



Johann Terblanche

Head: Catchment, Stormwater and River Management Branch
(Region 3 - Northern Districts)

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E johann.terblanche@capetown.gov.za

Date : 18 November 2025

To : Ekcon Consulting Engineers & Graeme McGill

Parties : I & C Developers, Sonstraal Developers & PSP Consulting Engineers

Subject : **MOSELBANK CANAL – SUPPLEMENTARY FLOODLINE STUDY REV2**

Our Ref : 2.5.2 DEVELOPMENT PROPOSAL - NORTH (DIEP/MOSSELBANK RIVER)

The Catchment Stormwater & River Management (This Office) acknowledges the receipt of the Stormwater Management Plan (SWMP)(attached): "MOSELBANK CANAL – SUPPLEMENTARY FLOODLINE STUDY, Report No.: MC458-01, Revision: 2, Date: 2025-10-14", compiled by Graeme McGill on behalf of Ekcon Consulting Engineers (EKCON) & appointed by Sonstraal Developers, submitted on 17 October 2025.

This letter is a revision to the letter issued on 27 October 2025 (attached), after the meeting held on 4 November 2025 (Minutes attached).

CONTEX

1. ASP Technology (ASP), appointed by PSP Consulting Engineers (PSP), on behalf of I & C Developers (Stonewood Estate), submitted a Floodline Study (Rev. 2, July 2024) for the Mosselbank Canal / Stonewood Estate:
 - 1.1 The study was initiated by I & C Developers to establish whether the new bridge had improved the floodlines and unlocked sterilized land.
 - 1.2 The study however indicated that the Stonewood Drive bridge, designed by Ekcon Consulting Engineers, caused the Stonewood Drive road to overtop, resulting in increased flood levels within in the Stonewood Estate.
 - 1.3 ASP proposed a concrete flood retaining wall on private property to mitigate the flooding, this floodwall also opens up a portion of sterilized land for development.
 - 1.4 CSRM evaluated the report and two rounds of technical queries were submitted to ASP for feedback.
 - 1.5 CSRM did not support the floodwall approach, based on the following comments:
 - 1.5.1 Broader upstream/downstream flood risks;
 - 1.5.2 Legal and liability implications;

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1.5.3 The precedent it would set for private floodwalls to be used to open up developable space.

1.5.4 Possible flood risks associated with shift in up and downstream floodlines

2. Ekcon was requested to provide all design data, models, and supporting documentation by 15 February 2025, after which a joint review meeting would take place on 3 March 2025 to determine the way forward.
3. A joint meeting between all the stakeholders was held on 3 March 2025, attended by this Office, Roads Infrastructure Management Department (RIM), ASP, PSP & Ekcon.
 - 3.1 It was confirmed that Ekcon had only conducted a backwater analysis, not a full floodline assessment, during the 2023 bridge design.
 - 3.2 ASP's study showed adverse flood impacts, prompting their floodwall proposal.
 - 3.3 RIM reiterated that the bridge and road may not negatively affect stormwater flow as per land use conditions.
 - 3.4 A way forward was determined:
 - 3.4.1 ASP/PSP to share their study with Ekcon;
 - 3.4.2 RIM & CSRM to engage with Sonstraal Developers (Le Coste Estate) (including Ekcon, and Graeme McGill ;
 - 3.4.3 Ekcon & Graeme McGill (McGill) to model the bridge in HEC-RAS 2D;
 - 3.4.4 Follow-up meeting planned for 7 April 2025.
4. Ekcon and Graeme McGill confirmed that their updated floodline report would be completed by end of July 2025.
5. Once submitted, all data would be shared among ASP, PSP, and Ekcon for coordinated review.
6. A follow-up technical meeting was proposed for 14 August 2025 to discuss findings.
7. The updated floodline study by Ekcon/McGill was submitted on 27 August 2025.
 - 7.1 CSRM evaluated the report and two rounds of technical queries were submitted to Ekcon/McGill for feedback.
8. An updated floodline study by Ekcon/McGill was submitted on 19 September 2025.
9. A joint meeting between all the stakeholders was held on 8 October 2025, attended by this Office, ASP, PSP, Ekcon, I & C Developers & Sonstraal Developers.
 - 9.1 The aim of the meeting was to review and reconcile the two independent floodline studies (ASP/PSP vs. McGill/Ekcon).
 - 9.2 Two design options were presented:
 - 9.2.1 Option 1 (ASP/PSP): Continuous concrete flood retaining wall on private property to protect Stonewood and unlock land.
 - 9.2.2 Option 2 (McGill/Ekcon): Construction of a flood berm along the southern edge of Stonewood Drive to improve hydraulic performance & mitigate overtopping of the road
 - 9.2.3 Option 3 (McGill/Ekcon): Opening of the Bonnie Brae culvert as an additional means to mitigate flooding of the Bonnie Brae residential area.

