Memorandum – Specialist input: Healthy Waters

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Subject: FTA159 – Delmore Fast Track – Auckland Council Application Reference: BUN60444768

Date: 25 June 2025

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1. INTRODUCTION

1.1 This memorandum provides Healthy Waters (**HW**) comments on the stormwater aspects of the Delmore fast-track approval application (**Application**).

1.2 It is structured as follows:

(a) Introduction

i. Executive summary

ii. Documents reviewed

iii. Engagement with the Applicant

iv. Site visit

(b) Reasons for consent relevant to stormwater

(c) Assessment of the stormwater aspects of the Application

(d) Proposed conditions

Executive Summary

1.3 This memorandum provides a technical assessment of the Application's proposed stormwater management strategy. The Application proposes development within the Ōrewa River West catchment. The site includes a complex hydrological network of 39 streams, with Stream 38 being a key tributary to the Ōrewa River estuary. The development has been designed to align with the natural topography and existing hydrological flow paths.

1.4 The key assessment issues and findings, addressed in more detail in **Section 3** below and within **Appendix A**, are as follows:

(a) **Water quality management**: The development adopts a *Treatment Train* approach and includes direct discharge of treated stormwater to adjacent streams and a public stormwater network with flow splitters and communal bioretention devices for water quality treatment and hydrology mitigation.

(b) **Riparian margins**: The proposed riparian yards are considered insufficient due to the site's steep terrain and unstable soils. A minimum of 20m, ideally 30-50m, is recommended, determined through a Geomorphic Risk Assessment. The proposed use of multiple T-bar outlets may further compromise streambank stability.

(c) **Raingardens**: A number of communal raingardens are proposed, intended for vesting to Auckland Council. There are concerns with the current proposed design sizing, long-term maintenance, and the suitability of multiple small devices. Further design optimisation and clarification are needed before Engineering Plan Approval.

(d) **Land to vest**: Stormwater assets and associated land are proposed to be vested as "land in lieu of reserve - for drainage purposes". Healthy Waters preference is for any land intended to be vested as "land in lieu of reserve – for drainage purposes".

(e) **Flood management**: The proposal does not include attenuation of the 1% AEP event. However, the Applicants flood assessment concludes minimal risk with adequate floor levels and flow paths. HW has not yet been afforded sufficient time to review the flood model.

1.5 The key recommendations arising from the assessment outlined in this memorandum are summarised in **Section 4** below. Comments on the Applicant's proposed conditions are provided in **Appendix C**. Additional conditions sought, if the Panel is minded to grant approval, are provided in **Appendix D**

Documents Reviewed

1.6 The following documents have been reviewed in preparing this memorandum:

- *Delmore Fast Track Approval Application, Assessment of Environmental Effects and Statutory Analysis* – Revision 1, dated 17 February 2025 (**AEE**)
- Appendix 4: *Delmore Fast-track Application, Ecological Impact Assessment* – Revision 'Final 1', dated 13 February 2025

- Appendix 6: *Stormwater Management Plan* (SMP)*, Delmore, Ōrewa*' – Version B, dated 11 February 2025
- Appendix 8: *Geotechnical Report, Proposed Residential Development, Russell Road and Upper Ōrewa Road, Wainui* – Issue 1.0, dated 14 February 2025
- Appendix 12: *Delmore Stormwater Infrastructure* – Revision E, dated 18 February 2025 (including appendices bound separately)
- Appendix 17-1 to 17-3: Scheme Plans
- Appendix 22: Proposed Consent Conditions
- Appendix 29: *Delmore Flood Assessment Report* – Revision B, dated 11 February 2025 (including appendices bound separately).

1.7 The Applicant's Agent has provided further documentation following preliminary discussion of the Application with Council. Modelling information was provided to Healthy Waters by the Applicant's Stormwater Engineers on 12th June 2025, however there has been insufficient time to complete a review the model at the time of writing. Revised documents provided by the Applicants Agent on 12th June 2025 which have been reviewed and include:

- *Delmore – Device Selection* memo
- *Delmore Healthy Waters June 12 Further Response* table
- *Delmore AC Subdivision June 12 Further Response* table

Engagement

1.8 A stormwater focussed pre-application meeting was held that included Healthy Waters (**HW**) and the Applicant's Stormwater Engineers on the 29th January 2025. Pre-application records outlining matters discussed are included in Consultation Overview Report[1].

1.9 The Applicant's Stormwater Engineers were provided with HW initial feedback on the Application and sought opportunity to work through matters raised. Meetings with the relevant HW specialists and the Applicant's Stormwater Engineers were held on the 4th and 5th of June 2025.

