

Local Government Guidelines for Subdivisional Development

SUBMISSION FORM - emailed to: blanchard-consulting@iinet.net.au

The Institute of Public Works Engineering (IPWEA) in collaboration with the Department for Planning and Infrastructure (DPI) are seeking comment on draft Edition 2 of the Local Government Guidelines for subdivisional development. These have been prepared by Blanchard Consulting, and revise and update the IPWEA Local Government Guidelines for subdivisional development Edition 1, released in 1998.

All comments received will be considered by the Guidelines Steering Committee, comprising representatives of IPWEA, DPI, Department of Water, Western Australian Local Government Association, the Urban Development Institute of Australia and representatives of the Cities of Rockingham and Wanneroo. A final document is scheduled for release in June/July 2009 and will be available on the IPWEA website at www.ipwea.org.au.

Submissions can be emailed to: blanchard-consulting@iinet.net.au
or mailed to Blanchard Consulting at: Unit2, 3 Bookham Street, Morley WA 6062

Electronic submissions forms are available from www.ipwea.org.au
Any inquiries should be directed to: Terry Blanchard on 0400 040 111 or Robert Willis on 0403 463 948

The closing date for submissions is Friday 1st May 2009.

Please ensure that submissions contain your name and contact details, and reference the module number and specific subsection to which your comments relate.

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Draft WAPC / IPWEA Subdivision Guidelines

GENERAL COMMENTS

The Urban Development Institute of Australia (UDIA WA) is taking the opportunity to offer further feedback on the draft *Local Government Guidelines for Subdivisional Development – Edition 2 2009* (the guidelines). UDIA is the peak body representing the property development industry in Western Australia with membership drawn from the land development, engineering, planning, environmental and urban design professions.

This submission has been compiled from input from members of the UDIA Infrastructure Committee.

UDIA would like to state from the outset that, whilst we support the intent of the guidelines which is to standardise engineering requirements and streamline approvals processes, the document is still in need of considerable review.

UDIA strongly recommends that the guidelines are released and trialled for six months with a final review at the end of that period.

UDIA is also concerned that the guidelines will not be adopted across local government authorities unless such action is mandated by the Department of Planning. We recommend that, after the six month trial and review, enforcement of the standards occurs.

It is noted that the guidelines do not reference some appropriate materials such as Liveable Neighbourhoods or the Department of Water's Storm Water Management Manual.

The Guidelines do not comment on the time that should be taken by a local authority to assess and approve engineering drawings, nor to address a request for the clearance of engineering conditions. The Industry needs some statement on these issues, if only by way of suggested timeframes.

UDIA does not support the inclusion of references to "Bonds" in a document that is purported to be a "minimum standards" guideline.

The document refers multiple times to the development of open space as a condition. This needs to be corrected as it is not a legal requirement.

Diagrams within the document need to be improved for legibility. In the majority of instances the font size is too small.

The UDIA submission does not reference typographical errors unless they are material to the meaning of the material.

MODULE NO 1 – LEGAL FRAMEWORK AND CONTRACT ADMINISTRATION.

1.1 (p1) General Requirements.

The confusion in the document is encapsulated in this section. Reference is made to "best practice minimum standards" in the first paragraph. This is an oxymoron. These standards must be about minimum standards that are acceptable in terms of balancing out affordability and whole of life costs.

1.1.1 (p2) Objectives of the Guidelines

The dot point "minimises future maintenance liability" should be replaced with words to the effect of "balances future maintenance liability with land affordability." The current statement could lead to over-specification of design requirements.

1.2 (p3) Planning and Development Act 2005

The document states that "careful note should be made that this document is a set of guidelines which become applicable only after the planning conditions for subdivision have been set by the Western Australian Planning Commission."

These guidelines should inform the setting of conditions as well as the clearing of conditions.

1.2.1 (p3) The Subdivision and Clearance Process

Please note that the first sentence in paragraphs 3 and 4 are the same.