9.3 Consensus was reached to adopt the McGill/Ekcon solution as the preferred option.

9.4 Two possible berm designs were discussed for Option 2:

9.4.1 Parapet wall; or

9.4.2 Earth berm with erosion protection.

9.5 ASP was requested to provide professional review input for incorporation into the consolidated report, to be submitted on 10 October 2025.

9.6 McGill was tasked to update the floodline report (including cost estimates) by 17 October 2025.

10. I & C Developers (Stonewood Estate), Sonstraal Developers (Le Coste Estate), and CCT (RIM) to agree on implementation funding and maintenance responsibilities by means of a formal Service Level Agreement (SLA).

11. A follow-up meeting to be held on 4 November 2025 at RIM's Kraaifontein offices, committee room, 1st floor.

12. ASP formally reviewed Ekcon/McGill's flood report: "Mosselbank Canal – Supplementary Floodline Study" and submitted comments to the City (attached), via a formal letter on 10 October 2025. The comments are listed below:

12.1 Include climate change by applying a 15% increase to rainfall intensity ($Q_{100CC} = 60 \text{ m}^3/\text{s}$).

12.2 Use simulated energy levels (not just water surface) for floodline delineation and berm design.

12.3 Design the berm crest for $Q_{100CC} + 0.5 \text{ m}$ freeboard.

12.4 Consider an alternative parapet concrete wall (on sheet piling) as mitigation.

12.5 Include erosion protection along the berm/road during detailed design.

12.6 ASP concluded that McGill's proposed berm solution effectively addresses flooding on Stonewood Road and Estate, while also reducing upstream backwater.

12.7 They recommended the McGill report (with these minor amendments) be accepted by the City of Cape Town with the above changes incorporated.

13. McGill's final report, submitted on 17 October 2025 (attached), consolidated all technical inputs and recommended the following:

13.1 A 155 m long berm along the southern edge of Stonewood Drive to prevent overtopping and spillage into Stonewood Estate (Alternative: Reinforced concrete or brick wall with equivalent crest elevation).

14. A meeting between all the stakeholders took place on 4 November 2025 (minutes attached) and the following outcomes were consolidated on:

14.1 I & C Developers will fund the berm construction and the Bonnie Brae culvert removal via DCs from the Stonewood development extension.

14.2 Ekcon (under Sonstraal Developers) will undertake the design, to be funded by I & C Developers (approximately R70,000).

14.3 The flood study report approval letter must be amended to include the following (The previous CSRMS approval letter dated 27 October 2025 will be retracted):

- 14.3.1 To be addressed to Ekcon and Graeme McGill and include the parties, with all stakeholders copied.
- 14.3.2 To state that the berm option is supported, subject to final authorization and design requirements (i.e. berm, brick wall, or concrete wall).
- 14.3.3 Conditions will be incorporated into the amended letter as if Ekcon will be designing and implementing the berm based on the McGill flood study.
- 14.3.4 The letter will also state that an SLA must be concluded between the CCT(RIM) and I & C Developers.
- 14.3.5 The letter will state that the maintenance responsibility of the berm will be confirmed during
- 14.4 A formal Land Use Application must be submitted for the additional 98 units, by I & C Developers, the Land Use will adhere as follow:
 - 14.4.1 Finished Floor Levels for the Stonewood extension to be set at 250 mm above the 1:100 flood level.
 - 14.4.2 The berm must be constructed prior to Practical Completion Certification of civil services for the Stonewood additional 98 units.
 - 14.4.3 Stormwater attenuation and treatment for Stonewood additional units are required.
 - 14.4.4 Berm maintenance responsibility to be clarified (cross-section to be sent to Vincent).
 - 14.4.5 SLA to be formalized during the Land Use Application process.
- 14.5 CSRM mentioned that the process had taken longer to reach conclusion, however it had been in the best interest of the Stonewood Estate, La Coste and the CCT, since the proposed mitigation will prevent flooding, be cheaper than the initial concrete wall proposal and furthermore, the developable space opened by this proposal will be double the original space.

