CAPRICORN MUNICIPAL DEVELOPMENT GUIDELINES

2023 MEETING 3 MINUTES

Venue: Teams

Date and Time: **28th April at 11:00 am**

<table>
<tr><th>Item</th><th>Item</th></tr>
<tr><td>1</td><td>Welcome

Attendance:
Chris Hegarty (MCE), Richard Bywater (MCE), Scott McDonald (GRC), Brendan Fuller (GRC), Grant Vaughan (RRC), Mohit Paudyal (RRC), Frank Nastasi (IRC), Jamie McCaul (RRC), Gary Carlyle (IRC), Jarvis Black (MRC), Sarah Banda (CHRC)</td></tr>
<tr><td>2</td><td>Apologies:
Jon Ashman (LSC), Tony Lau (LSC), Cameron Hoffmann (MRC), Anthony Lipsys (BSC), Frans Krause (GRC), Michael Stanton (IRC), Jason Gustafson (LSC), Nathan Garvey (BSC),</td></tr>
<tr><td>3</td><td>True and correct record of minutes from previous meeting
Refer Attachment A

<u>M2023.03 Resolution:</u>
That the minutes of the meeting held in Calliope on 30th March 2023 be formally adopted.</td></tr>
<tr><td>4</td><td>Terms of reference and Budget
Budget is roughly pro rata at the moment. No requests for more detailed breakdown/ estimate.
Reminder from Scott to allow for website development cost and upcoming invoice from LGAQ (distributed by GRC).</td></tr>
<tr><td>5</td><td>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.
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<tr><td>M22.01.01</td><td>Website Update</td><td>All</td></tr>
<tr><td>M10.5.1</td><td>D6 Site regrading – consider retaining wall issue</td><td>LSC</td></tr>
<tr><td>M22.04.01</td><td>Review of Reference documents in all Specifications</td><td>BSC</td></tr>
<tr><td>M22.08.02</td><td>D14 Floodways</td><td>MCE/RRC</td></tr>
<tr><td>M23.01.01</td><td>D11, PS4 and CMDG-W-091 : PN12.5 vs PN16</td><td>LSC/MCE</td></tr>
<tr><td>M23.01.02</td><td>Standard Drawing R-042 – Type A Commercial Driveway Slab</td><td>MCE</td></tr>
<tr><td>M23.01.03</td><td>Standard Drawing W-090 - 20 & 25mm Service and Water Meter Connections</td><td>GRC/MCE</td></tr>
<tr><td>M23.01.04</td><td>D1 – Evacuation Routes</td><td>GRC</td></tr>
<tr><td>M23.01.05</td><td>D11, D12, D5 – Acceptable software packages</td><td>All</td></tr>
<tr><td>M23.01.06</td><td>C224 – Open Drains</td><td>GRC</td></tr>
<tr><td>M23.01.07</td><td>C213 Earthworks Specification</td><td>GRC</td></tr>
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<tr><td>M23.01.08</td><td>Sewer Jump up ownership and drawing CMDG-S-030</td><td>LSC</td></tr>
<tr><td>M23.02.01</td><td>Pipe roughness parameters</td><td>BSC</td></tr>
<tr><td>M23.02.02</td><td>D11 Water Supply Network -D11.07.02 and Table D.11.07.02 Minimum and Maximum Pressures for Network Design</td><td>LSC</td></tr>
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<tr><td>6</td><td>New Agenda Items
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<tr><th>Item number</th><th>Item</th><th>Proponent</th></tr>
<tr><td>M23.03.01</td><td>G-020 Updates</td><td>All</td></tr>
<tr><td>M23.03.02</td><td>Planning scheme vs CMDG differences</td><td>All</td></tr>
<tr><td>M23.03.03</td><td>Sewer chamber size vs depth</td><td>GRC</td></tr>
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<tr><td>7</td><td>General Business

From M2023.01:

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
Reminder to review and respond to colour coding of infrastructure email to allow finalisation of D11 and D12 documents. Rich to resend email and give 2 weeks for review. Jarvis raised the idea of providing guidance for retrospectively changing infrastructure or providing previous colour/ label information with CMDG. Some discussion on advantages and disadvantages. Decision to not include as CMDG is primarily for new development.