S1.2.1.1 (p3) Subdivision Process

Paragraph 2 on page 4 states that “the Planning and Development Act now provides that if referral advice is not received within 42 days there is deemed to be no objection to approval and no requirement for conditions from that agency.” Whilst the Planning and Development Act stipulates a 42 day period it is silent on whether there is deemed to be no objection to approval.

There is concern that these guidelines are reinforcing current poor practice by including statements such as “in general over half the approval conditions relate to local authority requirements”
“A large subdivision could include some 30 – 45 conditions” (we are trying to reduce this number)
“Engineering conditions may be generic and”

The last paragraphs of page 4 should be reworded to provide guidance rather than historic commentary. It should also encourage consultants and LA officers to have early dialogue with the LA planners and engineers and the developer’s representatives respectively during the 42 day period to negotiate outcomes and conditions.

S1.2.1.2 (p6) Road Safety Audits

There is concerned that road safety audits are promoted on local streets. Most issues can be solved by consultation during the subdivision approval phase and reference should be made to this as the priority approach.

S1.2.1.4 (p6) The Clearance Process

This is not in a logical place and should be moved to before 1.2.1.2

6th Paragraph

This paragraph implies very late referral to SAT. If a SAT matter arises proponents should seek leave to appeal earlier in the process.

It is hoped that, should these guidelines reach a point of acceptance, then the second sentence in the paragraph will be reviewed to give much stronger recognition to these guidelines as setting the standard.

S1.2.2.1 (p.8) Expenses of Road or Waterway Construction and Road Drainage

2nd Paragraph

The term “clerk of works” is no longer used. Whilst it is recognised that it is referencing the Act, the section needs to be re-written to make it up to date.

3rd Paragraph

Needs to be rewritten as it refers to ‘water designs.’ It is uncertain if this is referring to stormwater designs, not (potable) water reticulation designs. Stormwater designs have always contemplated the use of private property for conveyance of overland flow. It is the cost of any special structures or mechanisms that are constructed to manage the overland flow that needs to be incorporated into the ‘supervision fee’ calculation. If the runoff simply sheets across the land, then there is no cost of construction.

Suggested rewrite:

Stormwater designs can include overland flow across future private property and thus the consideration of the cost of artificial waterways must include any construction costs associated with the stormwater’s conveyance across those areas and be subject to the fees for supervision.

4th Paragraph

POS development is never a condition for development so its cost will never form part of supervision costs. Development of POS is an option that is arranged under certain circumstances.

5th Paragraph

This should also be rewritten as suggested below, because the supervision fee does not apply to the POS – it applies to any works constructed within the POS for the management of stormwater.

Suggested rewrite:

Also where drainage is placed in public open space and the water is to flow across such public open space the supervision fee is to apply to the cost of constructing the drainage works (including conveyance) within the public open space.

6th Paragraph

Our understanding is the definition of “road” included the lighting of it therefore that cost should also be included in the ‘supervision fee’ calculation.

Suggested rewrite:

As the definition of "road" under the Act "... includes structures or other things appurtenant to the road ...", the cost of earthworks should be included in the calculation of supervision fees. Where earthworks extend beyond the road reserve, it has become accepted practice that 15% of the total earthworks cost be deemed applicable to the construction of roads (based on the premise that road reserve occupy approx 15% of the gross area of a development).

S1.2.2.2 (p8) Initial Subdivider may recover road costs from a subsequent subdivider

It should be added that, where land is developed but not subdivided, costs are not recoverable.

S1.9 (p3) EPBC Act

If reference is to be made to black cockatoos it should be specific to Carnaby's Black Cockatoo. The sentence should be deleted however, as there are numerous species that need to be considered.

