CAPRICORN MUNICIPAL DEVELOPMENT GUIDELINES

2023 MEETING 2 MINUTES

Venue: GRC Offices in Calliope

Date and Time: **30th March at 10:00 am**

Item	Item
1	**Welcome** **Attendance:** In person: Chris Hegarty (MCE), Richard Bywater (MCE), Scott McDonald (GRC), Brendan Fuller (GRC), Michael Stanton (IRC), Jason Gustafson (LSC), Nathan Garvey (BSC), Grant Vaughan (RRC), Mohit Paudyal (RRC), Frank Nastasi (IRC), Michael Yewell (LSC) Teams: Gary Carlyle (IRC), Jarvis Black (MRC), Sarah Banda (CHRC)
2	**Apologies:** Jon Ashman (LSC), Tony Lau (LSC), Cameron Hoffmann (MRC), Anthony Lipsys (BSC), Jamie McCaul (RRC), Frans Krause (GRC)
3	**True and correct record of minutes from previous meeting** Refer **Attachment A** <u>Resolution:</u> That the minutes of the meeting held on Teams on 3rd February 2023 be formally adopted.
4	**Terms of reference and Budget** Schedule 3 created for LGA population profiles and CMDG contribution percentages, refer **Attachment F**. Schedule 1 (committee members) document discussed and existence of governance document was explained to new members. <u>M2023.02 Resolution</u> <u>MCE to send governance documents to committee for review by new members</u>
5	**Outstanding items from the previous meeting** This includes items which were not fully resolved at the previous meeting or items not considered due to time constraints.

Item number	*Item*	*Proponent*
M22.01.01	Website Update	All
M16.11	C273 Landscaping – amend hydromulch spec	GRC
M15.20	PS26 Marker Posts	GRC
M22.02.05	Use of Corrugated polypropylene drainage pipes	LSC
M10.5.1	D6 Site regrading – consider retaining wall issue	LSC
M22.04.01	Review of Reference documents in all Specifications	BSC
M22.04.04	D5 – Polypropylene maintenance structures for gravity sewers	LSC

Item	Item		
	M22.07.04	RRC grated crossover drawings	RRC
	M22.08.02	D14 Floodways	MCE/RRC
	M22.09.01	D11 Water Supply Design – Colour and marking of Infrastructure	MCE
	M22.09.02	G-018 Standard Council Grid drawing – width markers	CHRC
	M22.09.03	D5 – Roof and Allotment Drainage	RRC
	M22.10.01	Standard Drawing CMDG-R-060	MCE/GRC
	M22.10.02	Incomplete tables of difference	GRC
	M23.01.01	D11, PS4 and CMDG-W-091 : PN12.5 vs PN16	LSC/MCE
	M23.01.02	Standard Drawing R-042 – Type A Commercial Driveway Slab	MCE
	M23.01.03	Standard Drawing W-090 - 20 & 25mm Service and Water Meter Connections	GRC/MCE
	M23.01.04	D1 – Evacuation Routes	GRC
	M23.01.05	D11, D12, D5 – Acceptable software packages	All
	M23.01.06	C224 – Open Drains	GRC
	M23.01.07	C213 Earthworks Specification	GRC
	M23.01.08	Sewer Jump up ownership and drawing CMDG-S-030	LSC
	M23.01.09	As Constructed Certification by Surveyor	RRC
6	**New Agenda Items**		
	Item number	***Item***	***Proponent***
	M23.02.01	Pipe roughness parameters	BSC
	M23.02.02	D11 Water Supply Network -D11.07.02 and Table D.11.07.02 Minimum and Maximum Pressures for Network Design	LSC
7	**General Business** • Consideration of splitting ongoing items into new agenda items to allow updates to documentation to be completed more promptly. For discussion. • From M2023.01: Not discussed at M2023.02 Discussion on how CMDG Guidelines are not minimum service standards. RRC and LSC have minimum services standard for water and sewer. Other LGAs not sure and committee members to investigate. RRC may have links between service standards and planning scheme and Mohit will check. MCE to add a general note to website. Action: LGAs to confirm if customer service standards exist (mainly for water and sewer) and consider creating them if not. M2023.02 Update: RRC example included as **Attachment J**		
8	**Next Meeting** Next meeting to be via Teams on 28/04/23 at 11am.		
9	**CMDG Action Register** The latest register is **Attachment B** **CMDG Trial Register** The latest register is **Attachment C**		

Item	Item
	Schedule 1 The latest schedule is **Attachment D** Any update on names vs position titles in schedule?
10	**Meeting Closed at 15.05**

<table>
<tr><th>Item No.</th><th>Item Details</th></tr>
<tr><td>M22.01.01</td><td>
Website Update
<u>M2023.01 Resolution</u>
GRC and MCE to attend startup meeting via teams.
GRC will invoice other LGAs directly for website. Full amount to be invoiced upfront to reduce administration as considered to be low risk. MCE to send purchase order list for LGAs to GRC.

<u>M2023.02 Update</u>
• Scott, Grant and Richard are liaising with LGAQ on behalf of the committee due to the tight timescales in LGAQ's website development program.
• The startup meeting with LGAQ was held via teams on 06/02/23 and the CMDG website requirements confirmed.
• Wireframe layouts of the three options were completed by LGAQ. These were reviewed and discussed in a meeting on 02/03/23. Direction was then given on the preferred option to be developed further. LGAQ are currently working to produce design concepts.
MCE provided update inline with above points. Website wireframes shown to committee.

<u>M2023.02 Resolution</u>
Continue as planned with website development.

<u>Action By</u>
GRC, RRC & MCE
</td></tr>
<tr><td>M16.11</td><td>
C273 Landscaping – amend hydromulch spec
• The current hydro mulch specification uses seed varieties that are more suited to colder climates. See <s>Attachment J</s> for example seed mix used by Dennis Contracting Services
<u>Previous Resolution 24 June 2022</u>
GRC, MRC, LSC are happy with the revised specification. RRC, IRC, CHRC, BSC to review and provide feedback/ acceptance.

Proposed spec acceptable - responses received so far:
<table>
<tr><th>Local Government</th><th>Acceptance</th></tr>
<tr><td>Banana Shire</td><td>Yes</td></tr>
<tr><td>Central Highlands Regional</td><td>Yes</td></tr>
<tr><td>Gladstone Regional</td><td>Yes</td></tr>
<tr><td>Isaac Regional</td><td>Yes</td></tr>
<tr><td>Maranoa Regional</td><td>Yes</td></tr>
<tr><td>Livingstone Regional</td><td>Yes</td></tr>
<tr><td>Rockhampton Regional</td><td>Yes</td></tr>
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<u>Previous Resolution</u>
Make changes to specification based on the feedback provided by Dennis Contracting Services and send to committee for final review.
<u>Current Status</u> – The Dennis Contracting Services document has been reviewed with a view to incorporation into C273 and the following has been noted.
• Many of the parameters specified by Dennis Contracting are consistent with CMDG including most hydromulch application rates, soil parameters / preparation, topsoil requirements
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- Binder application rate is specified in kg/ha by Dennis Contracting and in Litres in CMDG. Unsure of the difference here and what the appropriate rate would be.
- Fertiliser application rate for hydromulch seems to be specified by Dennis Contracting at and 100kg per hectare whereas CMDG says 1000kg/ha – need to understand the reason for a factor of 10 difference here
- Seed types specified by Dennis Contracting seem to be significantly different to those in CMDG but there may confusion regarding names of certain grasses. The comparison between CMDG and Dennis contracting grasses is below.

CMDG

SEED

a) Grass	Rye Corn (April-August) or	60 kg/ha
	Japanese Millet (September-March	60 kg/ha
	Hulled Couch	5 kg/ha
	Red Clover (Inoculated)	5 kg/ha
	White Clover (Inoculated)	5 kg/ha
	"Elka" Perennial Rye	5 kg/ha

Dennis Contracting

Improved Pastures Grass Seed Varieties

Sirohie Millet / Rye Grass (cover crop)
Green Couch
Reclaimer Rhodes Grass
Carpet Grass
Buffel Grasses
**Mix would consist of one cover crop, three perennial species.

Native Grass Seed Varieties

Sirhoie Millet / Rye Grass (cover crop)
Green Couch
Kangaroo Grass
Black Speargrass
Qld Bluegrass

- one of the native seed types specified by Dennis Contracting is black speargrass (not sure we want to encourage its use??)
- Seed application rates are not specified by Dennis Contracting – they instead refer to MRTS 16 but this document is not explicit on acceptable perennial grass species and their application rates. Its uncertain what application rates apply to the Dennis Contracting suggested grasses.

<u>Meeting M2022.10 Discussion 17 Nov 2022</u>

Brief explanation from Chris about differences between old and new specification highlighting the differences in plants and the lack of application rates advice. Input is need from an expert to provide guidance on the suitability of the proposed grass species and the application rates.

<u>Meeting M2022.10 Resolution</u>

Grant volunteered the services of the RRC landscape architect to review and comment on the changes. Chris to liaise with Michael Ramsay from RRC.

Brendan noted that NATSpec includes application rate for grasses and will send details to Chris.

<u>Meeting M2023.01 Update</u>

No progress at this stage. Jamie raised that RRC have noted poor results from hydromulching but good results from using turf in a checkerboard pattern. Discussion on types of erosion control measures and how there are multiple options but guidance on preferred ones may be beneficial. Chris to consider vegetation cover options when reviewing/ updating the document.