Site visit

1.10 A site visit specifically for this Application has not been undertaken by all HW specialists. HW Catchment Management and Operations Specialists visited 88 Orewa Road on the 10th April 2025. HW specialists are familiar with the wider area including concerns in relation to the Ara Hills development located to the north of the proposed development.

2. REASONS FOR CONSENT

2.1 The reasons for consent identified in the AEE[2] relevant to this assessment include:

- The discharge of stormwater runoff from impervious areas not otherwise provided for by Table E8.4.1 – discretionary activity pursuant to E8.4.1(A10); and

[1] Appendix 20 to the Application.
[2] Section 8.5, page 40.

- The diversion and discharge of stormwater runoff from a new stormwater network – discretionary activity pursuant to E8.4.1(A11).

2.2 HW holds a Regionwide Network Discharge consent (**RWNDC**) which authorises the diversion into and discharge from public stormwater networks within the Auckland Region. The RWNDC is only applicable to urban zoned land and as the underlying zoning of the development site is Future Urban, it cannot be authorised by the RWNDC.

2.3 Private diversion and discharge consents are sought and have been applied for as listed above.

2.4 A draft Stormwater Management Plan (**SMP**) for the development has been prepared, and submitted as part of the Fast-Track application. This has been reviewed in the context of explaining the proposed stormwater management for the development, but has not been reviewed in the context of adoption under Schedule 4 of the RWNDC.

3. ASSESSMENT OF STORMWATER ASPECTS OF APPLICATION

3.1 The site is located within the Ōrewa River West stormwater catchment and contains a network of 39 intermittent and permanent streams. Stream 38 captures flows from all other streams within the site, and is a tributary of the Ōrewa River which drains directly to the Ōrewa River estuary.

3.2 The proposed approach to managing hydrological features on site outlined within the Application includes retaining the existing watercourses and maintaining current natural flow path locations. The development layout has been designed to work with the site's existing natural hydrology.

Stormwater Management Proposed

3.3 The SMP outlines a Treatment Train approach for stormwater management for the development as outlined within Figure 1. This does not fully align with the descriptions provided in the Infrastructure Report which may result in inappropriate implementation of the stormwater management solution for the development area. In relation to the roof tanks (plumbed for non-potable reuse), the implementation is described as optional. This requires clarification to ensure the stormwater management solution is implemented appropriately.

3.4 To aid in maintaining stream base flow the Applicant's Agent has proposed that, where residential lots are located directly adjacent to streams, treated stormwater will discharge directly to the stream through T-bar outlet devices. The feasibility of this method of discharge will need to be confirmed through a detailed Geomorphic Risk Assessment to confirm long-term stability of the gullies.

3.5 Runoff from all other impervious areas within the development that do not discharge via T-Bar outlet devices are proposed to discharge into a new stormwater network. Flow splitters are proposed within the network that will divert runoff in smaller, frequent events (up to and including the 95th percentile rainfall event) to communal bioretention devices that have been designed to achieve water quality treatment and SMAF-1 hydrology mitigation.

