

Certification requirements are considered necessary to satisfy Council of the standard of construction.

Where works are undertaken directly by Council or Council undertakes the inspection of works at a hold point as the "principal certifying authority", the need for a compliance certificate may be dispensed with**.**

Design Requirements

OBJECTIVES

To ensure that the public infrastructure needs of different land uses are designed appropriately for those uses.

To ensure that the designs appropriately consider environmental, safety and public amenity issues.

To ensure that the designs meet Council's long term maintenance obligations to the community.

PROVISIONS

REQUIREMENTS

1. All public infrastructure works must be designed in accordance with Council's Specification for Public Infrastructure Works -Design.
2. Any driveway associated with the construction of a single dwelling house, or alteration or additions to a dwelling house or outbuilding shall be designed in accordance with Council's Specification for Dwelling Driveways.
3. The design of any public infrastructure works undertaken by Council, other than as part of a development application, shall have regard to the Council's Specification for Public Infrastructure Works – Design.

CERTIFICATION OF DESIGN

1. All designs for public infrastructure works are to be certified in accordance with the Design Certification Report contained in the Quality Assurance of Design Section of the Council's Specification for Public Infrastructure Works - Design, prior to the issue of any *Construction Certificate* for any part of the development.

Construction Requirements

OBJECTIVES

To ensure that the works constructed fulfil the purpose for which they were intended.

To ensure that public infrastructure works are constructed recognising the long-term maintenance obligations of the Council.

To ensure that the works constructed are safe, both during and after construction.

To ensure that the works constructed are environmentally appropriate, both during and after construction.

PROVISIONS

REQUIREMENTS

1. No construction works are to commence until:
   - The appropriate approval and construction certificate is in place under the Environmental Planning and Assessment Act, and Council has been notified of the proposed commencement of the work in accordance with the requirements of the EP&A Act,
   - Any appropriate approval is in place under the provisions of section 138 of the Roads Act, and
   - The appropriate performance and security bonds have been lodged with the Council.
2. All service installations (e.g. sewer, water, electricity) associated with the construction of a single dwelling house, or alteration or additions to a dwelling house or outbuilding shall be undertaken in accordance with Council's Specification for Minor Road Openings.
3. All driveway construction associated with the construction of a single dwelling house, or alteration or additions to a dwelling house or outbuilding shall be undertaken in accordance with Council's Specification for Dwelling Driveways.
4. All other Public Infrastructure Works shall be constructed in accordance with Council's Specification for Public Infrastructure Works - Construction.

CERTIFICATION OF CONSTRUCTION

1. All construction undertaken must be certified in accordance with the attached Schedule of Certificates and Hold Points prior to the issue of any *Occupation Certificate* or of any *Subdivision Certificate*.
2. If no *Occupation Certificate* or *Subdivision Certificate* is required for the development being undertaken, then use of the development shall not occur until the construction works are certified by Council.
3. Additionally, where work-as-executed plans are required no *Occupation Certificate* or *Subdivision Certificate* will be issued until the submission and certification of those plans.

CONSTRUCTION HOLD POINTS

1. The following schedule defines the *Hold Points* - beyond which no construction works may proceed until released by the *Principal Certifying Authority* for the project.
2. A *Compliance Certificate* is required to be issued for each hold point indicated in the Schedule.
3. At each hold point inspection, the accompanying certificate shall confirm that sedimentation and erosion controls have been checked to ensure they are functioning adequately and have been cleaned and maintained and that all controls are in accordance with Blue Mountains City Council Erosion and Sediment Control Policy and Code of Practice.

Work as Executed Plans

OBJECTIVES

To ensure that the works constructed fulfil the purpose for which they were intended.

To ensure that Council, as the owner or future owner of the asset, has an accurate record of the works undertaken.

PROVISIONS

REQUIREMENTS

All works carried out, other than single dwelling driveways and service installations (minor road openings), shall not be considered to be finalised unless accurate work-as-executed plans have been submitted to Council.