CONDITIONS (Applicable to I & C Developers (Stonewood Estate "Extension") and Berm Design Engineer i.e. Ekcon & Graeme McGill (or other))

This Office **supports** the **Mosselbank Canal – Supplementary Floodline Study**, subject to these conditions:

1. The option to construct a flood berm as per the abovementioned study is supported, subject to final authorization in terms of final intervention option (i.e. berm, brick wall or concrete wall).
2. If during any scenario, Ekcon Consulting Engineers cannot provide the design of the "flood berm" another Consulting Engineer may be approached by the developer (I & C Developers), to conduct the design. The conditions of this letter will still apply.
3. A Service Level Agreement between RIM and I & C Developers must be established in terms of the construction of the "flood berm".
4. The maintenance responsibilities of the "flood berm" will be determined during the Land Use Application process and confirmed within the abovementioned Service Level Agreement.
5. The proposed upgrades to the bridge must be completed and fully functional, prior to the practical and final civil engineering clearance inspections of the Stonewood Estate "extension".

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6. Detailed stormwater infrastructure design drawings must be prepared by a registered Civil Engineering Professional and be submitted for approval to Council (Urban Mobility: Roads Infrastructure Management) prior to commencement of any work. All services shall comply with the "Standards and Guidelines for Roads & Stormwater (February 2022 Version 3.0)" & "Water & Sanitation Department Service Guidelines & Standards (20 June 2019 Version 3.3)".
7. The proposed bridge upgrades, must be fully constructed and completed as per the below conditions:
 - 7.1 Prior to commencement of earthworks and construction of any development on future developable land situated on current downstream floodplains.
8. The approval of this report does not constitute the approval of any Land Use or Development Application, however may be used as a motivation along with the applicant's submission.
9. Any prospective developments on the affected floodplains, must follow the Town Planning application process in full.
10. Copies of the following documentation must be forwarded to the relevant Urban Mobility Directorate's RIM Department and this Office, prior to practical & final civil engineering services inspections.
 - 10.1 EKCON - A photo file during construction of the overland escape routes etc.
 - 10.2 EKCON - Civil engineering as-built drawings (e.g. stormwater reticulation, attenuation and treatment facilities etc.)
 - 10.3 EKCON – PCSWMM/HEC-RAS Models for GIS purposes.
 - 10.4 EKCON - Stormwater Operation and Maintenance Manual.
 - 10.5 EKCON - Revised Flood Study (if applicable).
 - 10.6 EKCON - Practical Completion Certificate w.r.t. civil engineering services.
11. After receiving the aforementioned documentation, this Office together with the relevant Urban Mobility Directorate's RIM Department will inspect all works, before signing off and taking over the completed infrastructure.
12. The developer must provide all services and link services required to the satisfaction of the City.
13. The Engineer shall monitor all construction activities and maintain an adequate level of supervision of the works.
14. The City of Cape Town reserves its right to hold the developer liable for any claims in respect of damage to municipal/ private property or infrastructure and additional municipal maintenance cost incurred as a result of flooding, siltation and contaminated stormwater caused by construction activities on this precinct and/ or ceasing of work due to inclement weather.
15. If the developer should decide to continue with construction of civil engineering infrastructure (which includes the stormwater infrastructure) without municipal approved conceptual stormwater plan/ stormwater management plan and civil engineering design drawings, then these activities are executed at the developer's own risk and cost.
16. It is the responsibility of the developer and his environmental consultant to ensure that, if any of the steps required above will require further authorisation from any other organ of state, such

authorisation (s) must be obtained and be brought to this Office's attention. (i.e. Water Use License, Environmental Authorisation, General Authorisation or renewal/ amendment etc.

Please note that these comments are based on the information that has been received to date. Should any new information be provided to this office, then this office reserves the right to review the recommendations as deemed appropriate.

Yours faithfully

P.P.