	M2023.01 Resolution Chris to liaise with Michael Ramsay and provide update. Vegetation cover options to be considered when reviewing/ updating the document. Jamie to send through photos of successful checkboard pattern turf establishment. M2023.02 Update Hydromulching is outside Michael's area of expertise so he is seeking input/ advice from some of his landscaping contacts. Grant to forward an email from Plantability regarding the hydromulch recommendations. Discussion on whether providing an exact specification is appropriate due to variances in region, seed availability, time of year, site specific issues etc. Wording to be included to say that the provided specification is only a guide and contractor is to confirm the mix design. Scott recommended contacting a hydromulch specialist if further input is required as the committee does not have the expertise to provide guidance. M2023.02 resolution Review email from Plantability. Add wording to say that the provided specification is only a guide and contractor is to confirm the mix design. Contact specialist if required. Action By MCE

M15.20

PS26 Marker Posts

- ~~**Attachment K**~~ is draft PS26 provided by GRC
- The previous resolution was:

Amended Purchase Spec PS26 provided by GRC.

- *All Councils to confirm if they use timber marker posts or not*
- *If no Councils use timber posts this will be replaced on CMDG-W-060 with Flat posts*
- *Councils to confirm which colours for which applications*

- Need guidance on the above dot points so that PS26 can be finalised.

Timber posts responses received:

Local Government	Timber posts permitted
Banana Shire	No
Central Highlands Regional	Yes
Gladstone Regional	No
Isaac Regional	Yes
Maranoa Regional	Yes
Livingstone Regional	No
Rockhampton Regional	No

Previous Resolution

MCE to research and check IPWEAQ and SEQ specifications, then update PS26 based on the findings. Drawing required updating to have post 900/1200 above ground (not total length) in urban areas, 1800 in rural areas.

Current Status

Changes made by MCE and new version (rev C) of PS26 is included as **Attachment K.** We need a resolution of the colour to be used for Dialysis Valves outside of GRC.

Some discussion on background

Chris summarised benefits in covering the above ground infrastructure in the document, namely that it is not covered elsewhere in CMDG, and it was agreed that it is worthwhile. Some discussion regarding the colours and most LGAs confirmed that the colour provided in the draft PS26 document are applicable.

Meeting M2022.10 Discussion 17 Nov 2022

No consensus reached on Dialysis valve colour (other than GRC). LGAs to discuss with their water sections to get feedback on proposed colours and to determine suitable colour to dialysis valves.

Hold PS26 until the above issue is sorted out.

Meeting M2023.01 Update

Refer to item M22.09.01

Resolution

Refer to item M22.09.01

Action By

All

M22.02.05

D5 – Use of corrugated polypropylene drainage pipes

- LSC is suggesting use of corrugated polypropylene drainage pipes.

6-2021	CMDG-D, CMDG-D5, C221.		Addition of corrugated polypropylene drainage pipes.	Twin wall corrugated polypropylene drainage pipes offer many benefits compared to reinforced concrete pipes. Benefits include: • Excellent corrosion and chemical resistance • Can be cut to length with no detriment to corrosion resistance • Excellent rubber ring joint sealing system • Smooth bore providing optimum hydraulic performance • Available in 6 metre lengths • Lighter to handle with a lower risk rating for those handling the pipes • Smaller diameter pipes can be man handled • Lower transport costs • Large and diverse range of fitting available 1.1 CMDG-D, CMDG-D5, C221. Addition of corrugated polypropylene drainage pipes.

- C221 Section C221.04 mentions FRC and RCP pipes but not Plastic.
- Current Section D05.18 reads as follows.

D05.18. PIPE MATERIAL

D05.18.01. The following pipe materials are approved subject to minimum cover and installation requirements stated by the manufacturer:

- Steel reinforced concrete pipe and culverts to AS4058; and
- Fibre Reinforced pipes to AS4139.; and
- Other pipes will be considered subject to individual Council approval.

D05.18.02. All joints between pipes shall be Rubber Ring Joints (RRJ).

- It is noted that Hydra Storm supplies pipe as follows:
  - Manufactured in accordance to AS – NZS 5065
  - Available from Diameter Nominal (DN) 225mm to 600mm
  - Manufactured from recycled HDPE

- C221 will need to be updated at the same time as D5.
- Richard mentioned that he is meeting with a representative from Iplex next week where he will get additional information and specifications.

Previous Resolution

Richard to collate information and specifications and send to committee for further discussion at next meeting with proposed changes to D5 and C221 to permit use of corrugated polypropylene drainage pipes.

Action By MCE

- Richard has met with the sales Rep but proposed changes to D5 and C221 are still being considered. It is recommended that Polypropylene pipes with classification SN8 are approved up to a diameter of 600mm.
- The technical guide for Blackmax (Iplex) is included as ~~Attachment N.~~

Use of polypropylene drainage pipes up to 600mm diameter in urban areas only - responses received:

Local Government	Acceptance
Banana Shire	Yes
Central Highlands Regional	Yes
Gladstone Regional	Yes
Isaac Regional	Yes
Maranoa Regional	Yes
Livingstone Regional	Yes
Rockhampton Regional	Yes

Commentary around impact on plastic pipes due to grass fires etc in rural areas.

Previous Resolution

Update D5 and C221 to permit polypropylene pipes (SN8) in urban areas only up to 600mm diameter. Add notes around to be installed as per manufacturers specifications. Revised documents to be sent to committee for review.

Meeting M2022.10 Update

In progress. Version 9 of D5 is included as **Attachment G**. Updated C221 to be sent to committee for review when completed.

Meeting M2023.01 Update

Minor comments received from MRC on D5.

Minor comments received from MRC and GRC on C221 in relation to numbering and table of contents.

MRC preference for Concrete or Steel over Polypropylene pipes. This was briefly discussed and Jarvis stated that MRC is happy to accept their use in line with the other LGAs.

Updates to Table D05.06.02 received from BSC.

Section D05.18 does not contain uPVC and Steel Pipes & Arches. Typically, uPVC is used for interalloment drainage. In addition, clause D05.18.02 states that RRJ joints are the only approved type, this precludes the use of FJs or solvent welding for uPVC.

D05.18. PIPE MATERIAL

D05.18.01. The following pipe materials are approved subject to minimum cover and installation requirements stated by the manufacturer:

Pipe material

- Steel reinforced concrete pipe and culverts to AS4058; and
- Fibre Reinforced pipes to AS4139.; and
- Corrugated polypropylene pipes to AS/NZS 5065. Up to 600mm maximum diameter. For use in urban areas only.
- Other pipes will be considered subject to individual Council approval.

D05.18.02. All joints between pipes shall be Rubber Ring Joints (RRJ).

Jason raised that standard drawing CMDG-D-010 is for rigid pipes and potentially should be updated to include flexible pipes. Some discussion on this as D-010 requires significant updates, point raised that it could be removed and Australian Standards referenced but decision made to retain drawing as CMDG is a one stop shop for information. Potential for an additional drawing to be required, one for rigid pipes and one for flexible. Update to this drawing is considered by committee as low priority and other items to be resolved first. MCE to prepare a dot point summary of the changes prior to updating.

M2023.01 Resolution

Make the following changes to D5:

- Add uPVC to the acceptable pipe materials

- Delete clause D05.18.02
- Add title to Annexure, “Template – Site-based Stormwater Management Plan”
- Make changes to Table D05.06.02 – Acceptable Modelling Packages as agreed in agenda item M23.01.05.

Standard drawing CMDG-D-010 to be added to action list for update (low priority). MCE to provide dot point summary to committee prior to making changes to the drawing.

M2023.02 Update

Changes made to D5 document and a copy is included in **Attachment G**.

Meeting M2023.02 discussion

GRC have noted that the current publicly available version of D5 includes the below table.

Table D05.04.2 - Design Annual Exceedance Probabilities – Major System

Development Category[1]	Major System	
	ARI (yrs)	AEP (%)
Reference flood for setting floor levels in hospitals, emergency services, flood evacuation buildings and Civil Defence HQ	500	0.2%
Reference flood for setting floor levels of emergency shelters, police facilities, museums, libraries, storage facilities for valuable records or item of historical or cultural significance, and housing for aged and those with impaired mobility; and the setting design levels for water and wastewater centres [2] and critical utility services infrastructure [2]	200	0.5%
Reference flood for setting habitable floor levels in residential buildings and floor levels in commercial/industrial buildings adjacent floodplains or overland flow paths [3]	100	1%
Design Storm for overland flowpaths	50 or 100	2% or 1%

Comments from GRC:

Some of the referenced flood immunities in this table conflict with those identified in the GRC Planning Scheme. Also, some of the floor level immunities in the Planning Scheme use the term “recommended”, so I am concerned that the wording of D5 could be seen as overriding the Planning Scheme. I also a bit unsure how the floor level references adds value to the guideline, as I would assume that all of the member Councils would have this information in their Planning Schemes.

For reference this is the same table from QUDM.

Table 7.3.2 – Recommended design average recurrence intervals (ARI) and annual exceedence probabilities (AEP) for the combined minor/major system

Development category [1]	ARI (yrs)	AEP
Reference flood for setting floor levels in hospitals, emergency services, flood evacuation buildings and Civil Defence HQ	500	0.2%
Reference flood for setting floor levels of emergency shelters, police facilities, museums, libraries, storage facilities for valuable records or item of historical or cultural significance, and housing for aged and those with impaired mobility; and the setting design levels for water and wastewater centres [2] and critical utility services infrastructure [2]	200	0.5%
Reference flood for setting habitable floor levels in residential buildings and floor levels in commercial/industrial buildings adjacent floodplains or overland flow paths [3]	~~100~~ Note 4	~~1%~~ Note 4
Design storm for overland flow paths	50 or 100	2 or 1%

Notes:

[1] The terms used in this table are described in the Glossary (Chapter 13).