Work as Executed Plans (at a reasonable scale) shall (as a minimum) contain the following information:

- Invert levels of all drainage pits, at entrance and exit,
- Location, class and size of pipes, box culverts and subsoil lines,
- Location of service conduits,
- Pavement thickness as constructed,
- Footpath widths at all tangent points, centre of curves, beginning and end of construction, at 50 metre intervals on straights,
- Road centreline levels and kerb levels at all tangent points, crests, sags, beginning and end of construction, and at 50 metre intervals on straight grades,
- Location of vehicle entries,
- Location and depth of slope junctions and pits relative to property boundaries on interallotment drainage lines,
- Details of all variations from the approved design.

CERTIFICATION OF WORK-AS-EXECUTED PLANS

1. All work-as-executed plans shall include

- a certificate from a registered surveyor indicating that the survey is a true and accurate record of the works that have been constructed,
- a certificate from the site engineer or superintendent that the works have been constructed in accordance with the approved drawings, Development Consent (if any), Construction Certificate, and Council's Specifications,
- a certificate from the design engineer that the works as constructed comply with the intent of the design and the Construction Certificate and Development Consent (if any), and that any variations do not in any way compromise the design intent of the approved drawings, Development Consent or Council's Specifications.

Schedule of Certificates and Hold Points

Hold Point Activity	***Relevant Council Specification and Clause No.***	***Aim / Goal / Outcome***	***Compliance Certificate Required***

Roads, firetrails, driveways, turning areas and passing bays

(Roads involving kerb and gutter construction should also comply with that schedule of works)

After setout of works, installation of erosion and sediment controls and prior to any excavation	**C212 Clearing and Grubbing** C212.02 – Limits of Clearing Blue Mountains City Council Sedimentation and Erosion Control Code of Practices and Policy	Confirm extent and alignment of works. Ensure extent of clearing is minimised. Check method of erosion and sedimentation control is adequate.	**NO**
Laying and compaction of subgrade (for flexible pavements eg bitumen)	**C242 Flexible Pavements** C242.14 – Spreading of Pavement Material	Ensure the quality of the underlying foundation material of the pavement	**YES**
Laying and compaction of subgrade (for rigid pavements eg reinforced concrete)	**C242 Minor Concrete Works** C271.03 – General C271.04 – Subgrade and Subbase compaction	Ensure the quality of the underlying foundation material of the pavement	**YES**
Laying and compaction of roadbase (flexible pavements)	**C 242 Flexible pavements** C242.20 – Compaction Requirements and Acceptance	Ensure the quality of the basecourse layer of the pavement	**YES**
Immediately prior to sealing of rigid pavement	**C 271 Minor Concrete Works** C271.37 (3) – Placing of steel reinforcement for concrete C 271.23 Placing and compacting concrete	Ensure the correct type and placement of reinforcing material and correct slab thickness. Ensure correct surface and jointing preparation has been carried out and that weather conditions are applicable to the construction of such works.	**YES**

Schedule of Certificates and Hold Points

Hold Point Activity	***Relevant Council Specification and Clause No.***	***Aim / Goal / Outcome***	***Compliance Certificate Required***

Roads, firetrails, driveways, turning areas and passing bays (continued)

Immediately prior to sealing of flexible pavement	**C244 Sprayed Bituminous Surfacing** C244.12 Preparation of Pavement Surface C244.15 Pavement Temperature and Weather Conditions **C245 Asphaltic Concrete** C245.21 – General C245.22 Preparation of Pavement **C255 Bituminous Microsurfacing** C255.15 Preparation of Pavement C255.16 – Weather Limitations	Ensure the correct type of pavement, thickness and finished surface level of the wearing coarse. Ensure correct surface preparation has been carried out and that weather conditions are applicable to the construction of such works.	**YES**
Final	**Approved Plans, Construction Certificate and Conditions of Development Consent**	Ensure all disturbed areas have been revegetated, that all documentation and works shown on the plans and specifications have been completed and that the site has been left in a safe, clean and tidy state,	**YES**