S1.11.1.1. (p11) Engineering Consultants

1st Paragraph

This must be rewritten as consulting engineers do not supervise. The contractor has a supervisor and is the only one that can certify. The Superintendent administers the Contract between a Principal and a Contractor. A part of that duty is to ascertain by infrequent inspections and review of documents submitted by the Contractor that the works appear to comply with the intent of the specification. The contractor is the only one that can supervise, certify or state compliance.

S1.13 (p14) Dust Control

An updated guideline for dust management was circulated in draft format last year. It may be prudent to reference that document as well, as it is more comprehensive than the older document.

S1.14 (p14) Control and Supervision of Works

6th Dot point

Traditionally, the supervision fee has been paid prior to seeking clearances, not prior to construction. The statement in the Guidelines may give local government officer the misunderstanding that payment can be demanded prior to construction. The time involved for the developer to identify his calculation of the fee, for the government to assess & accept the calculation, and for the local government to issue a Tax Invoice could involve 2 weeks or more. This order of delay in starting construction is not desirable.

S.1.14.3 (p15) Supervision

The Consulting Engineer does not supervise so the title of this section should be altered.

As stated in S1.2.2.1 the term "clerk of works" is no longer used. The definition used in S1.2.2.1 for the Consulting Engineer's "clerk of works" is *an industry person of several years experience in subdivisional works*. Most of the construction contractor's workforce would appear to meet this broad definition and it should not be rigidly defined.

S1.14.4.1 (p16) Inspections for Road Works

S1.14.4.2 (p17) Inspections for Drainage Works

This section is too rigid, does not reflect practices and relationships and should be re written. For example in S1.14.4.2 (pg.17) the final comment in this section states the Consulting Engineer shall be present. It is common practices for local government officers in the Perth metropolitan areas to often inspect construction works without having the Consulting Engineer present, as this seems to give them the flexibility to attend the site at their convenience rather than have to adhere to an agreed meeting time.

It is suggested the comment use the word should in place of shall, and that it be expanded to state that where joint inspections do not occur the local authority and the Consulting Engineer should exchange records of their inspections.

S1.15 (p17) Practical Completion

There is a conflict between paragraphs 1 and 2. In the first paragraph the Consulting Engineer shall notify the local authority in writing that the works have been inspected. Paragraph 2 states that "upon receipt of this notification, the consulting engineer..." The Consulting Engineer cannot both notify and receive that notification.

S1.16.1 (p18) Certification of Compliance

S1.16.2 (p18) Conditions of Clearance

3rd Dot Point - Certification...

In both cases neither the consulting engineer nor the superintendent can certify works. These sections need to be rewritten to reflect actual certification processes shown on the following page.

Construction Compliance & Contractor's Details

WAPC Ref No:

Location:

Stage No: (where applicable)

Developer:.....

In its role as Superintendent we consider that the road and stormwater drainage infrastructure for the above subdivision has reached the stage of Practical Competition (as defined by the General Conditions of Contract) based on the tests and random inspections undertaken in our role as the Superintendent. The works were undertaken by the Contractor shown below and the sub-contractor where noted installed the stormwater.

Superintendent

Company:.....

Signature:.....

Name:

The Contract works were undertaken by:

Contractor:-

Sub-contractor for Stormwater:-

Company:..... Company:.....

Address:..... Address:.....

.....

Contact person:..... Contact person:.....

Phone No:..... Phone No:.....

S1.16.2 (p18) Conditions of Clearance

7th Dot Point

Most authorities do not require payment of a defects liability bond. This document that sets the minimum standard and should not imply that a bond is needed. It is recommended to delete the 7th dot point.

S1.17.2 (p20) Bond Agreement

The proposal that the bond agreement must be subject to a 'legal check' is onerous and would unnecessary delay and cost to the clearance process. WALGA or IPWEA should be able to recommend a standard format that delivers the necessary requirements. Alternatively, it may be possible to duplicate the Water Corporation's standard Performance Agreement (which is their bonding document).