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<tr><td>8</td><td>Next Meeting
Next meeting to be via Teams on Friday 26th May at 11am.</td></tr>
<tr><td>9</td><td>CMDG Action Register
The latest register is Attachment B

CMDG Trial Register
The latest register is Attachment C

Schedule 1
The latest schedule is Attachment D
Any update on names vs position titles in schedule?</td></tr>
<tr><td>10</td><td>Meeting Closed at 12.10pm</td></tr>
</table>

Item No.	Item Details
M22.01.01	**Website Update** M2023.01 Resolution 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. M2023.02 Update • 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. M2023.02 Resolution Continue as planned with website development. M2023.03 Update Sign off completed for LGAQ to progress detailed design. Grant, Scott and Rich attended meeting with LGAQ to discuss detailed design phase and transfer for files from current website to new website. Training requirements raised by Scott. LGAs to confirm if they wish to have representatives in attendance. *Post meeting additional notes:* • *Grant, Scott and Rich had a meeting to confirm some website layout and details.* • *LGAQ recommend limiting training to 10 people onsite and 8 via teams. Training location to be confirmed – potentially GRC in Calliope or RRC in Rockhampton. Note that additional costs e.g. travel and accommodation are not included in the LGAQ fee and will be charged as a variation.* M2023.03 Resolution Continue as planned with website development. Action By GRC, RRC & MCE
M10.5.1	**D6 Site Regrading – consider retaining wall issue** 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. M2023.03 Update/ Discussion Comments have been received from Tony at LSC regarding wall position and ownership and some debate has occurred between MCE and LSC. Tony's input will be presented as part of any future discussions in the subcommittee. Some resolutions to the RRC case. Following this some legal advice has been received and some typical cross sections have been created. Discussion on how much should be contained in CMDG as this could be covered in building application and RPEQ certification. However, retaining walls can form part of operational works. General agreement to limit the amount on information shown in CMDG, provide general guidance directly in relation to new development. M2023.03 Resolution Subcommittee meeting with RRC, LSC and MCE to be in next 2 weeks. Jamie to provide legal advice information to the committee Rich to send information from research include university paper and fact sheets 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	Apr 2023	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	Apr 2023	No	
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.

M2023.03

Rich to send Grant summary of previously noted changes required to D2.

Scott noted that D13 may no longer be applicable to GRC and may be removed. All LGAs to confirm that D13 is not applicable, if so D13 can be removed.

Local Government	D13 Applicability
Banana Shire	
Central Highlands Regional	
Gladstone Regional	No
Isaac Regional	
Maranoa Regional	
Livingstone Regional	
Rockhampton Regional	No

Action By

All

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.

Remove from agenda as this will be covered by item M22.04.01.

Action By

LSC/RRC

M23.01.01

D11, PS4 and CMDG-W-091 : PN12.5 vs PN16

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						

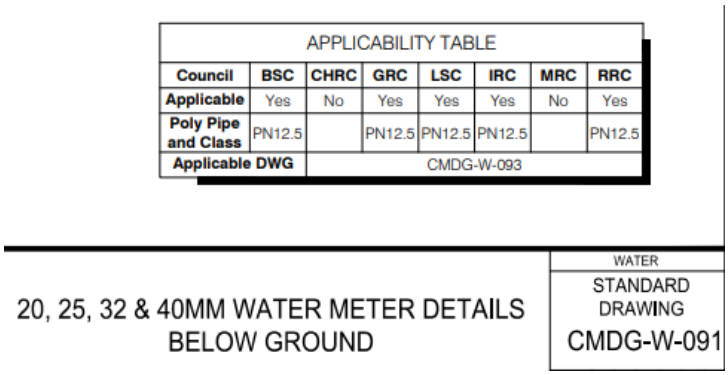


Table D11.09.01 PVC* Minimum Water Main Pipe Classes

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).	Confirmed
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).	Confirmed