Schedule of Certificates and Hold Points

Hold Point Activity	***Relevant Council Specification and Clause No.***	***Aim / Goal / Outcome***	***Compliance Certificate Required***
Kerb and Gutter and Shoulder Seal Works			
After setout of works, installation of erosion and sediment controls and prior to any excavation	**C212 Clearing and Grubbing** C212.02 Clearing and Grubbing – Limits of Clearing	Confirm the extent and alignment of works. Ensure extent of clearing is minimised. Check method of erosion and sedimentation control is adequate.	**NO**
Laying and compaction of subgrade	**C271 Minor Concrete** C271.03 – General C271.04 – Subgrade and Subbase compaction	Ensure the quality of the underlying foundation material of the kerb and gutter.	**YES**
Placement of Stringline	**C224 Open Drains and kerb and Gutter** C 224.12 (3&4) Open Drains – Kerb and Gutter	Ensure correct alignment, finished surface level and crossfall of construction.	**NO**
Immediately prior to pouring kerb and gutter	**C271 Minor Concrete Works** C271.23 Placing and compacting concrete	Ensure correct surface preparation has been carried out and that weather conditions are applicable to the construction of such works.	**NO**
Laying and compaction of shoulder seal subgrade (for flexible pavements)	**C242 Flexible Pavements** C242.14 Spreading of Pavement Material	Ensure the quality of the underlying foundation material of the pavement	**YES**
Compaction of roadbase (flexible pavements)	**C242 Flexible Pavements** C242.20 Flexible Pavements – Compaction requirements and Acceptance	Ensure the quality of the basecourse layer of the pavement.	**YES**
Immediately prior to sealing of pavement	**C245 Asphaltic Concrete** C245.21 Asphaltic Concrete C245.22 Preparation of Pavement	Ensure the correct type of pavement, thickness and finished surface level of the wearing coarse. Ensure correct surface preparation has been carried out and that weather conditions are applicable to the construction of such works.	**YES**
Final	**Approved Plans, Construction Certificate and Conditions of Development Consent**	Ensure all disturbed areas have been revegetated, that all documentation and works shown on the plans and specifications have been completed and that the site has been left in a safe, clean, tidy state.	**YES**

Schedule of Certificates and Hold Points

Hold Point Activity	***Relevant Council Specification and Clause No.***	***Aim / Goal / Outcome***	***Compliance Certificate Required***
Concrete Footpath			
After setout of works, installation of erosion and sediment controls and prior to any excavation	**C212 Clearing and Grubbing** C212.02 Clearing and Grubbing – Limits of Clearing	Confirm extent and alignment of works. Ensure extent of clearing is minimised. Check method of erosion and sedimentation control is adequate.	**NO**
Laying and compaction of subgrade	**C271 Minor Concrete Works** C271.03 – General C271.04 – Subgrade and Subbase compaction	Ensure the quality of the underlying foundation material of the pathway.	**NO**
Immediately prior to pouring footpath	**C271 Minor Concrete Works** C271.23 Placing and compacting concrete	Ensure correct surface preparation has been carried out and that weather conditions are applicable to the construction of such works.	**NO**
Final	**Approved Plans, Construction Certificate and Conditions of Development Consent**	Ensure all disturbed areas have been revegetated, that all works shown on the plans and specifications have been completed and that the site has been left in a safe, clean and tidy state.	**YES**

Schedule of Certificates and Hold Points

Hold Point Activity	***Relevant Council Specification and Clause No.***	***Aim / Goal / Outcome***	***Compliance Certificate Required***

Stormwater Drainage

After setout of works, installation of erosion and sediment controls and prior to any excavation	**C212. Clearing and Grubbing** C212.02 Clearing and Grubbing – Limits of Clearing	Confirm extent and alignment of works. Ensure extent of clearing is minimised. Check method of erosion and sedimentation control is adequate.	**NO**
After installation of pits, headwalls, pipes and subsoil drainage (prior to backfilling)	**C 221. Pipe Drainage** C221.07 Installation **C223 Drainage Structures** C223.03 General **C271 Minor Concrete Works** C271.03 – General C271.05 – Drainage Pits	Ensure correct grade, alignment, jointing and bedding of pipes and correct construction of pits prior to backfilling.	**YES**
Final	**Approved Plans, Construction Certificate and Conditions of Development Consent**	Ensure all disturbed areas have been revegetated, that all works shown on the plans and specifications have been completed. Ensure adequate access to pit chambers have been provided and that the site has been left in a safe, clean and tidy state.	**YES**