S1.17.3 (p20) Calculation of Bond Amount

4th Dot Point fee of \$1000 + GST

This is extraordinary and has no basis in actual costs incurred. This must be deleted.

S1.18.2 (p21) Defects Liability Bond

Most metropolitan local governments do not require provision of a Defects Liability bond. The text "it may be necessary for" should be inserted in the first sentence.

Those few local governments that do require a bond, require that it be calculated at 5% of the local government works (i.e. roads, pathways, & drainage), and not the total cost of the subdivision (which would also include sewers, water supply, underground power).

MODULE NO 2 – SITE PREPARATION GUIDELINES

S2.2.1.1 (pg.25) General

2nd Dot Point - Provision of sand fill in areas where the existing soils contain plastic and/or reactive soil conditions which would prevent traditional footing designs to be used...

This statement is naïve, misleading and not warranted

4th Dot Point - Providing a level compatible with adjoining developed lots in sewerred areas...

This needs both clarification and justification

5th Dot Point – provision of 300mm freeboard....

The final bullet point is in conflict with subsequent statements that a freeboard of 500mm is required adjacent floodways.

3rd Paragraph Where necessary to fill to the boundary....

This section states fill should extend at least 1.5m past the boundary. Traditionally 1m has been used. Is there any evidence to say that 1m is not sufficient?

6th Paragraph (Pg26) Where filling on a subdivision.....

Where filling on a subdivision affects the drainage of adjoining land, provision shall be made to collect and dispose of such water within or through the subdivision. No filled lots shall be permitted to drain onto abutting land....

This is too simplistic; for example if the development has a watercourse through it, and the land is filled, does this mean that the land cannot drain into to the watercourse?

S2.2.1.2 (p26) Residential Areas

The specification of a max 7% gradient from the verge to the building line has significant cost implications, being a departure from the previous practice of using 16.5% (1:6). Perhaps a better outcome would be to note that whilst a maximum of 16.5% is permissible, where possible the gradient should not exceed 7% for ease of access.

And if 7% is the desirable limit, why is 12.5% advocated in the preceding paragraph? And why are 16.5% gradients acceptable for public access ways?

The comments on grading between the verge level and the building line are prefaced by the words "if overall re-contouring is not required". This comment should be deleted as these gradients will be employed irrespective of whether re-contouring has been actioned or not.

The statements here are contradicted by the statements in S3.3.4, which indicate the 'lot access' gradient should not exceed 10% (with an absolute maximum of 16.5%).

It is believed that the statement "the maximum lot grading at boundary not more than 1 in 14 for disability" is not a correct interpretation of the Act.

S2.2.1.3 (p26) Industrial Areas

2nd Paragraph Maximum grade across lots in industrial areas - 6.67% (1 in 5)

What is the basis for this specification?

S2.2.1.4 (p26) Rural Areas

Guidance should be provided on acceptable cut and fill batters – reference to S3.3.4 to be included.

S2.2.1.5.1 (p27) Lot Filling

5th Paragraph – Lot filling shall be set so as to provide the building industry with level sites...

The proscription that the building pad must be made level should not be imposed. The cost of filling and retaining can add considerable cost to development and hence lot price, making the constructed product less affordable. By way of example, the use of retaining walls and artificial levelling of lots is almost non-existent in Victoria and NSW. This requirement is also contrary to pressures from planning and environmental agencies in relation to vegetation retention and will exacerbate the current sand supply shortage. Level lots are currently a choice by developers responding to market demands and should not be mandated.

S2.2.1.5.3 (p26) Soil Stabilisation, Dust and Smoke Control

2nd Paragraph The lighting of fires for the disposal of cleared timber...

This section needs to be rewritten as developers cannot burn off within 20 km of a town, so there is little point talking about smoke.

Cleared timber and vegetation can only be mulched or removed from site there for it is not “preferable” it is mandated.

Making the mulched material available to the public brings with it safety issues and should be removed from the document.