Johann Terblanche

Head: Catchment Planning: Region 4 (Northern Districts)

CC:

CITY OF CAPE TOWN

Clarissa Fransman	: Spatial Planning and Environment: Environmental Management (Northern region)
Kloey Bam	: Water & Waste Services: Assistant Catchment Planer: Region 3 (Northern Districts)
Motlatsi Nkholesa	: Water & Waste Services: Assistant Catchment Planer: Region 3 (Northern Districts)
Willem Burger	: Water & Waste Services: Assistant Catchment Planer: Region 3 (Northern Districts)
Willie Liebenberg	: Principal Professional Officer, Roads Infrastructure Management
Vincent Harris	: Head: District Roads & SW Kraaifontein, Roads Infrastructure Management
Johan Snyman	: Manager: RIM Area North, Roads Infrastructure Management

PARTIES

Jaco van Zyl	: PSP Consulting Engineers
Chris Moller	: I & C Developers
Isaac Borochoviz	: I & C Developers
Rikus Steyn	: Ekcon Consulting Engineers
Graeme McGill	: McGill Consulting Engineers
John Coetzee	: Sonstraal Developers



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Date : 27 October 2025

To : Ekcon Consulting Engineers (EKCON)/Graeme McGill (McGill Consulting)

SUBJECT : **MOSSELBANK CANAL – SUPPLEMENTARY FLOODLINE STUDY**

Our Ref : 2.5.2 DEVELOPMENT PROPOSAL - NORTH (DIEP/MOSSELBANK RIVER)

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 - 1.4 CSRМ evaluated the report and two rounds of technical queries were submitted to ASP for feedback.
 - 1.5 CSRМ did not support the floodwall approach, based on the following comments:
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 - 1.5.3 The precedent it would set for private floodwalls to be used to open up developable space.
 - 1.5.4 Possible flood risks associated with shift in up and downstream floodlines

2. Ekcon was requested to provide all design data, models, and supporting documentation by 15 February 2025, after which a joint review meeting would take place on 3 March 2025 to determine the way forward.
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9.6 McGill was tasked to update the floodline report (including cost estimates) by 17 October 2025.

10. STONEWOOD, Le Coste Developer (LE COSTE), and CCT (RIM) to agree on implementation funding and maintenance responsibilities by means of a formal Service Level Agreement (SLA).
11. A follow-up meeting to be held on 4 November 2025 at RIM's Kraaifontein offices, committee room, 1st floor.
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 - 12.2 Use simulated energy levels (not just water surface) for floodline delineation and berm design.
 - 12.3 Design the berm crest for $Q_{100CC} + 0.5 \text{ m}$ freeboard.
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 - 12.5 Include erosion protection along the berm/road during detailed design.
 - 12.6 ASP concluded that McGill's proposed berm solution effectively addresses flooding on Stonewood Road and Estate, while also reducing upstream backwater.
 - 12.7 They recommended the McGill report (with these minor amendments) be accepted by the City of Cape Town with the above changes incorporated.
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CONDITIONS

This Office **supports** the **Mosselbank Canal – Supplementary Floodline Study**, subject to these conditions:

1. The proposed upgrades to the bridge must be completed and fully functional, prior to the practical and final civil engineering clearance inspections.
2. Detailed stormwater infrastructure design drawings must be prepared by a registered Civil Engineering Professional and be submitted for approval to Council (Urban Mobility: Roads Infrastructure Management) prior to commencement of any work. All services shall comply with the "Standards and Guidelines for Roads & Stormwater (February 2022 Version 3.0)" & "Water & Sanitation Department Service Guidelines & Standards (20 June 2019 Version 3.3)".
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4. The approval of this report does not constitute the approval of any development application.
5. Any prospective developments on the affected floodplains, must follow the Town Planning application process in full.
6. Copies of the following documentation must be forwarded to the relevant Urban Mobility Directorate's RIM Department and this Office, prior to practical & final civil engineering services inspections.
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9. The Engineer shall monitor all construction activities and maintain an adequate level of supervision of the works.
10. The City of Cape Town reserves its right to hold the developer liable for any claims in respect of damage to municipal/ private property or infrastructure and additional municipal maintenance cost incurred as a result of flooding, siltation and contaminated stormwater caused by construction activities on this precinct and/ or ceasing of work due to inclement weather.
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12. It is the responsibility of the developer and his environmental consultant to ensure that, if any of the steps required above will require further authorisation from any other organ of state, such authorisation (s) must be obtained and be brought to this Office's attention. (i.e. Water Use License, Environmental Authorisation, General Authorisation or renewal/ amendment etc.

Please note that these comments are based on the information that has been received to date. Should any new information be provided to this office, then this office reserves the right to review the recommendations as deemed appropriate.