Schedule of Certificates and Hold Points

Hold Point Activity	***Relevant Council Specification and Clause No.***	***Aim / Goal / Outcome***	***Compliance Certificate Required***

Retaining Walls

After setout of works, installation of erosion and sediment controls and prior to any excavation	**C212. Clearing and Grubbing** C212.02 Limits of Clearing	Confirm extent and alignment of works. Ensure extent of clearing is minimised. Check method of erosion and sedimentation control is adequate.	**NO**
Preparation of retaining wall base slab	**C271 Minor Concrete** C271.03 – General C271.37 (3) – Placing of steel reinforcement for concrete	Ensure the quality of the underlying foundation material for the retaining wall base slab and correct type and placement of reinforcing material and correct slab thickness.	**NO**
Final	**Approved Plans, Construction Certificate and Conditions of Development Consent**	Ensure all disturbed areas have been revegetated, that all works shown on the plans and specifications have been completed and that the site has been left in a safe, clean and tidy state.	**YES**

Specification for Access to New Development

THE AIM OF THIS SPECIFICATION

The Specification for Access to New Development aims to outline Council's requirements for vehicular access to a new development proposed to be constructed beyond the end of Council's current maintained trafficable road system.

This Specification forms part of DCP 31 and should be read in conjunction with it.

There are two issues that this Specification seeks to address. These are the legal status of a road upon which access to a development is proposed, and secondly, the standard of construction required when that access extends beyond Council's existing maintained trafficable road system.

PRELIMINARY CONSIDERATIONS

Vehicular Access to development is considered a fundamental requirement for every development proposal. Issues such as, emergency access and egress in medical circumstances, for bush fire fighting, for structural property fire fighting and for the convenience of users and visitors to a site are important considerations.

However, any development proposal needs to recognise the potential environmental impacts of that proposed access arrangement.

OWNERSHIP OF THE ROAD RESERVE

Existing roads within the Blue Mountains may currently be owned by either:-

- Council,
- the Crown - managed through the Department of Land and Water Conservation,
- private persons, and
- the Roads and Traffic Authority (RTA).

The details in this plan relate to roads owned by the first three of these.

It is desirable from a management and user perspective that all roads that are accessed by the public within the Mountains are "Council" owned. This approach will assist in a consistent approach to legality, traffic regulation, construction standards and maintenance.

"Private Roads"

Roads currently owned by private persons within the Mountains and which are being used for public purposes were generally created in subdivisions prior to 1920 and were not transferred to Council for care, control and management. It is Council's intention to change the status of these roads to Council owned and managed public roads as Council becomes aware of them. A significant method by which Council becomes aware of “private roads" is through the development application process. The process by which this change of status occurs is through Section 16 of the Roads Act 1993. Commonly, the current legal owners of the roads are untraceable.

Council will generally initiate the change of the status of the road following the receipt of a development application for a property that fronts that road. Council may charge a fee to initiate this change of status. The amount of the fee will be listed in Council's Annual Management Plan - Schedule of Fees and Charges.

Any approval that may be given for the development or any access to the development cannot be granted until the gazettal of the public notice declaring the road to be a "Council" public road.

"Crown Roads"

Similar to the requirements for "private roads", Council will normally seek to change the status of the Crown roads to Council roads, but Council can only do so with the agreement of the Department of Land and Water Conservation.

Upon becoming aware of a Crown Road, Council will initiate the relevant processes (Section 151 of the Roads Act). Council may charge a fee to initiate this change of status. The amount of the fee will be listed in Council’s Annual Management Plan - Schedule of Fees and Charges.

This requirement, however, does not apply where:

- **the number of dwellings or potential dwellings to be accessed along the road is no more than 3, and**
- **the land is zoned Rural Conservation or Bushland Conservation, and**
- **the road exceeds a total length of 150m per dwelling.**

Generally where an approval is granted for a development with restricted access it will be subject to a deferred commencement provision in respect of the gazettal of the public notice declaring the road to be a "Council" public road. In some circumstances, the Department of Land and Water Conservation may give their expressed concurrence to the approval of the application and the commencement of works prior to the change of status of the road.