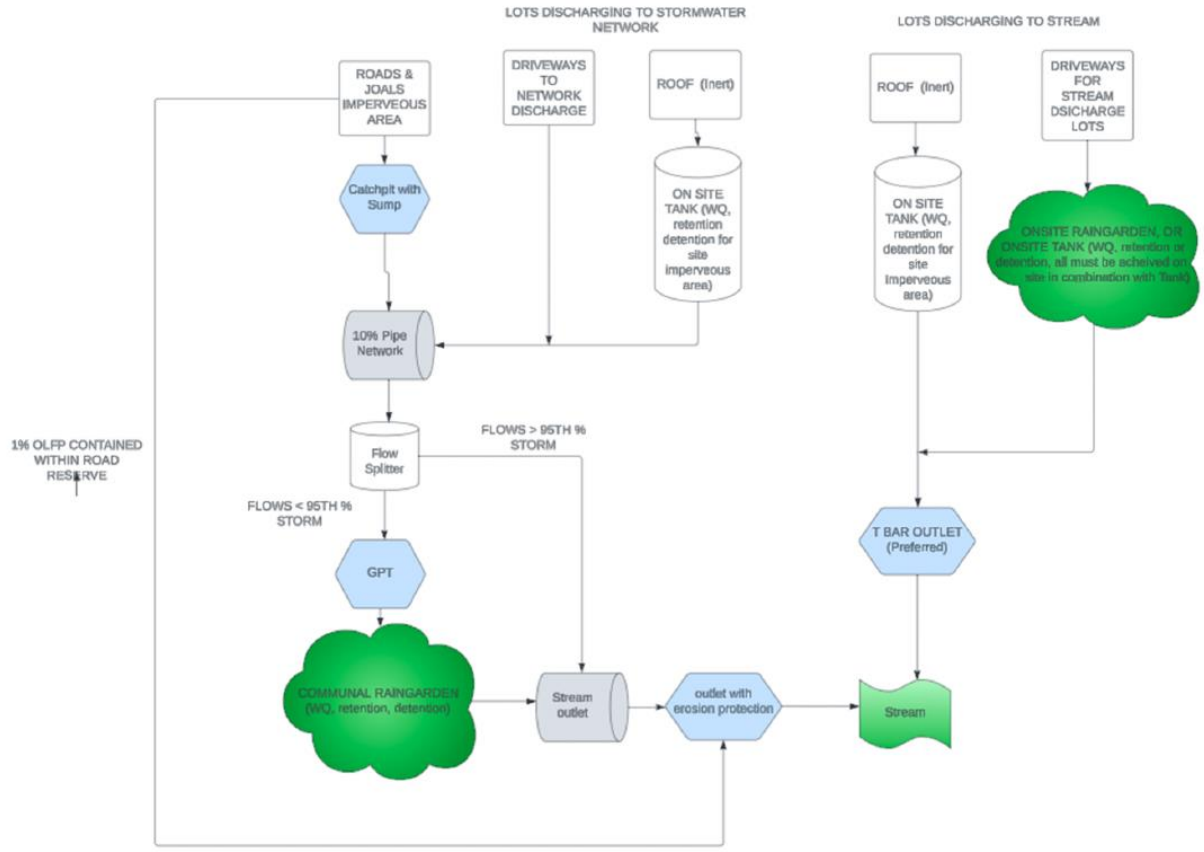

Figure 1. SMP - Figure 14: Treatment Train flow chart for BPO (McKenzie and Co – Feb 2025)

Waterways / Riparian Margins

3.6 The site's stream network is expected to adjust (widen, deepen, meander) in response to urbanisation. Hydrology mitigation and riparian planting alone may not prevent erosion or protect stream health in the long term. Key areas of concern have been identified by HW in relation to the long-term stream stability, ecological health, slope stability, and the adequacy of proposed riparian margins.

3.7 The site has areas with moderate to high geotechnical constraints, including soil creep, existing slip scarps, and complex subsurface geology (e.g., Northland Allochthon). Given the site's steep topography, unstable soils, and dynamic watercourses a 20m riparian margin may be insufficient. Appendix 12-1, drawing No 3725-1-4000, indicates that the 20m riparian margin will occupy a significant portion of many of the proposed lots, potentially leaving insufficient space for the intended building platforms.

3.8 A minimum of 20m, and ideally 30–50m, is recommended, particularly in steep or sensitive areas. Riparian setbacks should be variable and based on a Geomorphic Risk Assessment, not a uniform buffer. It is recommended that a Geomorphic Risk Assessment is sought to support existing ecological and geotechnical assessments. This recommendation was included in initial feedback provided to the Applicant's Agent on 19th May 2025, and discussed within the meeting on the 5th June 2025 however no Geomorphic Risk Assessment has been provided at the time of finalising these comments.

3.9 In addition, due to the existing geotechnical sensitivities of the site, the proposed use of multiple T-bar outlets has the potential to destabilize stream embankments, increase

erosion, and potentially trigger significant slope instability. The Geotechnical Report recommends that stormwater is piped and discharged to suitable outfall locations (e.g. gully bases, ponds, or creeks), and where discharge over engineered fill batters is proposed, it must be via approved energy dissipation devices with geotechnical input to ensure low flow rates and prevent scour[3]. Concern for the number of T-bar outlets proposed was discussed with the Applicant's Agents within the meeting on the 4th June 2025. It is recommended that further assessment specifically in this regard is sought to evaluate this risk.

Raingardens

3.10 Across the development, a number of communal raingardens are proposed receiving runoff from private lots and the proposed road areas. The Application outlines that the raingardens are intended to be designed in accordance with GD01 requirements and will provide water quality mitigation, retention, and detention. In principle, this stormwater management approach for the development is supported. Clarifications and concerns in relation to the proposed raingarden design are included in full within **Appendix A**.

3.11 The raingardens are intended to be vested to Auckland Council. The HW Operations Team have indicated a general preference for limiting the use of raingardens where possible due to long term maintenance considerations. Concern was raised by HW at pre-application stage with regard to the proposed implementation of raingardens and the Applicant's Team were encouraged to consider other, fewer devices. The Application documents include an options analysis in this regard which outlines that due to the smaller sized catchments and the topography they are not able to implement wetlands. Further discussion is also included within the Application clarifying that maintaining flows to the natural wetlands and streams has been prioritised over considering more consolidated devices.

3.12 HW Operations Team have noted that it appears that maintenance access and sufficient sediment drying areas in accordance with Auckland Council's Code of Practice have not been provided for some of the proposed raingarden devices.