S2.2.1.5.4 (p28) Soil Stabilisation Strategy

3rd Paragraph

7th Dot Point - Loam or gravel spreading ...

This is never done as it leads to lead to scour and erosion and should be deleted.

14th Dot Point - Compensation payments to persons affected by wind blown dust or sand drift...

It is up to an affected person to show cause as to how they are affected and costs. This must be removed from the document.

S2.2.1.5.5 (p29) Soil Stabilisation Bond

The premise of this section is flawed. Bonds should not be mandated as a good dust plan and careful timing of works will prevent the need for these additional fees.

4th Paragraph The soil stabilisation bond shall cover.....

The document states the developer's soil stabilisation bond can be called upon to address problems arising from "... the installation of services where this is undertaken later by a utility provider ...". This implies the bond will be held for an extended length of time and the developer will be accountable for actions outside of the span of control.

S2.3.1 (p30) Filling

3rd paragraph all fill must be clean, free draining, medium to course sand.....

Why must all fill be clean sand? Clay and gravel soils are used for fill in many locations.

4th paragraph All fill shall be compacted to the full depth to a minimum of 95%....

The specification of compaction levels is not in accordance with current AS specifications (which use Density Index for granular fill).

5th Paragraph For urban subdivisions on a clay sub-grade.....

Why must clay be covered with 300mm of sand? It is essential to work from the geotechnical report not to have a prescriptive "one size fits all" approach.

MODULE NO 3 – ROAD GUIDELINES

S3.2.1 (p32) Policies

WAPC DC 1.4 has been superseded by Liveable Neighbourhoods as the terms and concepts are different and/or contradictory. This reference must be deleted.

Table 3.1 (p34) Road Classifications

Check that this table matches the specifics of liveable neighbourhoods (LN). It should and there should be a specific reference rather than making up yet another table.

Table 3.3 (p34) Summary of Planning Criteria for Residential Roads

The road functions/types listed in Table 3.3 are different from those in Table 3.2. This should be redrafted.

Figure 3.1 (p37) Example of Road Layout

Note after figure says "Residential road design guidelines should generally be in accordance with the Western Australian Planning Commission Policy Development Control 2.6 and Table 3.3." Liveable Neighbourhoods should be referenced.

S3.3.1.2 (p39) Rural Roads Hierarchy

Dot point 1 Integrator roads which carry major traffic flows between central areas.....

This is not relevant as it is unlikely that a subdivision would ever involve construction of what is described as an 'integrator road' as this exceeds many of highways in rural areas. Delete reference.

Table 3.5 (p 42) Use of kerb types

The road descriptions in Table 3.5 should be consistent with the road descriptions in Table 3.2.

Figure 3.4 (p45) Traditional Base Course Profile

The reference to roadbase in Figure 3.4 should be corrected, with the reference being to crushed rock basecourse.

S3.3.10 (p46) Rural Base Course Profiles

The same as Figure 3.4 : the reference should be to crushed rock basecourse.

S3.3.11 (p46) Typical Cross Section

This detail is not currently used, although without the paved verges, it is consistent with a typical laneway pavement (although these are rarely brick-paved). The inclusion of the vee-drained cross section is questioned, particularly in relation to pedestrian safety.

S3.3.13 (p48) Traffic Management – Urban Roads

The terms used in Table 3.6 & 3.7 are not consistent, nor do they align with the terms in Table 3.2. The source of these tables is questioned along with their relevance to the majority of subdivisions.

Table 3.8 (p49) Traffic Speed – Leg Length impact

What do the asterisks in Table 3.8 signify?

S3.3.14 (p49) Parking Provisions

This section is too prescriptive and should be chosen to suit the specific needs and circumstances of each site.

S3.3.18.1 (p52) Regulatory and Traffic Control Signs

2nd Paragraph – The Consulting Engineer shall request...