Yours faithfully

**Willem
Burger**

Digitally signed by
Willem Burger
Date: 2025.10.27
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P.P.

Johann Terblanche

Head: Catchment Planning: Region 4 (Northern Districts)

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Willem Burger

From: Willem Burger
Sent: Tuesday, 11 November 2025 11:32
To: John Coetzee; Rikus; Isaac Borochowitz; Jaco van Zyl; Chris Moller
Cc: Johann Terblanche; Willie Liebenberg; Vincent Harris
Subject: Re: 20251107_STONEWOOD BRIDGE ROAD AND BERM_Meeting Notes: Nov 2025

Dear John,

Thank you for the notes, I amended as requested.

Attention all,

Herewith the updated minutes of meeting of Tuesday 4 November (12:00 to 14:00):

Attendees:

- | | |
|---------------------|--|
| • Johann Terblanche | : CSRМ (CCT) "Catchment Stormwater and River Management" |
| • Willem Burger | : CSRМ (CCT) |
| • Vincent Harris | : RIM (CCT) "Roads Infrastructure Management" |
| • Willie Liebenberg | : RIM (CCT) |
| • Jaco van Zyl | : PSP Consulting Engineers |
| • Chris Moller | : I & C Developers |
| • Isaac Borochowitz | : I & C Developers |
| • Rikus Steyn | : Ekcon Consulting Engineers |
| • John Coetzee | : Sonstraal Developments |

Background:

1. ASP Tech (Prof Basson), on behalf of I & C Developers (Stonewood Estate), submitted a Floodline Study (July 2024) indicating that the Stonewood Drive bridge/road design results in overtopping at the Stonewood Road's low point, increasing internal flood levels in the Stonewood Estate.
2. ASP Tech proposed a private concrete floodwall to mitigate the increased floodline/flood level. Additionally, this floodwall will open up developable space, previously sterilized by the floodlines. CSRМ did not support this proposal, since a holistic solution had to be brought forth by Ekcon (Engineers who designed the bridge and road).
3. It was agreed that Ekcon (via Sonstraal Developers) will appoint Graeme McGill to conduct a 2D floodline re-evaluation of the impacts of the new bridge and road to propose interventions that will holistically solve the possible flooding caused by the bridge and road in Stonewood and surrounding developments.
4. The McGill report was submitted in September 2025, and a consolidated stakeholder meeting was held on 8 October 2025, where consensus was reached to adopt a berm (or floodwall) along Stonewood Drive as the preferred mitigation solution, as per the findings of the McGill report.

5. Implementation funding and maintenance responsibilities will be formalized between I & C Developers / Sonstraal Developments and the City by means a Service Level Agreement (SLA).

Bridge and Road Compliance:

1. Clarification was enquired (by Sonstraal Developers) on whether the bridge and road were constructed in accordance with their approval conditions. Key points highlighted follow:
 1. The culvert does not overtop during the 1:50 event, in line with approved requirements – Ekcon.
 2. Culvert soffit level aligns with the approved historic McGill flood levels – Ekcon.
 3. Climate change allowances (15%) were not considered, as the original approved floodlines did not include them – Ekcon.
 4. The road and bridge should have been modelled due to their effect on flood levels, since the Stormwater By-law states that no structure may adversely affect the stormwater system – CSRM.
 5. The road approach was constructed approximately 100 mm lower than design, which exuberated overtopping, however overtopping will still occur under major storm events – CSRM.
 6. Vertical alignment constraints meant the road could not be raised further; a berm would have been the appropriate mitigation at the outset; had it been considered – RIM.
 7. The lack of modelling and resulting effects represent a shared oversight and should be treated as a lesson learned – RIM.

Funding of the Berm PROPOSALS:

1. The Le Coste development (Sonstraal Developers) has ±R12M in DCs, but limited flexibility.
2. The Stonewood extension (to be unlocked by the berm adjacent to the Stonewood Road) will yield approximately 98 units and sufficient development Contributions (DC's).
3. I & C Developers indicated willingness to construct the berm and recover the cost via DCs (approximately R700,000).
4. Suggestion to include the Bonnie Brae culvert removal into the same DC-funded intervention was supported.
5. The engineering in terms of the design of the berm will be done by Ekcon and funded by I & C Developers.