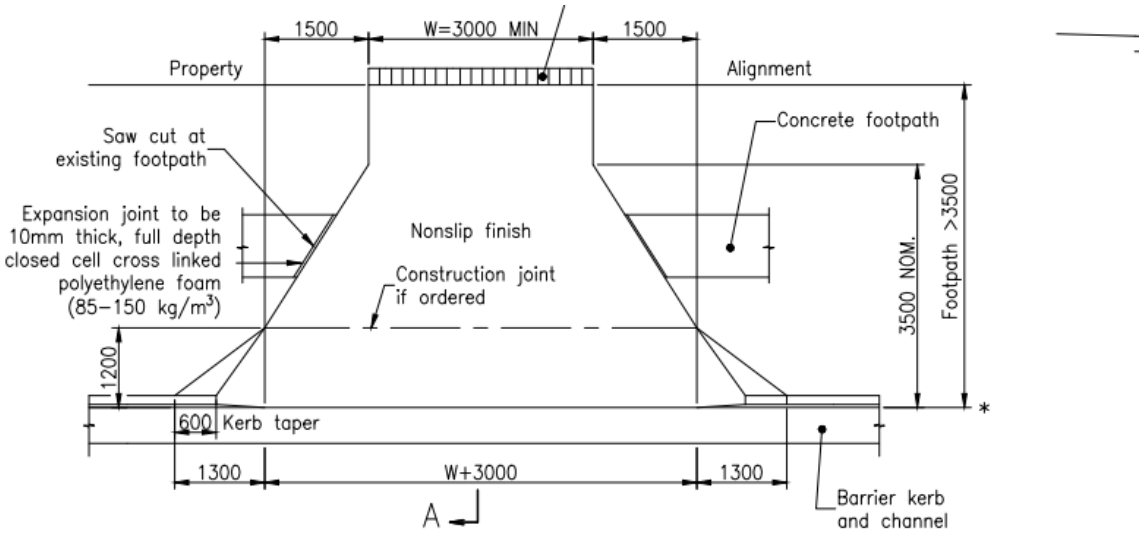
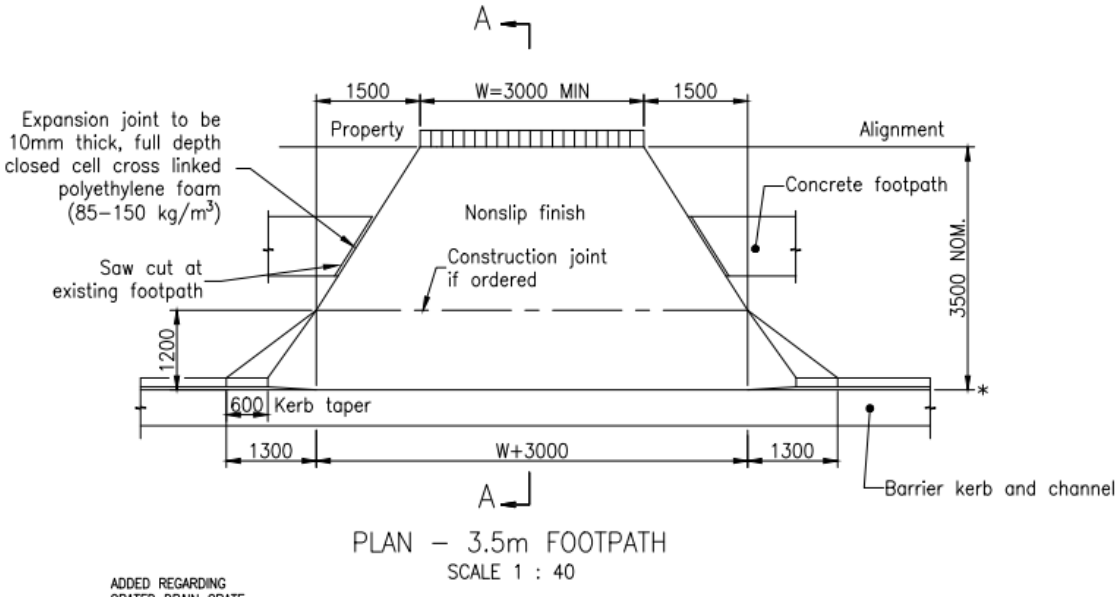
Standard drawings W-020, W-030, W-091 W-081 need to be updated with any changes.