3.13 An operation and maintenance plan for the proposed raingardens has not yet been provided and is typically expected as part of Resource Consent documentation where assets are proposed to be vested. Additional conditions recommending a submission of an operation and maintenance plan have been included within **Appendix D**.

3.14 Further ongoing discussion with the Applicant's Engineers including the HW Operations Team to clarify preliminary design queries (outlined in **Appendix A**), optimise the design, as well as ensure sufficient maintenance access is required as soon as possible, and prior to lodgement of Engineering Plan Approval.

Land to Vest

3.15 Land encompassing the proposed raingardens is intended to be vested to HW. Detail on the final extent of land, and design of assets proposed to be vested will not be provided by the Applicant until further stages of development (i.e. Engineering Plan Approval). Endorsement of the proposed stormwater management in principle does not preclude assessment and/or acceptance or rejection of land proposed to vest to

[3] Section 5.9, page 47

HW at later stages of development. HW welcome further engagement on proposed land and assets to vest.

3.16 Land proposed to vest should be as 'land in lieu of reserve – for drainage purposes' not 'local purpose (drainage) reserve' – some of the drawings provided with the Application outline both.

3.17 The Auckland Council Subdivision Specialist has incorrectly asserted a preference for 'Local Purpose (Drainage) Reserve'[4]. This is not in alignment with HW preference for 'Land in Lieu of Reserve – for Drainage Purposes'.

Management of Flood Hazards

3.18 The Applicant's Engineer has not proposed attenuation of the 1% AEP event. An assessment of flood effects has been provided[5] with the application documents which is summarised in the SMP including that based on 3.8 Degree climate change, and Maximum Probable Development (**MPD**) within the catchment, there is no downstream flood risk from the development. The Applicants flood assessment indicates[6] that stormwater runoff from the development is effectively managed, with minimum floor levels set above the 1% AEP flood levels and overland flow paths retained within existing stream channels and the road reserve.

3.19 A copy of the model was sought as part of initial feedback provided to the Applicant's Agent on 19th May 2025 and was provided on the 12th June 2025.

3.20 Healthy Waters have not yet been afforded sufficient time to review the Applicant's modelling information to accurately verify and assess upstream and downstream effects, ensure the reliability of model outputs, and confirm HW's support for the proposed stormwater management strategy.

4. RECOMMENDATIONS

4.1 Key recommendations outlined in the above assessment are summarised as follows:

- It is recommended that the panel request a Geomorphic Risk Assessment to aid in establishing effective riparian set-backs and assess the potential risks associated with the use of multiple T-bar outlets.
- If the Panel is minded to grant approval, a condition should be imposed to ensure that all raingardens are designed in accordance with GD01 requirements and will deliver the intended water quality mitigation, retention, and detention outcomes.
- Further discussion with the Applicant's Engineers, involving the HW Operations Team, is needed as the detailed design progresses to clarify preliminary design queries, optimise the design of the raingardens, as well as ensure sufficient maintenance access is provided. These matters must be agreed prior to lodgement of Engineering Plan Approval.
- Detail on the final extent of land and design of stormwater assets proposed to be vested must be agreed prior to lodgement of Engineering Plan Approval.

[4] *Delmore AC Subdivision June 12 Further Response* table, point 1.
[5] Appendix 29 to the Application.
[6] Section 13, page 33.

5. PROPOSED CONDITIONS

5.1 Initial comments on the Applicant's proposed stormwater-related conditions,[7] as well as additional conditions sought, if the Panel is minded to grant approval, are provided as **Appendix C** and **Appendix D**.

5.2 These initial suggestions are provided to assist the Panel, but are offered without prejudice to the Council's ability to make more comprehensive comments on any draft conditions under section 70 of the Fast-track Approvals Act 2024, should the Panel decide to grant approval.

[7] Appendix 22 to the Application.