[2] Refers to critical components of the system that are required to be flood-free in order to allow prompt and cost-effective recovery of services after a flood (e.g. electrical equipment).

[3] Refer to relevant local authority for confirmation of design storm AEP. Fill, building and floor levels are usually set relative to the 1% AEP event even if the overland flow path design storm represents a 2% probability.

Potentially a solution could be to remove Table D05.04.2 and add refer to planning scheme in the first instance for Building Floor Level immunity or QUDM.

Significant discussion was had on options including adding a general reference to planning schemes and whether to include or remove table and refer to QUDM for anything not covered by the planning scheme.

Also discussed Table D05.04.1 and whether to remove this table as well.

Decision to retain tables to make document more complete (one stop shop)

M2023.02 Resolution

Tables D05.04.1 and D05.04.2 to remain. MCE to add additional notes to be added beneath:

Order of Priority for documentation to determine applicable design ARI / AEP:

1. Refer to planning scheme of the relevant LGA in the first instance
2. Refer to CMDG
3. Refer to QUDM

Add the following new Note 4 to Table D05.04.02

(4) Refer to planning scheme in first instance, if not covered un the planning scheme then use 100years ARI/ 1% AEP as per QUDM.

LGAs to check planning schemes for any inconsistencies with CMDG so that these can be either amended or noted in CMDG.

Action By

MCE and all LGA's

M10.5.1

D6 Site Regrading – consider retaining wall issue Awaiting Action

- The previous resolution was
- Meeting 10 – Sub Committee of Amal Meegahwattage (LSC), Jamie McCaul (RRC), and Chris Hegarty to review the document and advise. Phil McKone to check LGAQ legal site for any retaining wall related advice
- Meeting 13. This item was not discussed. Chris, Jamie and Dev to meet to progress further.
- No progress on this issue yet – need to discuss its priority and resources to progress the matter

Previous Resolution

Jamie and Chris to discuss further and determine a potential resolution.

	Discussion Jamie mentioned seeing lots of this type of boundary retaining wall being used in the region. Mention of previously court case regarding retaining wall failure, Jamie to investigate the outcome of the case to provide potential guidance on how to proceed. Resolution Jamie and Chris to discuss further and determine a potential resolution. M2022.09 Update: Jamie is waiting on the outcome from some current RRC cases of retaining wall issues. The outcomes from these may influence or provide direction to the D6 changes. M2022.10 17 Nov 2022 Update: Jamie briefly discussed the ongoing issues. It was agreed that it may be worth including guidance on minimum retaining wall requirements for example no rough cut sandstone blocks. To be discussed further. M2023.02 Discussion Some discussion about background on this issue. Not as straightforward as it seems to resolve. Jason and Michael raised an interest of being involved when this item is being address. LSC could potentially draft example cross sections when required. Action By MCE/RRC/LSC

M22.04.01

Review of Reference documents in all Specifications

- BSC (Daniel) suggests the group consider a Design Specification review and revising the referencing to current standards/guidelines. These references should provide the same or better information that was originally referred to by the CMDG Design Specs.
- IRC (Michael) has also pointed out that construction specifications have not been reviewed for some time.
- Whilst GRC conducted a review of many of the specs when joining the group there has been only ad hoc review of standards and references since. For discussion at this stage – the question is when should reviews take place and what resources should be assigned to it?

Previous Resolution

Discussion around potential review of documents as some have not been revised since 2007. Chris to review documents and highlight the ones in need of a review. In addition, it was agreed to complete a detailed review the documents on an ad hoc basis as changes are required/ requested to specific documents.

M2022.09 Resolution

The following is a summary of the agreed documents to be reviewed and those responsible for carrying out the review.

M2022.10 Update

Comments received about Australian Standard references need to be updated in D11 and D12 from Sarah

Updated at M2023.02:

Specification	Last review and notes	In need of review?	To be reviewed by?
D1 Geometric Road Design	Dec 2022	No	N/A
D2 Pavement Design	Dec 2021	Yes	RRC (Grant)
D3 Structures and Bridges	Apr 2019 – References updated	No	
D4 Surface Drainage	Aug 2019	Yes	IRC (Michael)
D5 Stormwater Design	Mar 2022	No	
D6 Site Regrading	Mar 2012	Yes	RRC (Jamie) and MCE
D7 Erosion Control and Stormwater Management	Sep 2020 – but review not comprehensive	Yes	RRC (Jamie/Tilak)
D9 Cycleway and Pathway Design	Mar 2012	Yes	MCE
D10 Landscaping (DRAFT)		Yes	RRC (Grant/ Michael Ramsay)
D11 Water Reticulation	Jan 2022	No	CHRC (Sarah)
D12 Sewerage Reticulation	Jan 2022	No	CHRC (Sarah) Noted AS4999 is withdrawn
D13 Small Earth Dams (GRC only)	Apr 2019	Yes	GRC (Scott/Brendan)

	D14 Floodways (DRAFT)		Yes	RRC (Grant)
	D15 Driveways	Jun 2018	Yes	BSC (Nathan)

M2023.02 Resolution

Decided that review of all documents is to be by the end of July (4 months)

MCE to upload new D9 document within 2 weeks.

Action By

All

M22.04.04

D12 – Polypropylene maintenance structures for gravity sewers

- Iplex has requested that CMDG D12 be updated to allow for the use of 1000mm dia polypropylene maintenance shafts.
- The Iplex Ezipit technical guide is included as ~~**Attachment S**~~
- EZI pit, in all the sizes (MS (DN425), MC(DN600) and MH(DN1000)) are approved by the majority of the water Authorities in Melbourne, approved by Unity Water, Gold Coast Council, Logan Council, and Redlands Council in the SEQ water grid.
- The EZIpit has been around for a number of years - with about 15 years of use in Australia and 35 years use in Europe.

Use of polypropylene maintenance structures - responses received so far:

Local Government	**Acceptance of** 1000 dia polypropylene access chambers
Banana Shire	No
Central Highlands Regional	No
Gladstone Regional	No
Isaac Regional	Yes
Maranoa Regional	No
Livingstone Regional	TBC
Rockhampton Regional	No - TBC

M2022.10 Discussion

- Some discussion and revisiting of LGA preferences for maintenance shafts in CMDG
- Some feedback that internal ribbing could hold up debris

M2022.10 Resolution

	• Isaac regional Council accept the use of the polypropylene chambers as access chambers. New table of difference to be added to D12 for use of 1000 dia polypropylene access chambers as an alternative to concrete access chambers. • LSC and CHRC to confirm the use of the polypropylene structures for maintenance shafts only (ie 600 diameter) • LSC to provide an update about approval in table D12.09.04 • MCE to send update email to Iplex once above items have been confirmed. M2023.01 Update Awaiting feedback from LSC and CHRC Action By LSC/ CHRC/ MCE M2023.02 Update Supplier (Smart Stream Technology) has been in contact about sewerage shafts (poo-pits). During discussions it was noted he these are polyethylene so technically excluded from CMDG as CMDG references AS 4999 which is for PVC-U maintenance shafts. For discussion Discussion about differing material and referencing new Australian Standards for each type. Noted that AS do not exist for each material for maintenance shafts. M2023.02 Resolution • Reference to be changed from AS4999 to DRWSA 137-2019 as provided by Brendan • New item to be created for discussion on varying diameter of chamber based on depth. This is pursuant to GRC recent experience where a manhole internal reline left the reduced internal diameter unfit for confined space entry. • LSC to further consider acceptance of 1000dia polypropylene manholes, acceptance of bends in sewers and acceptance of maintenance structures. Action By MCE and LSC
M22.07.04	**RRC grated crossover drawings** Rockhampton Regional Council (RRC) have developed two standard drawings for grated overhead crossings at driveway crossovers, with RRC-R05 applicable for pedestrian and residential applications, and RRC-R06 applicable for commercial and laneway applications. Refer to ~~**Attachment T**~~ for details. These drawings have been in use in the RRC LGA since 2017 and are routinely referred to for the issue of works in road reserve permits as well as Council projects. RRC have requested, via Grant, that these two drawings be included in CMDG. M2022.10 Discussion Comments have been received regarding potential sharp transitions at the edges, a minor update to the drawing may be required to show a small wedge of asphalt either side of the grates. GRC and RRC have also noted that these should only be used when there is no other alternative and would not generally apply to greenfield sites. M2022.10 Resolution

	Create one new CMDG drawing that combines the information on the RRC standard drawings (with minor amendments) but ensure that it is noted on the drawings that these are only for use in exceptional circumstances as directed or approved by local government. Minor changes: • Reference AS 2890.1 for vertical clearance checks • Concrete/asphalt infill ramp to be adjusted to have wings • Add maximum grade on wings (use speed bump standards as a guide) • Hatch on grate to be changed to similar to inlet grates • Add only to be used in specific situations note in bold at top of drawing • Add applicability table with yes to all LGAs <u>M2023.01 Update</u> Changes have been made and drawing is under review by RRC to confirm that it still meets requirements. Maximum grade on the wings and extent into the travel lane to be discussed. Current draft version of drawing is ~~**Attachment L**~~. <u>M2023.01 Update</u> Changes following RRC review have been made including: • Additional notes around when these treatments will be considered. Drawing is included as **Attachment L** and ready for final review by committee. Brief discussion about batters on wings and whether additional notation is required around making good areas around the structure. <u>M2023.02 Suggested resolution</u> Change 1 in 4 max grade on wings to 1 in 4 desirable. Drawing to be uploaded to website. <u>Action By</u> MCE

M22.08.02	**D14 Floodways** The previous resolutions on this document are below. The current document is at **Attachment E**.