Principle Agreements:

1. I & C Developers will fund the berm construction and the Bonnie Brae culvert removal via DCs from the Stonewood development extension.
2. Ekcon (under Sonstraal Developers) will undertake the design, to be funded by I & C Developers (approximately R70,000).
3. The flood study report approval letter must be amended to include the following (The previous CSRM approval letter dated 27 October 2025 will be retracted):
 1. To be addressed to Ekcon and Graeme McGill and include the parties, with all stakeholders copied.

2. To state that the berm option is supported, subject to final authorization and design requirements (i.e. berm, brick wall, or concrete wall).
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 5. The letter will state that the maintenance responsibility of the berm will be confirmed during Land Use Application stage(SLA to be compiled by RIM).
4. A formal Land Use Application must be submitted for the additional 98 units, by I & C Developers, the Land Use will adhere as follow:
1. Finished Floor Levels for the Stonewood extension to be set at 250 mm above the 1:100 flood level.
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I trust the above is an accurate reflection of the discussions held. Should there be any corrections, additions, or omissions, please forward them to me by Wednesday, 12 November 2025.

Kind Regards

Willem Burger *Pr Eng*

Senior Professional Officer: Catchment Planner (Northern Regions)

Catchment, Stormwater and River Management

Bulk Services, Water and Sanitation

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From: John Coetzee <John@slmdev.co.za>

Sent: Tuesday, 11 November 2025 11:14

To: Willem Burger <Willem.Burger@capetown.gov.za>; Rikus <rikus@ekcon.co.za>; Isaac Borochowitz <ikalcj@gmail.com>; Jaco van Zyl <jaco@pspconsult.co.za>; Chris Moller <chrisrmoller@icloud.com>

Cc: Johann Terblanche <Johann.Terblanche@capetown.gov.za>; Willie Liebenberg <WillieF.Liebenberg@capetown.gov.za>; Vincent Harris <VincentRamon.Harris@capetown.gov.za>

Subject: Re: 20251107_STONEWOOD BRIDGE ROAD AND BERM_Meeting Notes: Nov 2025

CAUTION: This email originated outside of the City of Cape Town's network. Please do not click on any links or open attachments unless you know and trust the source. **STOP. THINK. VERIFY.**

Morning Willem.

Thank you for the summary.

Please see my marked up in "RED" to be amended or removed, please.

Sonstraal Developments (Pty) Ltd, cannot be part of the SLA ,due to the LUM application being submitted by I&C Developers for their LUM Approval for the 98 x Sectional Title Units and therefore the SLA will be required to be drafted and signed by I&C Developers, due to their DC been utilized, so Sonstraal Developments (Pty) Ltd cannot be part of the SLA.

@ Rikus, would you like to add any comment further.

Hope this clarifies the below marked in RED.

Thank you.

Kind Regards

John Coetzee

Project Director

T: 021 773 0113

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1st Floor Verdi House, Klein D'Aria Estate
97 Jip de Jager Drive, Bellville, 7530



From: Willem Burger <Willem.Burger@capetown.gov.za>

Date: Friday, 07 November 2025 at 14:52

To: John Coetzee <John@slmdev.co.za>, Rikus <rikus@ekcon.co.za>, Isaac Borochowitz <ikalcj@gmail.com>, Jaco van Zyl <jaco@pspconsult.co.za>, Chris Moller <chrisrmoller@icloud.com>

Cc: Johann Terblanche <Johann.Terblanche@capetown.gov.za>, Willie Liebenberg <WillieF.Liebenberg@capetown.gov.za>, Vincent Harris <VincentRamon.Harris@capetown.gov.za>
Subject: 20251107_STONEWOOD BRIDGE ROAD AND BERM_Meeting Notes: Nov 2025

Good afternoon all,

Thank you for attending the meeting on Tuesday 4 November (12:00 to 14:00), this office took the liberty to compile notes of the meeting:

ATTENDEES:

- | | |
|---------------------|--|
| • Johann Terblanche | : CSRМ (CCT) "Catchment Stormwater and River Management" |
| • Willem Burger | : CSRМ (CCT) |
| • Vincent Harris | : RIM (CCT) "Roads Infrastructure Management" |
| • Willie Liebenberg | : RIM (CCT) |
| • Jaco van Zyl | : PSP Consulting Engineers |
| • Chris Moller | : I & C Developers |
| • Isaac Borochowitz | : I & C Developers |
| • Rikus Steyn | : Ekcon Consulting Engineers |
| • John Coetzee | : Sonstraal Developments |

BACKGROUND:

1. ASP Tech (Prof Basson), on behalf of I & C Developers (Stonewood Estate), submitted a Floodline Study (July 2024) indicating that the Stonewood Drive bridge/road design results in overtopping at the Stonewood Road's low point, increasing internal flood levels in the Stonewood Estate.
2. ASP Tech proposed a private concrete floodwall to mitigate the increased floodline/flood level. Additionally, this floodwall will open up developable space, previously sterilized by the floodlines. CSRМ did not support this proposal, since a holistic solution had to be brought forth by Ekcon (Engineers who designed the bridge and road).
3. It was agreed that Ekcon (via Sonstraal Developers) will appoint Graeme McGill to conduct a 2D floodline re-evaluation of the impacts of the new bridge and road to propose interventions that will holistically solve the possible flooding caused by the bridge and road in Stonewood and surrounding developments.
4. The McGill report was submitted in September 2025, and a consolidated stakeholder meeting was held on 8 October 2025, where consensus was reached to adopt a berm (or floodwall) along Stonewood Drive as the preferred mitigation solution, as per the findings of the McGill report.
5. Implementation funding and maintenance responsibilities will be formalized between I & C Developers / Sonstraal Developments and the City by means of a Service Level Agreement (SLA).

Bridge and Road Compliance:

1. Clarification was enquired (by Sonstraal Developers) on whether the bridge and road were constructed in accordance with their approval conditions. Key points highlighted follow:

1. The culvert does not overtop during the 1:50 event, in line with approved requirements – Ekcon.
2. Culvert soffit level aligns with the approved historic McGill flood levels – Ekcon.
3. Climate change allowances (15%) were not considered, as the original approved floodlines did not include them – Ekcon.
4. The road and bridge should have been modelled due to their effect on flood levels, since the Stormwater By-law states that no structure may adversely affect the stormwater system – CSRM.
5. The road approach was constructed approximately 100 mm lower than design, which exuberated overtopping, however overtopping will still occur under major storm events – CSRM.
6. Vertical alignment constraints meant the road could not be raised further; a berm would have been the appropriate mitigation at the outset; had it been considered – RIM.
7. The lack of modelling and resulting effects represent a shared oversight and should be treated as a lesson learned – RIM.

Funding of the Berm PROPOSALS:

1. The Le Coste development (Sonstraal Developers) has ±R12M in DCs, but limited flexibility.
2. The Stonewood extension (to be unlocked by the berm adjacent to the Stonewood Road) will yield approximately 98 units and sufficient development Contributions (DC's).
3. I & C Developers indicated willingness to construct the berm and recover the cost via DCs (approximately R700,000).
4. Suggestion to include the Bonnie Brae culvert removal into the same DC-funded intervention was supported.
5. The engineering in terms of the design of the berm will be done by Ekcon (remove under Sonstraal Developers) and reimbursed (removed Reimbursed)(FUNDED BY I & C Developer)s.

principle Agreements:

1. I & C Developers will fund the berm construction and the Bonnie Brae culvert removal via DCs from the Stonewood development extension.
2. Ekcon (under Sonstraal Developers) will undertake the design, to be reimbursed remove (FUNDED) by I & C Developers (approximately R70,000).
3. The flood study report approval letter must be modified (AMENDED) to include the following (The previous CSRM approval letter dated 27 October 2025 will be retracted):
 1. To be addressed to Ekcon and Graeme McGill and include the PARTIES , with all stakeholders copied.
 2. To state that the berm option is supported, subject to final authorization (DESIGN REQUIREMENTS) (i.e. berm, brick wall, or concrete wall).
 3. Conditions will be incorporated into the (AMENDED) letter as if Ekcon will be designing and implementing the berm based on the McGill flood study.

4. The letter will also state that an SLA must be concluded between the CCT(RIM), I & C Developers & **INCORRECT, PLEASE REMOVE Sonstraal Developments will not participate in the SLA.**
5. The letter will state that the maintenance responsibility of the berm will be confirmed during Land Use Application stage(SLA to be compiled by RIM).
4. A formal Land Use Application must be submitted for the additional 98 units, by I & C Developers, the Land Use will adhere as follow:
 1. Finished Floor Levels for the Stonewood extension to be set at 250 mm above the 1:100 flood level.
 2. The berm must be constructed prior to Practical Completion Certification of civil services for the Stonewood additional 98 units.
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Kind Regards

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