The requirement for 8 weeks is questioned. Typically the Consulting Engineer will be focussed on producing a set of engineering drawings addressing the proposed subdivision works and this set includes 'lines & signs' documentation. This would be lodged with the local authority as one comprehensive package. Once approved (hopefully within 4-6 weeks), construction would commence.

S3.4.7 (p56) Ferricrete

1st Paragraph – The road base material...

The reference should be to basecourse material, not road base material.

2nd Paragraph

Where is grading nominated?

4th Paragraph

Why are the Atterburg limits so different to gravel. Check both.

Table 3.25 (p65) Asphalt Mixes

RAC10 and RAC14...

There was confusion over what the "R" stands for. This should be clarified in the document.

S3.4.13 (P68) Clay Paving Units

Need section for concrete pavers

MODULE 4 DRAINAGE MANAGEMENT GUIDELINES

- S4.2.1 (p70) Policies
- S4.2.2 (p70) Standards/Guidelines

Web Links for each of referenced document should be included.

S4.3.1.1.1 (p72) Principle

It is not a requirement to maintain pre-development volumes (except for the 1yr ARI event). The requirement is to not exceed peak flow rates.

S4.3.1.2.2 (p73) Criteria

It is unlikely that circumstance will permit subsoil flows to be treated where they are located below the traditional groundwater level. If subsoil lines have flows then they will typically be located at the groundwater level – how then if water to be held and treated?

S4.3.1.2.3 (p73) Storm Water Modelling Criteria

Is this consistent with the Department of Water's requirements? The reference source and a recommendation to check currency should be included.

S4.3.2.4 (p78) Stormwater Drainage Design – General Principles

2nd paragraph Consulting Engineers should discuss...

This statement is redundant (and poorly worded). For subdivision approval to have been issued, a strategy for the management of stormwater would have already been developed through a LWMP and/or UWMP.

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2nd Dot point The Consulting Engineer shall examine the complete downstream....

The action described should only be required if the Consulting Engineer has failed to demonstrate that pre-development flows have been maintained.

11th (& 12th) paragraph The Consulting Engineer shall design.....

There needs to be clarification of what is meant by arterial drains as they relate to this section.

The design ARI events specified in this paragraph appear to conflict with the recommendations in Figure 4.3 (eg. the figure indicates access streets should be designed to cater for 1yr ARI events, whereas the text states that a 5yr ARI period would apply).

S4.3.2.5 (p81) Groundwater Drainage Design

The use of the term MGL is being reviewed by the DoW since it is so poorly defined. Delete reference to MGL in all sections.

S4.3.2.5.2 (p81) Maximum Groundwater Level (MGL)

See above

S4.3.2.5.3 (p82) Average Annual Groundwater Level

This is an over-simplification of the term and its derivation. Seek advice from a specialist to re-write it.

Figure 4.4 (p83) Groundwater Decision Process

Top Box Does groundwater and/or waterlogging need to be managed? Based on MGL calculation ...

Incorrect use of the term MGL – amend words in first box to say AAMGL

S4.3.3.2 (p 84 & 85) Grated Gullies and Side Entry Pits

6th Paragraph The last gully before the drainage enters the main drainage line...

What is the definition of a “main drainage line” as referred to in the 6th paragraph? Will local governments be able to readily identify these sand traps for ease of regular maintenance? This statement appears to be describing the older practice where the entry pits were ‘off-line’ and connected into the ‘thru drainage system’ via a junction pit located next to the downstream entry pit.

Diagrams (p.85)

The Figure refers to a Side Entry Pit – Type 1. This infers there is more than one type available from which to choose. Why is the Universal Side Entry Pit not shown (although if the Document is to prescribe the minimum standard required, then the specification of just the “Cockburn-type” SEP is sufficient)?

S4.3.3.4 (pg.87 & 88) Sub-soil Drainage

1st Paragraph Sub-soil drainage shall be generally provided as a separate system and...