Meeting 11 13 Mar 2018	D14 Floodways a. Cardno to revise D14 using the new layout and document structure provided by RRC b. Table D14.09.01 needs revision and clarity eg d50 c. SPA and IDAS references need to be amended
Meeting 12 25 Oct 2018	D14 Floodways 'Sustainable Planning Act' needs to be updated/changed to 'Planning Act 2016'. Table D14.03.01 – note the source of the information in this table – It's a government source and policy could change.
Meeting 13 14 Mar 2019	Dev (LSC) is currently working on a new draft for D14 Floodways

A draft of D14 was prepared in 2018 but does not appear to have progressed since.

M2022.10 Resolution

Jon to check with Dev if new draft of D14 exists and forward to committee. Grant to review D14 when possible.

M2023.01 Update

No newer version is available from LSC. Grant to review 2018 version when possible.

M2023.02 Resolution

Grant to proceed with changes.

Action By

LSC/RRC

M22.09.01

D11 Water Supply Design – Colour and marking of infrastructure

In preparing a draft of PS 26 Marker posts it became apparent that a decision should be made regarding naming conventions and colour of surface infrastructure.

The WSAA Water Supply Code says “Above ground infrastructure to be coloured to Water Authority Requirements”. But it does have the following advice for spindle caps.

TABLE 8.1

COLOUR CODING OF SPINDLE CAP PLASTICS COVERS

Valve description	Colour
Closed valve	Red
Open valve	White
Dialysis patient	Blue
Non-drinking water	Purple

In terms of what is in CMDG now we have the following

Table D11.13.01 Kerb Painting Valves and Hydrants

Local Government	Kerb Painting (for valve and hydrants)
Banana Shire	Not Required
Central Highlands Regional	Not Required
Gladstone Regional	The kerb is to be painted (white – valves, yellow – hydrants) in the location perpendicular to the asset. Painted area is to be 300mm wide.
Isaac Regional	The kerb is to be painted (blue – valves, yellow – hydrants) in the location perpendicular to the asset. Painted area is to be 300mm wide.
Livingstone Shire	Not Required
Maranoa Regional	The kerb is to be painted (blue – valves, yellow – hydrants) in the location perpendicular to the asset. Painted area is to be 300mm wide.
Rockhampton Regional	Not Required

All paint colouring to comply with AS 2700 - Colour Standards for General Purposes.

And from CMDG-W-062

4. Pavement markers to be blue in colour for hydrants and yellow in colour for valves and constructed to AS 1906.3 (1992)

Note that the only notable difference between members at the moment that I am aware of is that GRC marks valves white – however this appears to be the norm in the Southeast corner.

Suggested resolution

For discussion only to search for common ground at this point

Marker Plate Disc Codes			
H	Hydrant	SV	Scour Valve
F	Flushing Point	V	Valve
AV	Air Valve	SH	Swabbing Hydrant
VB	Valve Box / Pit	SC	Swabbing Chamber

Coloured Reflector and Reflective Tape Codes GRC

White	Air Valves, Swabbing Chamber Potable Water Scour Valves, Valves
Yellow	Hydrant
Red	Closed Zone / Boundary Valve
Blue	Dialysis Valves
Lilac / Purple	Recycled Water Scour Valves, Valves
Cream or Grey	Raw Sewage

Coloured Reflector and Reflective Tape Codes – LGA's other than GRC	
White	Air Valves, Swabbing Chamber
Yellow	Hydrant
Red	Closed Zone / Boundary Valve
Blue	Potable Water Scour Valves, Valves
Lilac / Purple	Recycled Water Scour Valves, Valves
Cream or Grey	Raw Sewage
Blue (with identifier on spindle)	Dialysis Valves

M2022.10 Resolution

RRC use an identifier on the spindle (poly pipe over spindle with a brass plaque on top). Other LGAs to check what they do/ confirm if the RRC approach is acceptable for CMDG.

M2023.01 Update

Gary (IRC) raised a number of points in relation to the marker plates, for example ScV for scour valve. Gary will send through a list with IRC's requirements.

MCE to generate a revised table to contain the marker disc requirements including colours and nomenclature required for the different LGAs. All LGAs to review requirements and provide feedback for population of the table prior to next meeting.

M2023.01 Resolution

Revised proposed table to be provided for consideration prior to meeting.

M2023.02 Update/ Discussion

MCE completed some new tables and issued to the committee for comment prior to the meeting. Discussion was had around colour and nomenclature. The agreed tables and contents are below:

Marker Post Label Codes					
H	Hydrant	ScV	Scour Valve	PSV	Pressure sustaining valve
F	Flushing Point	V or SV	Valve	PRV	Pressure reducing valve
AV	Air Valve	SH	Swabbing Hydrant	SRM	Sewer Rising Main
VB	Valve Box / Pit	SC	Swabbing Chamber	RWM	Recycled Water Main
WM	Water Main	SM	Sewer Main	RAW	Raw Water Main

Coloured Reflector, Surface Cover, Spindle Cap and Reflective Tape Codes GRC	
White	Air Valves, Swabbing Chamber Potable Water Scour Valves, Valves
Yellow	Hydrant
Red	Closed Zone / Boundary Valve
Blue	Dialysis Valves
Lilac / Purple	Recycled Water Scour Valves, Valves
Cream	Raw Sewage – Rising Main
Grey	Raw Sewage – Gravity Main
Jade / Green	Raw Water

Coloured Reflector, Surface Cover, Spindle Cap and Reflective Tape Codes – LGA's other than GRC	
White	Air Valves, Swabbing Chamber
Yellow	Hydrant
Red	Closed Zone / Boundary Valve
Blue	Potable Water Scour Valves, Valves
Lilac / Purple	Recycled Water Scour Valves, Valves
Cream	Raw Sewage – Rising Main
Grey	Raw Sewage – Gravity Main
Blue	Dialysis Valves (with identifier on spindle)
Jade / Green	Raw Water

Notes

1. Note all post colours to be white or to match tables XXXX

Note that there will be consequential changes to a number of standard drawings.

M2023.02 Suggested Resolution

Agreement reached on above tables. Tables to be sent around for final review and input for water departments.

After review and feedback has been considered it is intended that the tables are to be added to D11 and D12. Reference to be added that standard for colours are generally consistent with POP23 and that exact colours should be in accordance with the appropriate Australian Standards.

List of affected standard drawings to be added to action register for updates when time permits.

Action By

All

M22.09.02

G-018 Standard Council Grid drawing – width markers

Sarah raised the question of whether hazard markers/ grid width markers should be replaced with guideposts on existing grids as they are not shown on drawing G-018.

Response from MCE:

The width markers are still acceptable and potentially a requirement. Typically, width markers are required when the grid is narrower than the road i.e. grid width is less than road formation width, this is also TMR's approach. The exact guidepost requirements are possibly a little more up for debate depending on how you interpret MUTCD, but some guideposts would definitely be needed as well. The other CMDG drawing G-020 requires the hazard markers at the grid and guideposts at 10m from each corner. I have discussed this with one of our Senior Road Safety Auditors and we agree that the approach shown on drawing G-020 is the best option to cover all bases.

I think that the best approach would be to review G-018, potentially with the view to combine it with G-020.

M2022.10 Discussion

Discussion on use of grates and applicability. CHRC are requesting hazard markers on all grids. Agreed that G-020 is a more complete drawing especially in relation to signage.

M2022.10 Resolution

Agreed to supersede G-018 but retain on website as an example. CHRC, LSC, BSC and MRC to confirm applicability on G-020 as they will have no applicable grid drawing following superseding of G-018.

M2023.02 Background

CHRC and MRC have expressed concerns with the removal/ superseding of G-018.

Summary of MRC comments:

1. Preference is to retain hazard markers.
2. Remove reference to a proprietary product removed. Instead quote the engineering/technical parameters. Historically they have had big issues with stipulating a proprietary product.
3. Is the pre-cast base required in all circumstances? Can it be applied on a case-by-case basis?
4. G-020 does not have an abutment detail like G-018 has presumably this is because G-020 users utilise pre-cast units, however the regional areas regularly cast in-situ. Abutment detail required.
5. There is frequent reference to 'precast' preference for this to be removed.
6. We are cognisant that some councils have a Grid Policy, so we want the standard drawing to be in line with MRC's existing Grid Policy.
7. For example, we recommend Note 5 is tabulated (widths/traffic counts for each Council). MRC is shown below.

Traffic Volumes	Grid Type Required
Road with greater than 250 vehicles per day	Not permitted
Road with traffic volumes less than 250 but more than 20 vehicles per day	Double grid (8m)
Road less than 20 vehicles	Single grid (4m)

a. Notwithstanding the above, a double grid may be required, at Council's discretion, irrespective of the above if:

8. Note 7. Not applicable to MRC.
9. Note 6. Possibly tabulated. MRC's loading criteria is below (based on the TMR guide).

Frames and abutments are to be structurally certified for design loads in accordance with AS5100.2-2017 (the Bridge Design Code), including all relevant load factors, dynamic load allowances and deflection limits (i.e. span/600). The particular loads to be applied are as follows:

- W80 wheel load;
- A160 axle load;
- M1600 moving load;
- S1600 stationary traffic load.

Local Government	G-018 Applicability	G-020 Applicability
Banana Shire	No	Yes?
Central Highlands Regional	No?	Yes?
Gladstone Regional	No	Yes
Isaac Regional	No	Yes
Maranoa Regional	No?	Yes?
Livingstone Regional	No	Yes?
Rockhampton Regional	No	Yes

An alternative option may be to add a note to G-018 to reference G-020 for signage requirements.

Sarah has asked if width of grid can be specified on the drawing as CHRC does not have a grids policy. For discussion.