APPENDIX A: HW COMMENTS REGISTER

REF	HW REQUEST FOR INFORMATION/CLARIFICATION	REASON FOR REQUEST
Waterways Planning – Stream Erosion		
SW1	It is essential that the applicant undertakes detailed stability and erosion assessment of the gully and stream network for the 100-year design life including: • Evaluation of the Current Network State • Identification of Development Impacts and Mitigation Strategies • Assessment of Natural Hazards and Public Safety Risks. This should not only reflect the change in land use, but also the concentration of flows in response to the outlets from the communal devices, 10% AEP pipe network and the 1% AEP flowpaths.	The channels within the proposed Fast Track area and beyond appear to be founded on East Coast Bays formation. Channels within these areas respond slowly yet significantly to hydraulic changes influencing channel incision and lateral migration. The current stream networks will continue to evolve with the proposed alteration of flow regime within their respective drainage catchments. Without adequate consideration now, the channel networks may require interim stream works to be undertaken to provide protection to property and infrastructure over the design life. The adjoining subdivision to the north (Ara Hills) has similar stormwater management to what is proposed for Delmore. Despite its relatively recent construction and reliance on generic SMAF1 hydrology mitigation there is evidence of gully failure as well as stability failures of the stormwater management devices themselves. Within these East Coast Bay formation areas, the application of generic SMAF controls is not considered appropriate for the long-term safe operation of the subdivision.
SW2	Increase the Riparian Margin to a more appropriate width following detailed geomorphic investigations. In the absence of this detailed assessment, the Riparian Margin should be not less than 20m.	As mentioned in the SW1 (above) the channels within the current Fast Track area will respond to development through increased incision and lateral movement over the design life. Due to the sensitive nature of the East Coast Bays formation, it is recommended that the Riparian Margin is increased to account for the changes in stream hydraulics and hydrology within the drainage sub-catchments.
SW3	Carry out detailed erosion assessment around the outlets from the proposed raingardens and public stormwater networks (including overland flowpaths) for all events up to 100-year ARI and provide appropriate erosion protection.	Urbanisation of greenfield areas will result in the concentration of discharges to the gully networks on the site. The concentration of flows has the potential to significantly destabilise the gullies resulting in widespread bank failure and slips that could endanger property.
Waterways Planning – Water Quality		
SW4	Confirm how even surface distribution of flows will be achieved in the larger raingardens proposed in the Fast Track area.	Raingardens throughout the Fast Track areas Stage 1 and 2 have significantly varied drainage catchment areas. Two specifically (RG11 and RG01) have areas greater than 900m^2. The flows that will be entering these raingardens will be relatively high and design is required to ensure that channelling of flows does not occur impacting to the long-term stability and function of the devices.

REF	HW REQUEST FOR INFORMATION/CLARIFICATION	REASON FOR REQUEST
SW5	Confirm how treatment of all impervious surfaces is to be achieved or provide evidence of a BPO that is to be applied to the Fast Track application.	Within the provided drawing set, there are a few discreet areas within the Fast Track development that do not appear to receive treatment or hydrology mitigation. Examples are JOAL 01, JOAL 016 and ROAD 01. To comply with the RWNDC it is necessary for the applicant to provide justification why in a greenfield environment it is not possible to meet the minimum requirements.
SW6	Confirm the design catchments that are connected to each raingarden and confirm how the treatment and hydrology mitigation outcomes are being provided.	The SMP and Stormwater Report both identify that roof runoff is to be directed to on-lot tanks, whilst the driveway for each lot is to be connected to the communal raingarden. Whilst the drawing set indicates that a splitter box will be constructed upstream of the raingardens the applicant is to confirm the drainage area that has been considered for each of the devices, together with any assumptions of impervious area connection. It should be noted that the use of splitter boxes can create issues as some areas of the connected catchment may not receive treatment due to the timing of flows within the network. It would be preferred that detailed modelling of the Fast Track stormwater infrastructure be modelled to confirm that the outcomes of the hydrology mitigation are being met, and the design is not just balancing volumes.
SW7	Confirm how runoff from private lots from flow spreader units interact with the proposed communal devices.	Drawings 3725-2CDE-4503 and 4505 indicate that runoff from private lots will discharge down a steep escarpment to communal raingarden devices. Due to the nature of the subsoils in this area, there needs to be careful consideration of providing protection to the escarpment and the device. The applicant is required to demonstrate how the stormwater management in these areas will work and how the communal device will be protected from inflows from the private lot areas to ensure that it does not become overloaded and that overflows from the device will not have negative impact on the long-term stability of the devices.
SW8	Confirm that raingarden design will provide the necessary treatment function and be hydraulically sized to adequately manage the inflows throughout a design storm.	Some of the raingardens indicated on the submitted plans appear to be small and shaped to fit into the urban layout. As a result, there could be issues of these devices for treatment performance and flow distribution. Raingarden sizing is based on a 60% imperviousness for the contributing catchment. This is considered to be too low based on the zoning and roading that is proposed. The designs should be updated to reflect the actual connected catchment land uses. Section 9.4 of the SMP states that the communal raingardens will provide treatment, retention and detention of the “public roads and JOALs that do not discharge to streams”. How will flows from the lot areas interact with the flows from the roads? Please confirm,