Council will not maintain or construct roads that remain as Crown roads.

CURRENT EXTENT OF ROAD CONSTRUCTION

Council's trafficable road system currently exists in two forms, sealed and unsealed but formed.

Access along other roads may be along unformed roads where a track exists, and in some cases vehicular access to some properties may not be available. Properties and roads in these categories are not part of the trafficable road system (unformed roads).

Council has resolved that it will not maintain or construct roads in this category.

Council will provide guidance to intending purchasers of properties through certificates under Section 149(2) of the Environmental Planning and Assessment Act 1979 about the application of the construction requirements of this Specification.

MINIMUM STANDARD REQUIRED FOR COUNCIL ROADS

For a single dwelling house proposed to be constructed beyond the extent of Council's trafficable road system:

- The road pavement must be at least 4 metres wide, with a further 1.0 metre shoulder on both sides.
- The road must incorporate adequate turning facilities for vehicles at the end of its construction. This should be sized to accommodate bush fire fighting vehicles and Council waste and effluent removal vehicles.
- The road construction must be sealed (two coat bitumen seal, asphaltic concrete or concrete) for any section where the grade exceeds 10% or for any section subject to water flows (creek crossings). Where more than 50% of the road is to be sealed because of this requirement, the entire road shall be sealed.
- The road pavement must meet the appropriate geo-technical standards identified in the Blue Mountains City Council Specification for Public Infrastructure - Design, and Blue Mountains City Council Specification for Public Infrastructure – Construction. As a minimum the pavement must consist of 150mm thick DGB 20.
- Passing bays should be provided at least every 100 metres.

For other forms of development a higher standard of construction will apply, depending upon the traffic generation expected for the development. Specifically, where a development includes more than one dwelling or where the development will bring about more than one dwelling utilising the access, the road construction will, at a minimum, need to be sealed for its full length.

Council will not contribute to the cost of the design or construction of road works beyond the extent of its trafficable road system where the works are proposed to provide access to development proposals. Once a road is designed and constructed in accordance with this Specification, Council will "re-classify" the road and undertake the appropriate maintenance in accordance with its maintenance schedules.

MINIMUM STANDARD REQUIRED FOR CROWN ROADS

Where roads are to remain as a Crown road the construction requirements outlined above shall not apply, but the construction shall comply with the following requirements:

- **The access shall be graded to provide for a smooth driving surface at least 3.5 metres wide and maximum grade of 20%,**
- **Adequate provision shall be made for drainage of the access surface and table drains,**
- **Adequate provision shall be made for passing bays, and**
- **The access shall be free of overhanging branches and trees for a width of at least 5 metres.**
- **Approval for these works may be required from DLWC.**

The applicant shall be responsible for the maintenance of the access to the property where the access remains along a Crown road. Council may require this aspect to be reinforced through a restriction or positive covenant registered on the title of the relevant property.

Council's Waste Collection Services generally will not utilise the access along these roads and alternative arrangements will need to be made with Council regarding the collection location for the houses.

GENERAL DESIGN AND CONSTRUCTION ISSUES

The design for Council roads should comply with Blue Mountains City Council Specification for Public Infrastructure - Design.

The construction of the road should comply with Blue Mountains City Council Specification for Public lnfrastructure – Construction.

Prior to construction of any roadwork, an application to undertake work in a public road under Section 138 of the Roads Act is required and the relevant fee must be paid.

All work constructed in the public road reserve must be undertaken by a competent and approved contractor with relevant experience in this type of construction. The contractor is required to provide proof of public liability insurance to Council prior to commencing any work in the road reserve. Council may direct work in the road reserve to be removed and/or reinstated if work is carried out without Council approval or Council supervision.

All works to access a new development that is beyond the extent of Councils current trafficable road system must be satisfactorily completed and approved before work commences on the construction of the development.

JOINT CONSTRUCTION ARRANGEMENTS

There may be some situations where it is likely that there are other landowners who might utilise the construction and formation of a road required by this Development Control Plan Specification, to access future developments.