M2023.02 Discussion

Discussion on keeping G-018. General acceptance by most LGAs to use or move towards using G-020. MRC may adopt once further changes have been made.

M2023.02 resolution

G-018 - change title to Alternative Council Grid. Add note 3 from Drawing G-020 regarding signage. Remove reference in applicable drawing box in applicability table. Update style.
G-020 - Change title to Standard Council Grid and remove <500 AADT. Update style.

The above changes to be made as an interim measure until further consideration of Issues raised by MRC on G-020.

Action By

MCE

M22.09.03

D5 – Roof and Allotment Drainage

As per QUDM, there are five levels of roof and allotment drainage design and depends upon the development category. Further QUDM directs that required level for each development category is at the discretion of the local government. Maybe in CMDG (D5) we need to have some information about this?

Below is the Brisbane City Council requirements:

7.2.2.3 Drainage

1. Council's design standards for stormwater infrastructure vary for different types of land uses. The design standards for roof water, drainage in private roads/driveways and for drainage in roads fronting those types of development are set out in Table 7.2.2.3.B.
2. Pipe drainage of on-site roof water and surface water from paved and unpaved areas must comply with AS/NZS 3500.3:2003 Plumbing and drainage - Stormwater drainage, QUDM for Level III, IV and V drainage standards.
3. The design of the major system must ensure flows can be conveyed safely. Where the major system is part of a road, this may require increasing the capacity of the minor system above that shown in this table to ensure flow depths and hazard are acceptable (refer to QUDM).

Table 7.2.2.3.B—Design standards for drainage systems

Development category	Design parameter	Minimum design standard	
		AEP	ARI (years)
Rural areas (typically 2–5 dwellings per hectare)	Minor drainage system Major drainage system	39% 2%	2 50
Residential developments (Low density residential)	Minor drainage system Major drainage system	39% 2%	2 50
	Roof water drainage	Level II QUDM	
Residential developments (Low–medium density to High density)	Minor drainage system Major drainage system	10% 2%	10 50
	Roof water drainage	Level III and Level IV QUDM	
Industrial uses	Minor drainage system Major drainage system	39% 2%	2 50
	Roof water and lot drainage	Level IV QUDM	
Commercial land uses (centre zones)	Minor drainage system Major drainage system	10% 2%	10 50
	Roof water and lot drainage	Level IV and V QUDM	

Notes—

The design standard of major drainage system is to safely manage the difference between the minor and major flows where a minor system is provided in accordance with QUDM.

A severe storm impact assessment is to be provided where development may interfere with the passage of stormwater during the major flow event. Refer to QUDM for applicability and design considerations.

Currently the CMDG Table specifies one level for all development types:

Table D05.16.1 - Inter Allotment Drainage Requirements

Local Government	QUDM Level	Special Requirements
Banana Shire	II (Note 1)	Connection to main is permitted. No grated inlets.
Central Highlands Regional	II (Note 1)	
Gladstone Regional	III (Note 2)	Connections must be to pits.
Isaac Regional	II (Note 1)	Connection to main is permitted. No grated inlets.
Maranoa Regional	II (Note 1)	
Livingstone Shire	II (Note 1)	
Rockhampton Regional	II (Note 1)	

Note 1: Level III inter allotment drainage may be required by the Local Authority in some instances (e.g. steep slopes).

Note 2: GRC may consider level II inter allotment drainage in low risk circumstances.

<u>M2023.02 discussion</u>

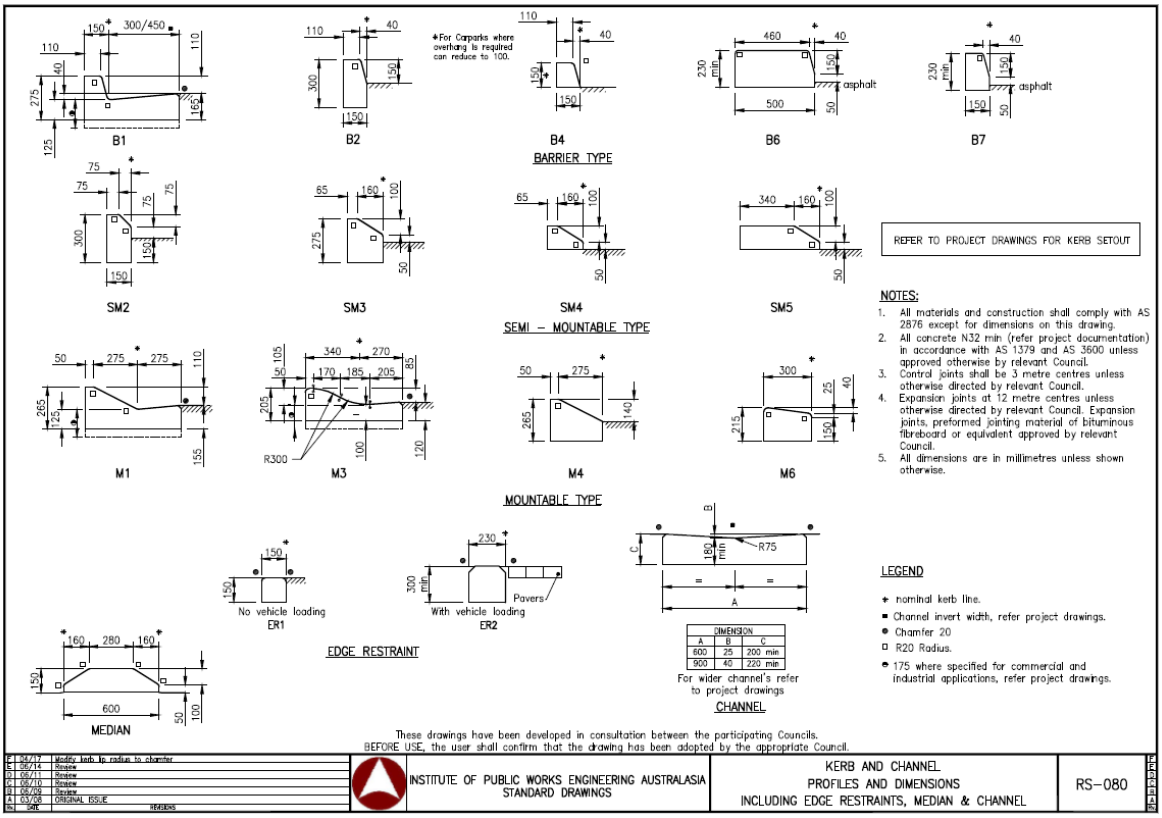
Discussion on whether to keep table or convey information in a different way. The main issue to convey was that the CMDG Table D05.16.1 was intended to convey requirements for Low density residential and not other development.

<u>M2023.02 resolution</u>

Update Table D05.16.1:

- Add “Low density residential” to the QUDM Level title followed by (Note 3).

	• Add “low density residential only” after the No grated inlets. • Add extra column – Application. Column entry to be “Low density residential” for all LGAs except GRC where the column entry is to be “residential” • Note 3 – For all other development categories – industrial , high density residential, commercial etc refer to QUDM. Action By MCE

M22.10.01	**Standard Drawing CMDG-R-060** As part of an applicability change request from BSC drawing CMDG-R-060 (**Attachment H**) has been updated to be applicable to all LGAs and R-060A is now redundant. Scott has suggested considering the format of the IPWEAQ and TMR kerb profiles standard drawings. On these drawings the kerbs and channels are split into types, i.e. Mountable, Semi Mountable, Barrier etc. It would also be worth considering the possibility of aligning the CMDG kerb references with the IPWEAQ drawing as the profiles are the same in many instances. It is a good time to check if there are any additional kerb profiles that are being used or requested that could be added to the drawing.  <u>M2023.02 Discussion</u> Discussion on adopting or aligning with IPWEA or TMR kerb profiles. There are some differences between profiles and Council have kerb machine moulds for the CMDG kerb profiles. In addition, changing profiles may cause interaction issues when infilling old sections of kerb with new. Concerns were raised with vertical clearance at driveways due to the deeper TMR/IPWEA channel on the barrier kerb and channel. LSC raised that the use of the IPWEA median kerb type is increasing due to footpath separation and on road cyclepath/ parking separation requirements. Agreement to create new CMDG kerb type to include this profile. MCE questioned whether type 9 is used anymore. RRC stated that type 9 kerb is not disability compliant and agreement reached to remove. New kerb to be number 11 to avoid confusion rather than replacing type 9. <u>M2023.02 Resolution</u> Maintain CMDG kerb profiles and naming convention. Remove Type 9 Add Type 11 median kerb based on IPWEA profile Upload drawing once changes have been made <u>Action By</u> MCE

M22.10.02

Incomplete tables of difference

Below are the tables of difference in various CMDG documents that are incomplete. The aim is to populate these tables or remove if agreement can be reached between LGAs.