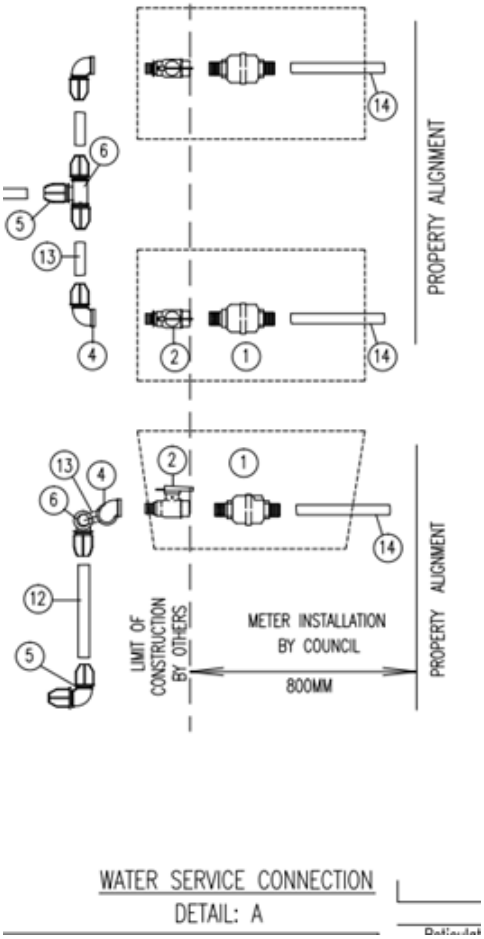
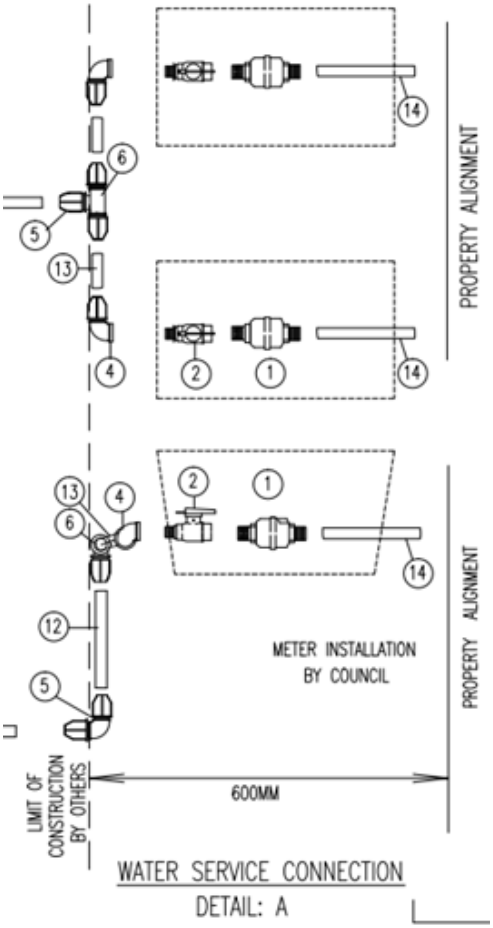
Although test pressure of 1250kPa specified in D11 is equal to the PN rating of the pipe, the test pressure can be up to 1.25 times the maximum allowable operating pressure or PN rating. This means that for PN12.5 a maximum test pressure of 15.6bar is permissible.

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

For discussion

	M2023.03 Resolution Update Standard drawings W-020, W-030, W-081 to PN16 poly for LSC. Other LGAs to remain as PN12.5. In D11 Amend IRC DICL Class to PN35 Rich to send LSC justification email to committee. 2 week response time to advise otherwise changes will be made as detailed above. Action By MCE

M23.01.02	**Standard Drawing R-042 - Type A Commercial Driveway Slab** It has been pointed out that the kerb taper shown in the plan view may be drawn incorrectly   <u>M2023.03 Resolution</u> Some discussion on the titles and industrial vs commercial. Agreed to leave A version titles the same as these match GRCs road hierarchies and are only applicable to GRC. MCE to investigate current requirements for reinforcing as SL72 may be insufficient for 175mm thick. Update drawings R-042, R-042A, R-043, R-043 and send to committee for review prior to upload. <u>Action By</u> MCE

M23.01.03	**Standard Drawing W-090 - 20 & 25mm Service and Water Meter Connections** 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>M2023.03 resolution</u> LGAs to discuss with requirements water departments and provide feedback. <u>Action By</u> All

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.

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.

M2023.03 Discussion

Scott raised that there could be issues if the LGA is not able to access or use the information. Jamie raised the same issue with LGAs potentially not being able to feed new information back into existing models if the format is different.

Suggested Resolution - No resolution this meeting

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** - No resolution this meeting 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. M2023.03 Suggested resolution TBC Action By All
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 Suggested resolution TBC For Action 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

M23.03.01

Standard Drawing CMDG-G-020 - No resolution this meeting

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		
Central Highlands Regional		
Gladstone Regional		
Isaac Regional		
Maranoa Regional		
Livingstone Regional		
Rockhampton Regional		

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

For discussion

Suggested Resolution

Action By

MCE

M23.03.02	**Planning scheme vs CMDG differences** - No resolution this meeting LGAs to check planning schemes for any inconsistencies with CMDG so that these can be either amended or noted in CMDG.
M23.03.03	**Sewer chamber size vs depth** - No resolution this meeting Consideration to be given 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. *More detail and suggested resolution to come following research by MCE* For discussion Suggested Resolution Action By