In order to assist in the sharing of the costs of the road works, Council encourages the relevant landowners to arrange a joint funding and construction arrangement. This should only be undertaken in conjunction with a development application for land that will gain access along the proposed road works.

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Specification for Dwelling Driveways

THE AIM OF THIS SPECIFICATION

The Specification for Dwelling Driveways aims to provide some simple guidelines and requirements in the planning and construction of vehicle access from the public road to the private car space.

The specification details the overall design, approval and construction process for dwelling driveways.

PRELIMINARY CONSIDERATIONS

APPLICATIONS AND APPROVALS

All driveways require approval from Council before they can be built.

For new dwellings, which are subject to the submission of a Development Application (DA), the ***design approval*** of the driveway is part of the DA process and should recognise the design principles discussed later in this guide (see General Design Issues section below).

The ***construction approval*** of the driveway, whether to a new or existing dwelling, is the same process (see Construction Issues section below).

Prior to construction of any driveway, an application to open a public road under section 138 of the Roads Act and the relevant fee must be paid.

All work constructed in the public road reserve must be undertaken by a competent and approved contractor with relevant experience in this type of construction. The contractor is required to provide proof of public liability insurance to Council prior to commencing any work in the road reserve.

Council may direct work in the road reserve to be removed and/or reinstated if work is carried out without approval or supervision.

For Information regarding the ***construction approval*** of driveways, contact Council's Local Maintenance Overseer.

Council officers can be contacted at any time to give particular guidance on all the issues below.

A list of useful contact details can be found at the end of this document.

PUBLIC SERVICE UTILITIES

Access to the site should not interfere with the existing public utility infrastructure, including Council drainage structures, unless prior approval is obtained from the respective authority. Driveways are to be a minimum of 500mm clear of all road drainage structures.

You should advise Telstra, Integral Energy, Sydney Water and AGL prior to commencement of works. Often they require service conduits under the driveway to facilitate future servicing. These conduits are usually supplied free of cost. This will ensure your driveway does not need to be excavated in the future.

The location of all services, telephone, electricity, water, sewer and gas should be verified with the relevant authorities before work commences. Interfering with them can be dangerous and costly. Any alteration or damage incurred to these services is the contractors responsibility.

CONSTRUCTION ISSUES

You are required to contact Councils Local Maintenance Overseer to obtain construction approval prior to commencing any work in the road reserve.

GUTTER CROSSINGS

If vertical kerb & gutter exists fronting your lot without an opening in the kerb, a section needs to be removed and a gutter crossing constructed.

Where kerb & gutter does not exist fronting the lot, a gutter crossing is required. There are two types of gutter crossings:

1. Reinforced concrete dish crossing
2. Concrete layback

A standard drawing for these structures are available from Council and should be obtained prior to construction commencing. The alignment of the gutter crossing is governed by kerb & gutter or other gutter crossings in the adjacent area. If none exist, the invert of the gutter crossing should be aligned with the invert of the table drain in the road shoulder.

SHOULDER SEAL

A bitumen splay shoulder seal may be required from the gutter crossing to the edge of the bitumen. The minimum standard for a bitumen splay seal is 30mm AC10 hotmix on 150mm compacted thickness of DGB20 roadbase on a compacted and approved subgrade.

APRON CROSSING

The part of the driveway within the road reserve between the property boundary and the gutter crossing is called the apron crossing. The minimum standard for an apron crossing is a reinforced concrete slab 150mm thick with f72 reinforcing mesh at mid depth of the slab on a compacted and Council approved subgrade.

For a single dwelling, the apron crossing is 3.0m wide at the property boundary splayed to 4.0m wide at the gutter. For driveways designed for more then one dwelling, the apron crossing is 5.5m wide at the property boundary splayed to 6.5m wide at the gutter crossing and the driveway is 5.5m wide for the first 6.0m behind the boundary.

The section of driveway in the road reserve should be of uniform surface with no trip edges. Transition batters no steeper than 1(vertical):3(horizontal) may be required adjacent to footpath crossings if the driveway needs to be excavated. The driveway should not interfere with any existing or future pedestrian pathway and the level and grade should provide a safe uniform surface integrated with the overall grade and characteristics of the immediate locality.