CMDG Incomplete Tables of Difference - Oct 2022

Table D11.06.01 Water Supply Network Analysis Software

Council	Software Used	Comment
Banana Shire	InfoWorks WS Pro	
Central Highlands Regional	WaterGEMS	
Gladstone Regional	InfoWater	
Isaac Regional	EPANET	Want WaterGEMS but cost $20k/yr is hard to justify. Looking to cost share with another Council.
Livingstone Shire	INFOWORKS	
Maranoa Regional	WATER GEMS	
Rockhampton Regional	WATER GEMS	

Table D11.07.03 Fire Fighting Requirements

	Residual pressure at most disadvantaged hydrant (m)	Flow	When fire flow is applied
Banana Shire	12m	15L/s for 2h for residential and 30L/s for 4 hours for commercial / industrial.	MHMD
Central Highlands Regional	Refer to Queensland government's Planning Guidelines for Water Supply and Sewerage		
Gladstone Regional	Refer to Planning Guidelines for Water Supply and Sewerage		
Isaac Regional	Refer to Queensland government's Planning Guidelines for Water Supply and Sewerage		
Livingstone Shire	12m	15L/s for 2h for low and medium density residential 30L/s for 4 hours for high density residential and commercial / industrial.	MHMD
Maranoa Regional	12m	15L/s for 2h for low and medium density residential 30L/s for 4 hours for high density residential and commercial / industrial.	MHMD
Rockhampton Regional	12m	15L/s for 2h for low and medium density residential 30L/s for 4 hours for high density residential and commercial / industrial.	MHMD

Table D11.10.02 Valves and Tees Instalment Arrangement

Local Council	Flanged Valves and Tees	Valves per Tee
Banana Shire	Yes	3
Central Highlands Regional	Yes	3
Gladstone Regional	Yes	3
Isaac Regional	Yes	3
Livingstone Shire	No	2 (both downstream legs)
Maranoa Regional	Yes	3
Rockhampton Regional	No preference	2 (both downstream legs)

Table D11.20.1 Use of Pump Stations in Reticulation Network

Local Government	Reticulation Pump Stations permitted within reticulation network
Banana Shire	No
Central Highlands Regional	Yes
Gladstone Regional	No
Isaac Regional	Yes
Livingstone Shire	Yes
Maranoa Regional	Yes
Rockhampton Regional	Yes

Table D12.06.01 Sewer Reticulation Network Analysis Software

Council	Software Used	Comments
Banana Shire	N/A	Too costly to maintain a software in the council
Central Highlands Regional	SewerGEMS	
Gladstone Regional	InfoSWMM	
Isaac Regional	SWMM	Want SewerGEMS but cost $20k/yr is hard to justify. Looking to cost share with another Council.
Livingstone Shire	SWMM	
Maranoa Regional	SEWERGEMS	
Rockhampton Regional	SEWERGEMS	

Note: SWMM5 is freely available online via the USEPA.

Table D12.07.01 Design Average Dry Weather Flow (ADWF)

Council	Design ADWF	EP/ET
Banana Shire	200 L/d/EP	2.6
Central Highlands Regional	250 L/d/EP	2.7
Gladstone Regional	225 L/d/EP	2.6
Isaac Regional	250 L/d/EP	2.7
Livingstone Shire	540 L/d/ET	2.7

Maranoa Regional	200 L/d/EP	2.7
Rockhampton Regional	540 L/d/ET	2.7

Table D12.20.02 Wet Well Internal Diameter

Local Government	Minimum wet well internal diameter (mm)
Banana Shire	1800
Central Highlands Regional	2400
Gladstone Regional	3000
Isaac Regional	2400
Livingstone Shire	2400
Maranoa Regional	2400
Rockhampton Regional	2400

Table D15.10.01 Racing Line Assessment Applicability

Local Government	Is section 15.10 Racing Line assessment applicable?
Banana Shire	No
Central Highlands Regional	No
Gladstone Regional	Yes
Isaac Regional	No
Maranoa Regional	No
Livingstone Regional	TBA
Rockhampton Regional	No

M2023.02 resolution

LSC to confirm yes or no to Racing Line Assessment (Table D15.10.01)

MCE to action changes.

Ensure correction to Table D12.07.01 L/EP/d is actioned.

Action By

MCE, LSC.

M23.01.01

D11, PS4 and CMDG-W-091 : PN12.5 vs PN16 – No resolution this meeting

D11 and PS4 currently have PN12.5 for all LGAs except for LSC (PN16). Should these documents be updated to have the same (PN16 Poly) for all LGAs? Current document details are below.

APPLICABILITY TABLE							
Council	**BSC**	**CHRC**	**GRC**	**LSC**	**IRC**	**MRC**	**RRC**
Applicable	Yes	No	Yes	Yes	Yes	No	Yes
Poly Pipe and Class	PN12.5		PN12.5	PN12.5	PN12.5		PN12.5
Applicable DWG	CMDG-W-093						

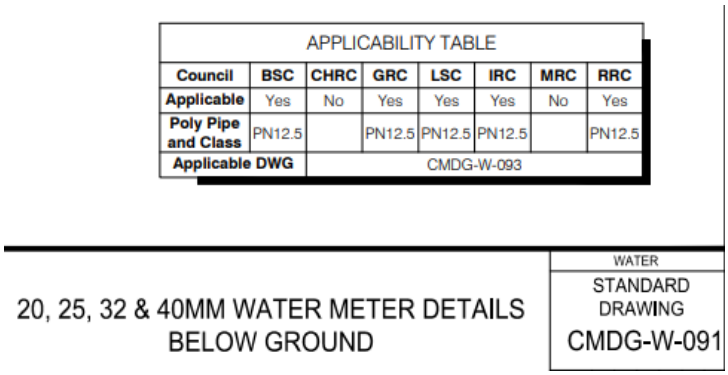


Table D11.09.01 PVC* Minimum Water Main Pipe Classes

Local Government	MPVC	OPVC	DICL	PE
Banana Shire	Class 16	Class 16	PN35	PE100 PN12.5
Central Highlands Regional	Class 12	-	PN35	PE100 PN12.5
Gladstone Regional	Class 16	Class 16 (Material Class 450)	PN35	PE100 PN12.5
Isaac Regional	Class 16	Class 16 (Material Class 450)	PN16	PE100 PN12.5
Livingstone Shire	Class 16	Class 16 (Material Class 450)	PN35	PE100 PN16
Maranoa Regional	Class 16	Class 16	PN35 for Road Crossings & Aerial PN20 - general works	PE100 PN12.5
Rockhampton Regional	Class 16	Class 16 (Material Class 450)	PN35	PE100 PN12.5

4.0 Pressure Classification (PN) –

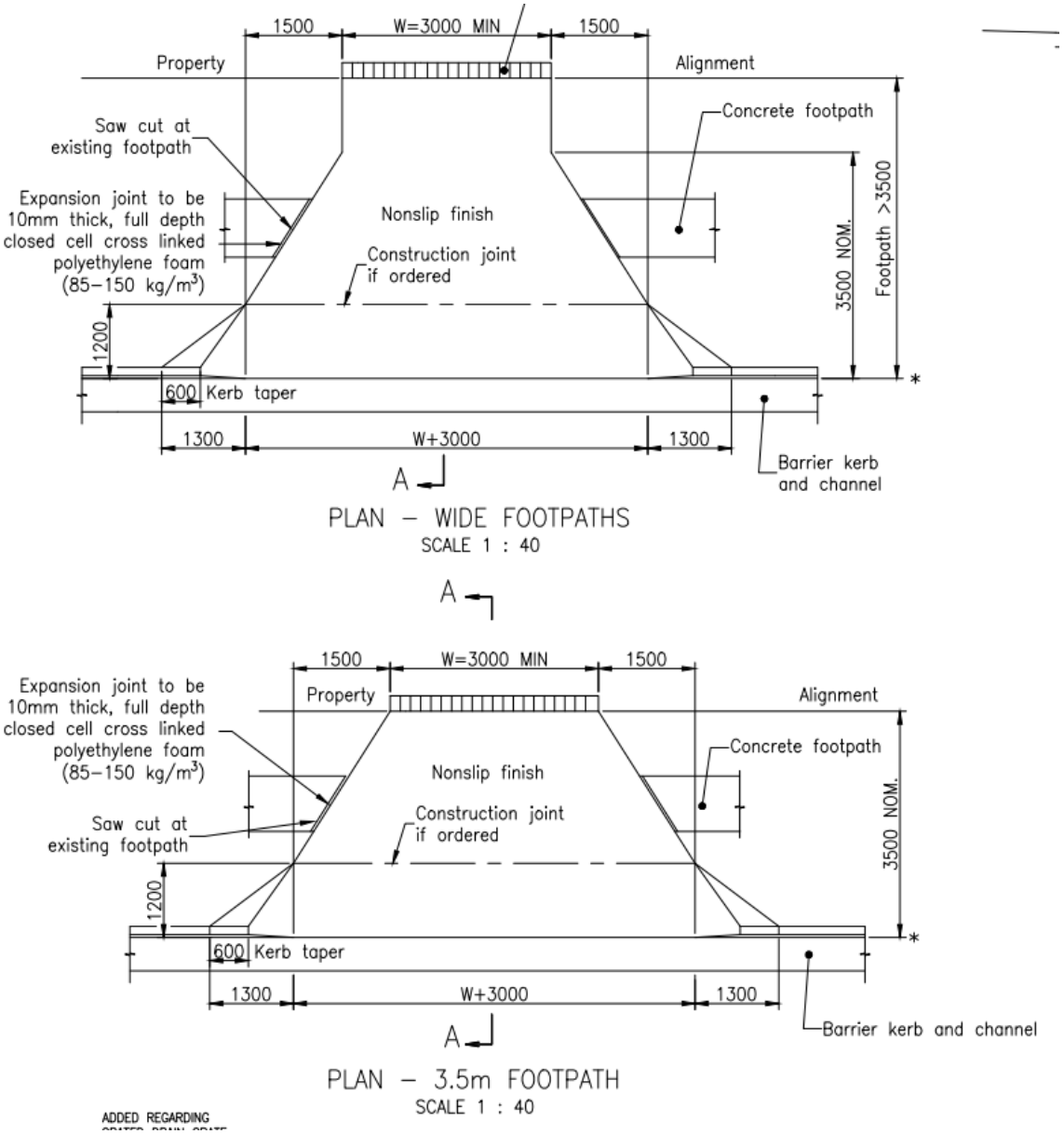
Local Government	Pressure Classification for new installation and repair
Banana Shire	PN12.5 (1250 kPa or 1.25 MPa @ 20° C).
Central Highlands Regional	PN12.5 (1250 kPa or 1.25 MPa @ 20° C).
Gladstone Regional	PN12.5 (1250 kPa or 1.25 MPa @ 20° C).
Isaac Regional	PN12.5 (1250 kPa or 1.25 MPa @ 20° C).
Livingstone Shire	PN 16 (1600 kPa or 1.6 MPa @ 20° C).
Maranoa Regional	PN12.5 (1250 kPa or 1.25 MPa @ 20° C).
Rockhampton Regional	PN12.5 (1250 kPa or 1.25 MPa @ 20° C).