This is incorrect and misleading. Engineering design and compliance with criteria will set the need for this and the documentation should not indicate that it shall be provided. The section needs to be rewritten to say that the subsoil pipes run beside the sealed drainage pipes but this does not mean that an entirely independent pipe system is required for subsoil pipes. When designed, the subsoil can outfall into the same system.

Most local governments would say they want the geotextile wrapped fully around the aggregate. It is also unusual to see the aggregate extend up and around the solid pipe as a standard requirement.

MODULE NO 5 STREETScape GUIDELINES

S5.3.1.1 (p92) General

9th Paragraph The local street network should provide.....

What is the justification for the threshold of 3000 vehicles per day for cycling to be on the street?

S5.3.1.2 (p95) Urban Areas

The footpath should be dimensioned at 1.5m in Figure 5.3, since the 300mm to the property line is shown separate from the footpath. The same applies in Figure 5.4, since the widening of the footpath to become a shared path is shown as dashed.

5.3.3 (p98) Street and Public Area Lighting

Is this consistent with Western Power policy? This should be checked to ensure no conflict.

S5.4.2 (p101) Street Trees

3rd Dot Point - Trees shall be planted greater than 8 metres from a street light, unless otherwise approved.

6th Dot Point - ...trees shall be planted greater than 2.8m from private boundaries...

8th Dot Point - ...trees shall not be permitted within 12.0m of the intersecting curbs ...

These criteria are concerning. The 12 metre setback from corners is too much and there is a lack of clarity about where it is measured from. A six metre setback is considered sufficient. In many cases, if you plant trees a minimum of 2.8 metres from the front boundary, they will not fit. The 8 metre clearance is incorrect as it means that a tree cannot be planted on the opposite side of a road where a streetlight is located.

MODULE NO 6 – PUBLIC OPEN SPACE GUIDELINES

S6.3.1 (p103) General

1st Paragraph *The WAPC will generally require public open space to be developed by a developer ...*

The WAPC cannot require development of open space. This is must be corrected

10th Paragraph *Where required by the Western Australian Planning Commission as a condition of subdivision, or where...*

Again, it cannot be required. Open space development is a choice made by the developer. In some cases, the use of drainage features in open space is conditional on landscaping the structure itself.

S6.3.3.2.2 (p106) Development Process

4th Dot Point - ... *payment of the landscape maintenance bond*

This should not be included. As with defects bonds, this should not set this as a minimum standard. Most authorities do not want such bonds.

S6.3.3.4 (p106) Landscape Maintenance Bond

Ditto as per previous comments on bonds - do not mandate.

S6.3.3.5 (p107) Power supply

1st Paragraph *... to allow for future lighting, building ...*

It is unreasonable to allow for future building etc and it is not a condition for provision of underground power.

S6.3.3.9 (p108) Use of Reserves for Drainage and Floodwater Storage Purposes

2nd Paragraph

2nd Dot Point *In the case of a developer, providing a written undertaking to 'develop' the reserve as required and specified by the local authority.*

This implies that if a drainage basin is to be "developed" in an open space are, then the whole of the rest of the open space must be developed. This is grossly unreasonable and unrealistic.

4th Dot Point - The drainage purpose does not impose on the minimum area required for recreation within a development.

This should be linked to the open space/drainage comments listed in Liveable Neighbourhoods. The current wording is misleading and inadequate.

S6.4.6 (p113) Post and Rail Fencing and Bollards

1st Paragraph Where so specified, the perimeter of reserves adjoining roads or where barriers are to be used on reserves of any public space for protection of vegetation or access control, are to be fenced with CCA treated pine post bollards or post and rail fencing in accordance ...

The use of bollards etc should not be mandated as the use of kerbs, good design and some smart thinking can provide an appropriate outcome.

S6.4.6.2 (p114) Vegetation Protection Fence

Reference is made to a non-existent S4.2.4.