GENERAL CONSTRUCTION REQUIREMENTS

Low level driveways should always involve the construction of a concrete layback style gutter crossing, maintain the tabledrain fronting the site and include a slight roll over behind the layback to prevent roadwater entering the site. Precautions should be taken during construction to prevent the site being inundated from roadwater. Where the road is elevated above the adjacent table drain, a piped crossing may be required. This is to include a 375mm diameter reinforced concrete pipe with adequate depth of cover and suitable headwalls.

Where a gutter and/or apron crossing interferes with a stormwater pipe and/or its outlet through the kerb, the stormwater pipe must be carried diagonally across the footpath to connect with a new kerb outlet which is to be provided by the contractor. All drainage holes must be 100mm x 50mm galvanised rolled hollow section (RHS) at minimum grade of 0.5%. The invert of the drainage hole is to be 10mm above the gutter invert.

All access construction works and public utility relocation shall incur no cost to Council and is to include any necessary work to make the construction effective. Any damage to Council's assets shall be made good prior Council issuing a final clearance for the works.

Where a redundant layback will occur at the frontage of the property, new concrete kerb & gutter is to be constructed to replace the redundant layback.

All construction works are to be in accordance with Blue Mountains City Council Specification for Public Infrastructure - Construction.

All crossings shall be barricaded and lit with lamps to ensure they are safe and to prevent them from being used for three days after completion.

All disturbed areas will need to be effectively controlled during construction in terms of sedimentation/ erosion controls and then revegetated upon the completion of works. Council's Sedimentation and Erosion Control Code of Practice and Policy should be followed.

Upon completion of the works in the road reserve, the contractor must contact Council to arrange a final inspection.

GENERAL DESIGN ISSUES (Whether Existing Or New Dwellings)

SITE ANALYSIS AND PLANNING

Any development should provide some written assessment of the proposed vehicle access for the development. On difficult sites, access may control the architectural design and building layout. Building setbacks, floor levels and general orientation should be reviewed in conjunction with the access design to ensure it is workable. Car parking and access should be unobtrusively integrated into the streetscape and landscape.

The extent of clearing, depth of cut and fill for the access and manoeuvring bay and the extent of sealing needs to be carefully considered in the design process. On difficult sites various design options may be considered including elevated parking spaces, reduced building alignment setback or a detached garage to accommodate vehicles where considered appropriate. Elevated parking pads must stand entirely within the lot. No encroachment onto the road reserve is permitted.

MAXIMUM GRADES

The maximum driveway grade should not exceed 1(vertical) : 4(horizontal). Appropriate transition grades adjacent to the gutter crossing and parking space to provide adequate sight distance and avoid vehicles from scraping. Such transition grades can be obtained from Council.

SURFACE MATERIALS

A coarse finish to provide traction is required on all steep driveways. In areas where frosts and icy conditions are common, a grooved surface finish is good practice.

Grades above 1:10 should be sealed with a permanent pavement material - reinforced concrete or bitumen - to provide adequate traction, minimise maintenance and environmental damage (siltation and erosion) and to ensure all weather access.

SAFETY CONSIDERATIONS

Access should be safe, direct and available at all times The access should intersect the road as near to 90^0 as possible. On corner lots, the access point should be setback a minimum of 6.0 metres from the side boundary.

Vehicles should generally park and manoeuvre behind the building line. Additional space may be required to provide and ensure vehicle manoeuvring. Guide posts with reflectors may be required to assist visibility.

On busy roads, roads with poor site distance or on steep driveways, entry and exit should always be in a forward direction. This will require the construction of a manoeuvring bay adjacent to the parking area. The manoeuvring bay and all turning movements must be done entirely within the lot.

Vegetation trimming and embankment benching adjacent to the access point may be required to provide adequate and safe sight distance.

GENERAL DESIGN REQUIREMENTS

Where the driveway is prominent from the street, a dark earth toned appearance is required.

Any access designed to service more than one dwelling must be sealed.