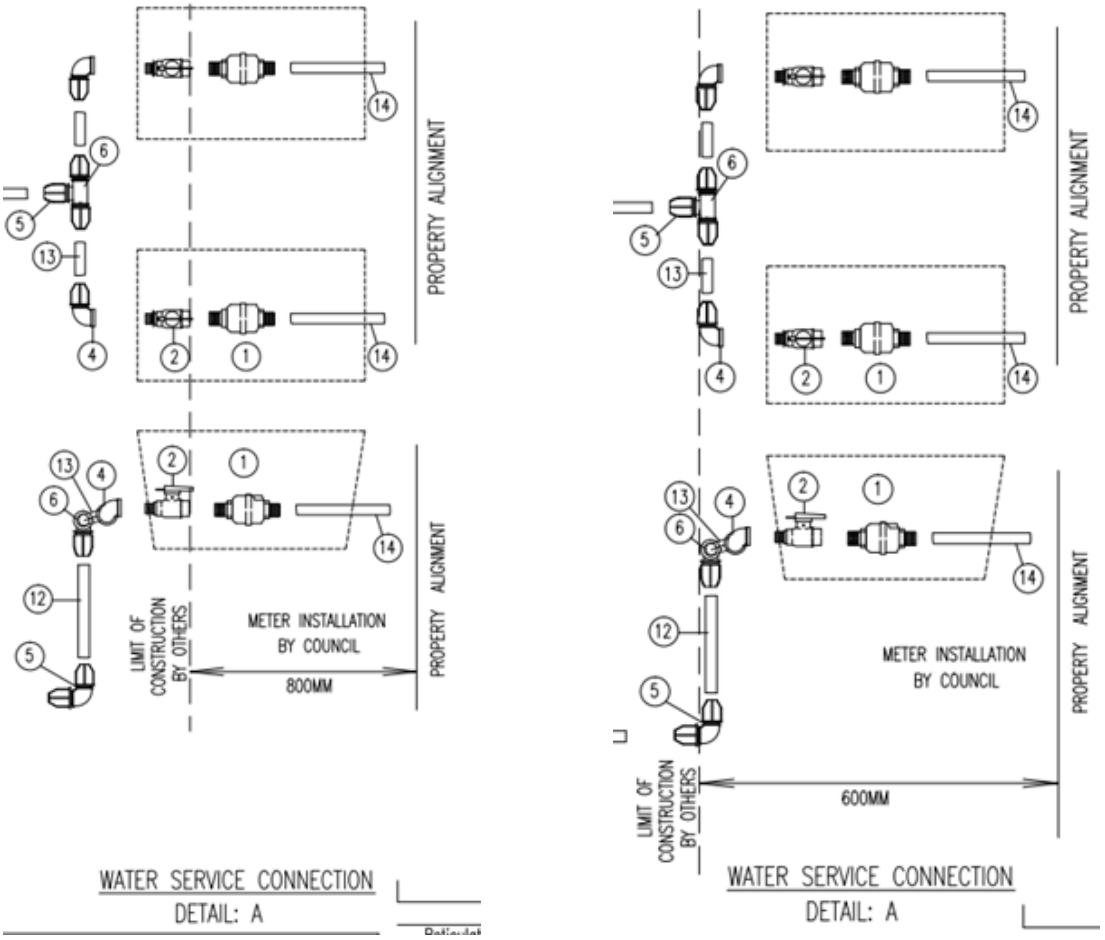
Standard drawings W-020, W-030, W-091 W-081 need to be updated with any changes.

Although test pressure of 1250kPa specified in D11 is equal to he PN rating of the pipe, the test pressure can be up to 1.25 times the maximum allowable operating pressure or PN rating. This means that for PN12.5 a maximum test pressure of 15.6bar is permissible.

The above is the main reason behind GRC changing to PN12.5 previously.

For discussion

	Suggested Resolution Update documents to PN16 poly for all LGAs or LSC to consider changing back to PN12.5 for consistency. Amend IRC DICL Class to PN35 Action By MCE
M23.01.02	**Standard Drawing R-042 - Type A Commercial Driveway Slab** – No resolution this meeting It has been pointed out that the kerb taper shown in the plan view may be drawn incorrectly  Suggested Resolution Update drawing and send to committee for review. Action By MCE

M23.01.03	**Standard Drawing W-090 - 20 & 25mm Service and Water Meter Connections** – No resolution this meeting As part of an update to W-090 it was noted that the differences between W-090 and W-090A are minor and there may be an opportunity to combine them. The key difference between the drawings W-090 and W-090A Is the water service connection detail: **W-090** **W090A**  The other difference between the drawings is just the short single size on the W-090A is 25mm not 32mm, this could be covered in the applicability table if required. The main benefit from not installing the valve is reduction in the risk of water theft. For discussion. <u>Suggested resolution</u> TBC <u>Action By</u> TBC

M23.01.04	**D1 – Evacuation Routes** – No resolution this meeting It was raised by GRC that an evacuation route section/ clause may be beneficial in D1. A general clause may be useful referring to any specific work done by the relevant LGA on flooding/ storm surge to inform level and designated evacuation routes. An example from Mackay is reproduced below: **2.19 Evacuation Routes** Where works are proposed for existing or foreshadowed evacuation routes, designers shall recognise that minimisation of inundation during flooding or storm surge events is a requirement to ensure the ability of the roadway to maintain its function as an evacuation route. Crown levels on these roads is to be maintained at a minimum level of 5.0m AHD to ensure its viability and trafficability during evacuation incidents. Further, where the development is controlled by the storm surge Minimum Level of RL5.0m, then the road shall be no lower than 4.7m AHD at the lip of the kerb & channel. The evacuation routes to which this requirement applies are shown in the *Mackay City Council – Emergency Action Guide*. Copies of this document are available from Council and are on Council's web page. For discussion <u>Suggested Resolution</u> TBC <u>Action By</u>

M23.01.05

D11, D12, D5 – Acceptable software packages. – No resolution this meeting

The wording in relation to software package use in CMDG uses terms “acceptable” or “must” in relation to use of software packages which implies that Consultants must use the stated software packages. It was my understanding that these packages were preferred and encouraged simply because it was easier for LGA’s to check and therefore approval for development was easier to obtain. Are other software packages excluded?

Extract from D5 Following to illustrate.

D05.06.10. The full electronic files associated with any computerised modelling works shall be provided to Council as a part of Site Based Stormwater Management Plan. Computer model shall be prepared by a qualified person experienced in the use of the program and under the supervision of a Registered Professional Engineer of Queensland (RPEQ) experienced in this field. The accuracy of the model shall be verified by a RPEQ experienced in this field. The model shall be calibrated and a sensitivity analysis shall be completed. Acceptable software packages are identified in Table D05.06.02 – Acceptable Modelling Packages.

Table D05.06.02 – Acceptable Modelling Packages

	Banana Shire	Central Highlands Regional	Gladstone Regional	Isaac Regional	Maranoa Regional	Livingstone Shire	Rockhampton Regional
Runoff Routing:			XP Raft/ TUFLOW				
Drainage Analysis:			Drains (ILSAX)/ PCDRAINS				
Steady Flow			HEC-RAS				
Unsteady flow			MIKE 11/ XPSWIM/ TUFLOW				
Water Quality			MUSIC				

D11.06.01. The planned service area, hydraulic capacity and component sizing shall be as approved by the Water Service Provider via a Water Supply Network Analysis. Software used by consultants for Water Supply Network Analysis must be compatible with that use by the relevant Council. A list of the software used by each of the participating Councils has been provided below.

Table D11.06.01 Water Supply Network Analysis Software

Council	Software Used
Banana Shire	
Central Highlands Regional	
Gladstone Regional	InfoWater
Isaac Regional	H2OMAP
Livingstone Shire	INFOWORKS
Maranoa Regional	WATER GEMS
Rockhampton Regional	WATER GEMS

D12.06.01. Software used by consultants for Sewer Reticulation Network Analysis must be compatible with that use by the relevant Council. A list of the software used by each of the participating Councils has been provided in Table D12.06.01 Sewer Reticulation Network Analysis Software below.

Table D12.06.01 Sewer Reticulation Network Analysis Software

Council	Software Used
Banana Shire	
Central Highlands Regional	
Gladstone Regional	InfoSWMM
Isaac Regional	
Livingstone Shire	SWMM
Maranoa Regional	SEWERGEMS
Rockhampton Regional	SEWERGEMS

Note: SWMM5 is freely available online via the USEPA.

Suggested Resolution

Change from “Acceptable” software packages to “Preferred” software packages in table D05.06.02.