MODULE NO 7 – STANDARD DRAWING GUIDELINES

S7.3.1 (p115) Design Drawings

This section appears to relate to landscape drawings. This should be clarified/stated.

2nd Dot Point - Existing services

3rd Dot Point - Survey marks

It is very unwise and unnecessary to show this information on drawings. The surveyor's plan is the only one to show these marks and similarly, the obligation to check services and view plans is the contractors. These requirements should be deleted.

S7.5.5 (p119) Layout Plan

7th Dot point footpaths, footways, cycle paths

What are footways?

8th Dot Point survey and benchmarks

It is not necessary to show survey and bench marks unless it is expected that the local government will do survey checks during construction which is not standard practice.

S7.5.6 (p120) Road Plans

The reference to the provision of road cross-sections was amended in S7.4, but it is still specified here.

MODULE 8 CONSTRUCTION GUIDELINES

S8.3.1.4 (p125) Topsoil

2nd Paragraph When earthworks have been completed, the topsoil shall be re-spread to a maximum compacted depth of 100mm over all areas of earthworks to match the approved finished surface levels.

Topsoil is no longer always re-spread as the builder removes it again during construction creating additional work and additional cost. This must be reworded.

S8.3.1.5.2 (p126) Lot Filling

3rd Paragraph Fill to be compacted to:
95% of the modified maximum dry density over the building envelope; and
90% of the modified maximum dry density over the remainder of the fill area.

This is not possible with non-cohesive material and should be rewritten to suit sand.

It is inappropriate to say 95% only applies to building envelope in context of urban land. Simplify to say whole lot if area is less than 1,000m².

S8.3.1.7.1 (p128) Materials

1st Paragraph The sub-base shall be constructed of limestone complying ...

Sub-base materials are not always limestone, especially in some rural areas. Use of word shall in prescriptive and should be removed.

S8.3.1.7.3 (p128) Compaction

2nd Paragraph Where damage to adjoining properties may result, the use of vibrating rollers will not be permitted.

This must be rewritten to state that vibration must be used in accordance with the noise and vibration plan.

S8.3.1.8.4 (p129) Acceptance

Paragraph 1 The surface course shall be tested for shape and level...

Rewrite

The surface course shall be tested for shape and level and any irregularities greater than 10mm when tested with a straight edge 3m long shall be made good by addition or removal of material and further rolling and cutting to grade until the specified cross section is obtained.

S8.3.1.10.4 (p132) Aggregate

1st Paragraph The aggregate shall be dry and free from dust and other foreign material...

Rewrite

The aggregate shall be dry and free from dust and other foreign material at the time of application, pre-coated where necessary, and shall be uniformly spread over the sprayed area by means of an approved mechanical spreader.

S8.3.1.12.5 (p134) Longitudinal Joints

1st Paragraph ...and coincident within 150mm...

This cannot be achieved with a wider carriageway or in the case of a dual carriageway.

S8.3.1.12.7 (p136) Acceptance of Asphalt Seal

Asphaltic Mat Voids

1st Paragraph second sentence... It is calculated thus: $MP - CD \mid AMV = \dots$

The formula appears to be incomplete.

S8.3.1.13.8 (p139) Daily Finishing of Pavements

It is unnecessary for the paving to be compacted at the end of each day's laying.

S8.3.1.15.5 (p143) Contraction Joints

Paragraph 1 second sentence The contraction joint shall be aligned at 90° to the paving alignment and shall be a minimum of 20mm deep...

This is too deep for a construction joint.

S8.3.1.15.6 (p143) Edge Treatment

1st Paragraph The edges of the dual use path shall retain the non slip boom finish surface and shall not be rounded.

It is unclear as to why the edges of DUPs can't be rounded. This requirement should be removed.

S8.3.1.16.5 (p144) Edge Restraints

The inclusion of edge restraints is an unnecessary expense and is not justified against the problem.