Driveway access to the street should generally be confined to a single point in order to maintain street parking, landscaping opportunities on the street and within the building setback and minimise impact upon the streetscape.

DESIGN PLAN INFORMATION

If a Development Application (DA) is required, plans detailing the proposed access are to be submitted with the DA. If a DA is not required, the driveway requirements should be discussed with Council's local Maintenance Overseer.

On flat sites a simple plan view is generally adequate.

On steeper sites the designer should provide the following information with the Development Application:

- Contour plan with spot levels.
- Plan view of the proposed development showing the access alignment relating to existing and identifiable features.
- Longitudinal section of the driveway from the centreline of the road to the rear of the parking platform. Transition grades are to be detailed.
- A typical cross section and cross sections at logical intervals.
- Pavement detail. This should include pavement type, thickness, width, surface finish and sub-structure. Expansion joint, control joint and key joint detail should be included if the proposed driveway is a concrete construction.
- Proposed method of drainage of the driveway surface.
- Extent of area to be disturbed.
- Extent of cut and fill including retaining wall details.
- Hand rail, safety fence & wheel stop detail.
- Vehicle turning path detail.
- Location of and impact on public utilities.
- Impact on natural features.
- Pedestrian access from the parking space to the dwelling.
- Proposed restoration details.

Difficult sites may require the submission to be prepared by a Civil Engineer or Surveyor with experience in the design of driveways to such sites.

USEFUL CONTACT DETAILS

Blue Mountains City Council **4780 5000**

Telstra. **13 2203**

Integral Energy.. ..... **13 I081**

Sydney Water **13 2092**

AGL **13 1606**

Specification for Minor Road Openings

THE AIM OF THIS SPECIFICATION

The Minor Road Openings Specification aims to provide some simple guidelines and requirements for any excavation or other construction works that are undertaken within Councils Road Reserve including the footpath and the road itself.

The specification details the procedure that must be followed when undertaking any works within the road reserve.

APPLICATIONS AND APPROVALS

All work within the road reserve requires an application, the payment of a road opening fee and approval from Council.

Prior to construction of any driveway, an application to open a public road under section 138 of the Roads Act and the relevant fee must be paid.

All work constructed in the public road reserve must be undertaken by a competent and approved contractor with relevant experience in this type of construction. The contractor is required to provide proof of public liability insurance to Council prior to commencing any work in the road reserve.

Council may direct work in the road reserve to be removed and/or reinstated if work is carried out without approval or supervision.

All road openings require the supervision and a final inspection by Council's Restorations Officer.

Council officers can be contacted at any time to give particular guidance on all the issues below.

A list of useful contact details can be found at the end of this document.

PUBLIC SERVICE UTILITIES

You should advise Telstra, Integral Energy, Sydney Water and AGL prior to commencement of works to verify the location of all services. Interfering with them can be dangerous and costly. Any alteration or damage incurred to these services is the contractors responsibility.

CONSTRUCTION ISSUES

Road openings within the trafficable carriageway require traffic control devices in accordance with Council's Specification for Control of Traffic. **Council's Restorations Officer must be contacted before excavating a trafficable carriageway.**

Road and footpath openings should be planned to ensure excavations are for a single day only. If this is unavoidable, all open excavations shall be backfilled and/or made safe for operation at the end of the day. This work shall include the erection of appropriate barricading, night lighting, signage and alternate safe usage arrangements.

All work in Council's road reserve shall be undertaken in accordance with Council's Specification for the Control of Traffic.

All trenches shall be backfilled and adequately compacted with the excavated material.

All excavated areas are to be restored by paving, concreting, turfing or mulching the disturbed area to ensure the site is returned to its pre-existing and surrounding conditions. The work shall also ensure the finished surface is free of any possible trip edges.

The site shall be left in a safe, clean and tidy state.

Sedimentation and Erosion Controls shall be placed in accordance with Council's Sedimentation and Erosion Control Policy and Code of Practice.

USEFUL CONTACT DETAILS

Blue Mountains City Council 4780 5000

Telstra 13 2203

Integral Energy 13 1081

Sydney Water 13 2092

AGL 13 1606