In D11.06.01 and D12. 06.01 Replace “must be compatible with that used by the relevant Council” to “is preferred to be compatible with that used by the relevant Council”

Action By

MCE

M23.01.06	**C224 – Open Drains** – No resolution this meeting Brendan noted that he was looking for table drain information and this construction specification contains the relevant information. A title change was suggested or potentially adding this information to the drainage design specification D5. For discussion. CAPRICORN MUNICIPAL DEVELOPMENT GUIDELINES OPEN DRAINS INCLUDING KERB & GUTTER (CHANNEL) C224 **CONSTRUCTION SPECIFICATION** <u>Suggested Resolution</u> TBC <u>Action By</u>
M23.01.07	**C213 Earthworks Specification** – No resolution this meeting GRC have commented on C213 in relation to the setout. The document discusses the installation and spacing of pegs. However, it is common in the industry to use 3D models, GPS/ RTK a rather than pegs and offsets. For discussion <u>Suggested Resolution</u> Update C213 to include the use of 3D models. <u>Action By</u> MCE

M23.01.08	**Sewer Jump up ownership and drawing CMDG-S-030** LSC have raised issues around ongoing maintenance costs of sewer connections. The issues are often caused by poor workmanship of contractors. LSC have proposed revisions to drawing S-030 as per the markup **(Attachment M)** The justifications are as per below: • Council does not install the top junction of a "jump up". • Plumbing contractors have no incentive [except for good practice] to compact around and under the top junction that commonly fails. • Council plumbing inspectors have measured up and left when this void is filled. • Access to this area in the property is often difficult and expensive. • Re-instatement of this area is often difficult and expensive. • Property owners often don't know about "jump ups" and commonly build over them. • Should council repair/replace a "jump up" there is an expectation we have accepted ownership and will continue to maintain it. • Council often has to return and maintain the re-instatement. This change would required updates to other LGA documentation as well as the CMDG drawings. Historically the ownership of the jump up is by the LGA. This is supported by the Standard Sewerage Law/ Sewerage and Water Supply Act 1949, which in section 14 point 6 states that the jump up is part of the sewerage system (extract below). For discussion. **14 Access to sewerage system** **(1)** A local government must, to the greatest practicable extent, make sure that— (a) all premises in a sewered area are able to be connected directly and separately to the local government's sewerage system for the sewered area; and (b) the sewerage system can deal with the sewerage requirements of all premises in the sewered area. **(2)** Subsection (1) does not stop the local government from recovering from an owner of premises the reasonable cost of complying with the subsection for any particular premises or premises group. **(3)** If 2 or more premises are part of a premises group, the local government does not fail to comply with subsection (1) because it makes sure only that the premises group, rather than each individual premises, is able to be connected directly and separately to its sewerage system. **(4)** The design of the sewerage system must allow for a connection point for each premises or premises group to be at or within the boundary of the premises or premises group, and, to the greatest practicable extent, at an invert level below ground level at which a sanitary drain or property sewer laid at minimum grade is capable of servicing the premises or premises group. **(5)** The placing of each connection point is to be decided by the local government, acting reasonably in the circumstances of the connection. **(6)** A junction, bend, pipe, jump up or graded jump up required to connect a sanitary drain or property sewer to the local government's sewer is part of the sewerage system, but only if the sanitary drain or property sewer is at or above the level of the sewer. <u>M2023.02 Discussion</u> Brief summary on the issue and MCE highlighted that there may be legal ramifications with the proposed change.

	M2023.02 resolution LGAs to review any internal information and consider LSC proposal. Action By All
M23.01.09	**As Constructed Certification by Surveyor** The Surveyors Board Queensland contacted RRC regarding the terminology in relation to the certification of as constructed plans/ information. The letter notes the different levels of Queensland Surveyor Registration and provides recommendation on the requirement for a "Registered Surveyor Queensland" to provide as constructed certification. Letter is **Attachment N**. For discussion M2023.02 discussion Impacts to documentation reviewed and other LGAs mentioned that they had received the same letter. M2023.02 resolution Make the following changes to CMDG documentation: • CP1.21.2 Replace "Licensed Surveyor" with "Registered Surveyor (QLD)" (This clause relates to as-constructed survey) • CP1.24.3 Replace "Licensed Surveyor" with "Registered Surveyor (QLD)" (This clause relates to as-constructed drawings) • CP1.29.1 Replace "Licensed Surveyor" with "Registered Cadastral Surveyor (QLD)" (This clause relates to sealing the plan of survey) • CP1.C Example Subdivisional Inspection and Test Plan - Replace "Licensed Surveyor" with "Registered Surveyor (QLD)" (This clause relates to as-constructed drawings) There could be other changes that are necessary. Each LGA to check over their As Constructed requirements to see if there are licenced surveyor references there also. Action By MCE – update documentation. All review any other impacts

M23.02.01	**Pipe roughness parameters** – No resolution this meeting From Nathan/ BSC: With the significant rainfall currently being experienced, we are finding that pipes are quickly becoming congested with debris, reducing their operational capacity. Networks designed to the 'Good' parameters require continued maintenance to operate at an acceptable level or can quickly deteriorate from good to poor condition very quickly. This results in resourcing issues when Council inherits these assets at the conclusion of the on-maintenance period. The original request was that BSC wished to adopt 0.6mm minimum pipe roughness value. However, D5 doesn't directly contain any information in relation to the Colebrook White equation. It does reference the charts and the CPAA hydraulics design manual (which uses Colebrook White). However, QUDM is the main point of reference and is based on manning's equation for pipe capacity, typical values are for "average" conditions. For discussion: • Use of worse case parameters for design • Higher cost for developers to reduce LGA maintenance costs • Any similar issues noted by other LGAs <u>Suggested resolution</u> TBC <u>For Action</u> TBC

M23.02.02	**D11 Water Supply Network -D11.07.02 and Table D.11.07.02 Minimum and Maximum Pressures for Network Design** – No resolution this meeting LSC have been having issues with achieving minimum pressure at house pad on elevated battleaxe blocks. There have been a number of discussions and it is suggested that the text below be included in D11: *In situations where internal services from the meter to proposed house building pads exceeds a length of 10m (for example battleaxe allotments) it may be necessary for 32 to 50mm polyethylene to be extended from the meter to the building site or the installation of tanks and pumps (both options at the Developers expense). This is to ensure that sufficient pressure is available at the house building pad location. The designer shall make a submission to Council to demonstrate what internal infrastructure is necessary where the internal service from the meter to the house building site will exceed a length of 10m.* Further background from Chris' email: The design parameters in CMDG are intended to ensure that Council has enough capacity in the system to supply elevated lots. So the design parameters ensure that the infrastructure has the capability to supply water to a higher level than the meter. Owners could usually do this by using larger diameter poly to the house site. In fact in the past I have conditioned for larger diameter poly to extend up a battleaxe handle to the building site to ensure this happens. The service standards are where you outline that Council is obligated to supply the required pressure at the meter. That is, despite what the design standards say Council takes on a lesser obligation when it comes to the customer service standards. Refer to FRW customer service standards below. Note I could not find LSC's customer service standards – do you have something similar? I suggest you would defend Councils position based on your obligation to supply the required pressure only at the meter and at no other point based on customer service standards (despite what the design parameters are). Having said that I think that the situations you have presented below with long internal service lines to building sites does present an issue. This is because the Node level for design at "Finished surface/ street elevation at the main location, building pad level or at the mean lot level, whichever is the highest" does not contemplate it will be a long horizontal distance from the meter to the building pad level. The way for Council to deal with this is to identify such properties at development time and ensure tanks and pump are provided by the Developer if necessary (Tanks and pumps for private maintenance not Council – Councils obligation ends at the meter).

D11.07.03. A minimum design pressure head for Domestic Demands alone, for each Water Service Provider as presented in Table D11.07.02 Minimum and Maximum Pressures, shall be provided during the MH (maximum hourly maximum day) on third consecutive Maximum Day consumption at the defined building pad level or at the mean lot level, whichever is the highest elevation. For clarity when carrying out water network analysis the node levels must comply with the details in Table D11.07.02.

Minimum Pressure Domestic Demands

D11.07.04. The maximum design pressure shall not be exceeded. The maximum desirable design pressure for each local government is outlined in Table D11.07.02. Where, practical, pressure reducing valves or other network design measures shall be utilised to achieve this requirement.

Maximum Pressure

Table D11.07.02 Minimum and Maximum Pressures for Network Design

	Minimum Pressure at the Node	Node Level for Design	Maximum Desirable Pressure	Absolute Maximum Pressure
Banana Shire	22 m	Finished surface/ street elevation at the main location, building pad level or at the mean lot level, whichever is the highest	50 m	80m
Central Highlands Regional	22 m		50 m	80m
Gladstone Regional	25 m (in main)* 20m (in main – constant flow network)	Finished surface/ street elevation at the main location	50 m (reticulation network)	80 m
Isaac Regional	22 m	Finished surface/ street elevation at the main location, building pad level or at the mean lot level, whichever is the highest	50 m	80m
Livingstone Shire	22 m		50 m	80m
Maranoa Regional	20 m		50 m	80m
Rockhampton Regional	22 m		50 m	80m

* In all design instances it is required that there is a minimum of 22m at the water meter

Adequacy and Quality of Normal Supply of Water

CSS Reference	Performance Indicator	Potable Water Schemes	
		Rockhampton & Gracemere Water Supply Scheme	Mount Morgan Water Supply Scheme
CSS8	Minimum pressure standard at the water meter (kPa)	220 kPa	220 kPa
CSS9	Minimum flow standard at the water meter	9 L/min	9 L/min
CSS10	Connections with deficient pressure and/or flow (% of total connections)	< 2.5%	< 2.5%
CSS11	Drinking water quality (compliance with industry standard)[1]	> 98%	> 98%
CSS12	Drinking water quality complaints (number per 1,000 connections)	< 5	
CSS13	Drinking water quality incidents (number per 1,000 connections)	< 5	< 5

Suggested resolution

Include proposed text in D11.

Action By

MCE