

Peter Childs

From: Grant Harlow <GHarlow@martens.com.au>
Sent: Tuesday, 4 December 2012 4:22 PM
To: Peter Childs; Daniel Martens; Megan Kovelis
Subject: FW: Riverside MUSIC modelling
Attachments: Riverside MUSIC modelling

BMT WBM review of Martens prelim MUSIC model attached plus issues resolved in subsequent conversations.

Regards

Grant Harlow
Project Manager, Senior Engineer
BE(Hons), BNatRes(Hons), MIEAust



Martens & Associates Pty Ltd
Unit 6/37 Leighton Place
Hornsby, NSW 2077
P + 61 2 9476 9999
F + 61 2 9476 8767
www.martens.com.au

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From: Tony Weber [mailto:Tony.Weber@bmtwbm.com.au]
Sent: Wednesday, 3 October 2012 3:52 PM
To: Megan Kovelis; Stuart.Withington@planning.nsw.gov.au
Cc: Grant Harlow; Daniel Martens; peter.childs@erm.com; Geoff Cox (geoffrey@crighton.com.au)
(geoffrey@crighton.com.au)
Subject: RE: Riverside MUSIC modelling

Hi Megan

I concur with your dot points 1 and 4. For dot point 3 it is appropriate to use a high flow bypass for a GPT where it is fitted with an internal flow diversion structure, like that used in a CDS unit or Humeceptor, as when the bypass is engaged, it completely bypasses the unit. Where a dedicated bypass is not used, then the MUSIC model will calculate when the system overflows. For dot point 2 I rechecked the model you previously sent and I think if you do this you won't need the downstream GPTs to achieve the gross pollutant removal which would be a far better way forward I would think.

Cheers

Tony

Tony Weber
National Practice Leader – Water Quality
BMT WBM Pty Ltd

Visiting Fellow
Integrated Catchment Assessment and Management Centre
Fenner School
Australian National University

BMT WBM Pty Ltd
Level 8, 200 Creek Street
Brisbane QLD 4000 Australia
P: +61 7 3831 6744
F: +61 7 3832 3627
M: +61 407 316 215
W: www.bmtwbm.com.au



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From: Megan Kovelis [<mailto:mkovelis@martens.com.au>]
Sent: Wednesday, 3 October 2012 3:37 PM
To: Tony Weber; Stuart.Withington@planning.nsw.gov.au
Cc: Grant Harlow; Daniel Martens; peter.childs@erm.com; Geoff Cox (geoffrey@crighton.com.au)
(geoffrey@crighton.com.au)
Subject: RE: Riverside MUSIC modelling

Tony,

Thank you for your time this afternoon. In summary the following was discussed/resolved in relation to our preliminary MUSIC modelling at Riverside:

1. Rather than using mean daily evaporation data for Williamtown RAAF (sourced from BOM) we should use areal potential evapotranspiration figures that are calculated based on the BOM Climatic Atlas of Australia.
2. Use of GPT's downstream of biofilters is justified given the pollutant reduction objectives that we need to achieve (90%) are not achieved with biofilters alone. The application of these GPT's will be explained in the report so that what we have been modelled can be applied in 'real life'.

3. For the biofilters and GPT bypass, use of the default (100 m³/s) is more appropriate than figures calculated in accordance with the NSW MUSIC Guidelines given no high flow channels are proposed.
4. For roof source nodes, base flow EMC values will be changed to 0.001 instead of 0.000 as in some versions of MUSIC this returns an error message.

Provided these adjustments are made, we assume that our modelling approach is satisfactory and we can progress with finalising a whole-site model.

We appreciate the feedback provided. Please let us know if there is anything further.

Kind Regards,

Martens & Associates Pty Ltd

Megan Kovelis
Environmental Scientist
BEnvSc (Hons1)



Martens & Associates Pty Ltd
Unit 6/37 Leighton Place
Hornsby, NSW 2077
P + 61 2 9476 9999
F + 61 2 9476 8767
www.martens.com.au

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From: Stuart Withington [<mailto:Stuart.Withington@planning.nsw.gov.au>]
Sent: Wednesday, 3 October 2012 12:31 PM
To: Grant Harlow
Cc: Geoff Cox
Subject: Riverside MUSIC modelling

Hi Grant

please find attached BMT WBM's review. There appears to be some fundamental errors with the preliminary modelling so we are glad we have had the review undertaken. Please ensure all of BMT WBM's recommendations are followed with the detailed modelling. Can you please give me an estimate of how long it will take to provide this?

thanks

Stuart Withington

A/Team Leader
Metropolitan & Regional Projects North
NSW Department of Planning & Infrastructure | GPO Box 39 | SYDNEY NSW 2001
T 02 9228 6546 E Stuart.Withington@planning.nsw.gov.au



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