REF	HW REQUEST FOR INFORMATION/CLARIFICATION	REASON FOR REQUEST
		catchment area managed and hydraulic sizing calculations of all public stormwater infrastructure.
SW9	Where are the GPTs located upstream of the communal raingardens. It is assumed that these GPTs are to be provided as none of the raingardens have forebays (as stated in the Stormwater Report). How will these interact with the hydraulics of the splitter box. The outgoing pipe will need to be sized for the detention flows.	Drawing 3725-4500 Rev B includes a generic section of a Hynds First Defence High Capacity 1200DN GPT (or similar) that is assumed to be located upstream of the communal raingardens, as recommended in GD01. These devices are not indicated on the stormwater layout plans. The generic section indicates that outflows from the GPT will be for the WQV Flow; however, these outflow pipes will need to be sized for the appropriate detention flows. The inclusion of the GPT will introduce further head loss into the network and detailed hydraulic modelling is recommended to demonstrate that the network will perform as intended.
SW10	The SMP recommends that raingardens are used due to their ability to provide retention (infiltration) management. This is contrary to the recommendations of the Geotechnical report included in the submission information.	The geotechnical report (Appendix 08) indicates that any device would need to be lined to prevent infiltration. If this is to be applied the raingarden will not be providing a retention function. It is suggested that there may be a more cost-effective construction, operation and maintenance solution to be provided.
Catchment Planning – Flood Hazards		
SW11	Correct the use of 'inert' to low contaminant generating' building materials.	The use of inert building materials, is misleading. Studies have shown that commonly used inert materials are actually sources of heavy metals in stormwater runoff. Therefore, it is requested that 'low contaminant generating' building materials are used instead. The following consent condition can be used to assist in the control of building at the next stage of development and has been included within **Appendix D**. *Stormwater Quality* *X.1 New buildings, and additions to buildings, must be constructed using cladding, roofing and spouting building materials that avoid the use of contaminant generating building products which have:* i. *exposed surface(s) or surface coating of metallic zinc or any alloy containing greater than 10% zinc; or* ii. *exposed surface(s) or surface coating of metallic copper or any alloy containing greater than 10% copper; or* iii. *exposed treated timber surface(s) or any roof material with a copper containing or zinc-containing algaecide.* It should also be noted that in the Greenfield environment, the use of low contaminant generating materials is not considered a sufficient 'treatment' method and must be accompanied by a GD01 complaint device either at source or communally located.

REF	HW REQUEST FOR INFORMATION/CLARIFICATION	REASON FOR REQUEST
		Where roof runoff utilizes either a first flush diversion device, or internally plumbed, non-potable reuse
SW12	Confirm whether reuse tanks for internal, non-potable reuse are to be provided for each lot.	Appendix A of the SMP identifies that reuse tanks are 'optional'., Please review this against the SMP text and if tanks are optional, ensure that the design of the communal devices is updated to reflect the roof area inclusion for treatment.
SW13	Confirm whether infiltration is to be used or not.	Appendix 8 of the SMP indicates that support for raingardens results from the ability to achieve infiltration. With the erosive nature of the subsoil on this site, and from evidence of device failure in the neighbouring subdivision due to seepage at a device outlet, infiltration is not recommended. This may influence the device type that is to be proposed and also the calculations for each device. It would be advantageous for the proposed stormwater management be defined now, based on available information, with guidance and direction to future users with regard to what investigations are required t the next stage of development.
SW14	Include relevant drawings and calculations of stormwater infrastructure in the SMP.	Drawings and calculations appear to be missing from the SMP appendix. It is important that these are included with the SMP to assist in the review to ensure that what is being proposed has been designed correctly and complies with the Code of Practice.
SW15	Confirm the design parameters and device sizing.	The calculations that are set out in Appendix B of the Stormwater Report appear to be based off an impervious area of 60%. This value is too low and needs to be revised to be more representative of the road and lot areas. In addition, the calculations in Appendix B of the Stormwater Report appears to suggest that the catchment connected to each rain garden is 90% impervious. This is not correct and needs to be addressed.
SW16	Public stormwater assets located within private lot areas and JOALS should be relocated within public space to allow long-term maintenance.	Some public lines (for example in the vicinity of JOAL04a) are located to the rear of private lots. There are issues that can arise from an ongoing operation and maintenance perspective of this arrangement, even when easements are applied. It is requested that the alignments of the public infrastructure be reconsidered as far as possible to reduce this situation occurring.
SW17	Confirm what newly created impervious areas are not receiving treatment or hydrology mitigation and provide a justification why they are not. Where areas are connected to the public network, demonstrate that they are accounted for in the appropriate raingarden.	Within the drawing set included in Appendix 12-3 there appears to be areas of new impervious coverage that are not receiving any treatment or hydrology mitigation. A relatively large area of Road 01 on the eastern side of Stage 1 appears to discharge untreated runoff to a stream gully, adjacent to a communal raingarden constructed on Road 09. This area of Road 01 contains two intersections and a change in grade. As a result, this area of the road will be subject to manoeuvring, braking and acceleration; all activities that increase the risk of contaminants being deposited on the road.

REF	HW REQUEST FOR INFORMATION/CLARIFICATION	REASON FOR REQUEST
		There are also some JOAL areas that appear to not be accounted for in the raingarden design despite being connected to the public network.
SW18	Splitter boxes are presented upstream of each communal device. There should be a detailed hydraulic analysis undertaken of the entire public network to confirm that it operates as intended.	The use of a splitter box upstream of the raingardens is assumed to be there to enable low flows (up to the 95th percentile event) to discharge to the device, with higher flows diverted direct to the gullies. Careful consideration needs to be made of the design of the diversion structure to ensure that the driving head generated within the manhole does not increase velocities to the raingarden and that energy losses will not impact the performance of the upstream pipe network. It is recommended that detailed hydraulic modelling of the subdivision, including pipe networks, splitter boxes and raingardens is completed once the final site layout is confirmed and this modelling will be reviewed and approved by Healthy Waters prior to Engineering Plan Approval being sought.
SW19	Provide more detail on the discharge locations of overland flowpaths to the gullies, together with flows, velocities and any erosion protection required to the gully and receiving watercourse.	It is not clear from the drawings provided where overland flowpaths will discharge to the gullies and watercourses. In addition, there appears to be no calculations to support the flow or velocities expected. Due to the sensitivity of the receiving environment this information should be provided, together with detailing appropriate erosion mitigation.
SW20	The modelling used to support the Application should be supplied to Healthy Waters for review and confirmation that the results are appropriate and acceptable.	The current modelling is assumed to be simplistic lumped catchments connected directly to the gully network, with the watercourses represented as 2D only. It is recommended that this model be supplied to Healthy Waters for review to confirm if the detail and modelling parameters are considered appropriate. Due to the complexity of the proposed stormwater network, it is recommended that more detailed hydraulic modelling be undertaken of the proposed infrastructure and submitted to Healthy Waters for review and approval prior to Engineering Plan Approval being sought.
Healthy Waters Operations		
SW21	Provide evidence that the proposed maintenance access associated with each raingarden device can be built and meets the necessary requirements for safe vehicle access and activities.	Whilst it is acknowledged that most of the raingarden devices have a maintenance access allowed for, this is effectively just a buffer applied to the top of the device. Safe operation of the devices is required to be assessed now so that Healthy Waters can understand how the maintenance tracks will be incorporated into the step topography that is present. The maintenance access allowance should include for all the regular functions that are carried out, including set down areas.

REF	HW REQUEST FOR INFORMATION/CLARIFICATION	REASON FOR REQUEST
		Due to the relatively large mature of the raingardens, all maintenance activities should be assumed to be undertaken outside of the road reserve and activities should not include Traffic Management Plans being required.
SW22	Provide appropriate areas for lay down / sediment drying areas with the device accessways.	Include appropriately sized lay down / sediment drying areas in addition to the accessway to facilitate ongoing maintenance of the devices.
SW23	Consideration of consolidating the total number of devices being proposed and type of device to be constructed.	It is recommended that where possible consolidation of devices be considered to optimise the total number of devices that are to be vested. In addition, consideration should be given to the type of device to be constructed. Raingardens are not only costly to maintain but can also be costly to construct. If infiltration is not being utilised, consideration should be given to a potentially more appropriate stormwater management device to provide treatment and necessary hydrology mitigation.
SW23	Reconsider the widespread application of private flow spreader bars discharging flows direct to gullies.	There are a number of private flow spreader bars proposed for discharging lot areas direct to the gulley system. Flow spreaders have a number of issues associated with them, primarily being the potential risk of destabilising the banks and the inherent risk of failure due to lack of maintenance. Where erosion risks are present and high, it is recommended that these are consolidated and connected to the public stormwater network.
SW24	Clarify if the intention of maintaining stream base flow is realised by the proposed stormwater design.	Section 9.3 of the SMP explains that the design intent includes “maintaining stream baseflows”. Where communal devices are proposed, please clarify whether the headwaters of the streams are bypassed or whether sufficient recharge is provided by the T-Bar outlets.

APPENDIX B: MINUTE 3 – APPENDIX 4 RESPONSE

The Expert Panel issued an invitation to comment within Minute 3 dated 26 May 2025 that specifically includes a preliminary list of matters the Auckland Council (including its CCOs) are asked to consider (Appendix 4).

We have considered the following items relevant to our assessment and address as follows:

Stormwater including discharge conditions

1. The proposed stormwater management relies on individual privately-owned on-site roof water reuse tank to achieve SMAF1 compliance for roof runoff. These tanks will require ongoing maintenance to ensure they provide ongoing compliance with SMAF1 requirements. Can the Council's regulatory department provide comment on their ability to provide the necessary ongoing monitoring and enforcement as necessary to achieve this, noting there is a large number of existing and likely future tanks throughout the Auckland region that this is applicable to. Possible enforcement could require time consuming and onerous measures if privately owned tanks are removed or tampered with.

   Response:

   To be addressed by regulatory stormwater specialist (Auckland Council SWWWITA Team).

2. Do the proposed consent conditions adequately address the requirement to prepare operation and maintenance plans for private on-site roof water reuse tanks, including addressing the need to adequately minimise health risks of using roof water for toilet flushing e.g. due to air borne pathogens?

   Response:

   To be addressed by regulatory stormwater specialist (Auckland Council SWWWITA Team).

3. Can Council suggest consent conditions for consent notices to be placed on individual residential lot titles to require protection of and ongoing ensure ongoing operation and maintenance of rain tanks?

   Response:

   To be addressed by regulatory stormwater specialist (Auckland Council SWWWITA Team).

4. Is Council (Healthy Waters) satisfied the Stormwater Management Plan (SMP) prepared by the applicant is in accordance with the requirements of the stormwater Network Discharge Consent. Can they advise the mechanism for Council adopting an approved SMP given the subject land is not zoned for urban development?

   Response:

   Condition 13 of the RWNDC sets out the process for stormwater management plans to be adopted into the RWNDC to authorise the diversion and discharge of stormwater. In particular for new greenfield development which is not currently urban

zoned, an SMP can only be adopted following a notified plan change, where the plan change is consistent with the SMP.

The diversion and discharge of stormwater from this Fast Track application therefore cannot be authorised by the RWNDC and a private consent for diversion and discharge of stormwater will be needed to be obtained. This has been sought by the Applicant.

Flood Risk

5. Does the Council consider the flood risk assessment prepared by the applicant is fit for purpose, including with respect to flooding where roads cross the main stream, including hazard to vehicles, risk of scour damage to road fill?

Response:

A copy of the flood model was sought as part of initial feedback provided to the Applicant's Agent on 19th May 2025 and it was provided on the 12th June 2025.

Healthy Waters have not yet been afforded sufficient time to review the Applicant's modelling information to accurately verify and assess upstream and downstream effects, ensure the reliability of model outputs, and confirm HW's support for the proposed stormwater management strategy.

The modelling utilises 2021 LiDAR data which does not account for the subdivision downstream (visible in the 2025 imagery on GeoMaps). Looking at the aerial images, the subdivision is founded in engineered fill. It is important that consideration be made to the stability of this in relation to flows in the watercourse downstream of the site to assess the stability of any constructed embankment within the floodplain.

Further analysis is therefore required to demonstrate that the proposal does not result in increased flood risk to downstream established properties.

Healthy Waters' position will be confirmed once the model has been reviewed.

APPENDIX C: PROPOSED CONDITIONS COMMENTS REGISTER

<table>
<tr><th>#</th><th>APPLICANT'S PROPOSED CONDITIONS</th><th>HEALTHY WATERS COMMENT</th></tr>
<tr><td>1</td><td>Activity in accordance with application
The consent holder must undertake the works in general accordance with the application formally received by the Environmental Protection Authority on the 14 February 2025, and the following documents. In the event that any of the provisions of the following documents conflict with the requirements of these conditions of consent, these conditions of consent must prevail.
• Application form and Assessment of Environmental Effects and Statutory Analysis prepared by Barker & Associates Ltd titled "Delmore – 88, 130, 132 Upper Ōrewa Road and 53A, 53B and 55 Russell Road, Ōrewa" and dated February 2025; and
• The following reports and plans listed at Attachment 1.

. . .

<table>
<tr><th>Report title and reference</th><th>Author</th><th>Rev</th><th>Dated</th></tr>
<tr><td>Ecological Impact Assessment</td><td>Viridis</td><td>1</td><td>13/02/2025</td></tr>
<tr><td>Arboricultural Assessment</td><td>Peers Brown Miller</td><td>N/A</td><td>11/02/2025</td></tr>
<tr><td>Draft Stormwater Management Plan</td><td>McKenzie & Co</td><td>B</td><td>24/01/2025</td></tr>
<tr><td>Preliminary Site Investigation</td><td>Williamson Water and Land Advisory</td><td>3</td><td>13/02/2025</td></tr>
<tr><td>Geotechnical Report</td><td>Riley Consultants</td><td>1.0</td><td>14/02/2025</td></tr>
<tr><td>Archaeological Assessment</td><td>Clough & Associates Ltd</td><td>N/A</td><td>02/2025</td></tr>
<tr><td>Landscape Assessment</td><td>Greenwood Associates</td><td>1</td><td>11/02/2025</td></tr>
<tr><td>Water, Wastewater and Utilities Report</td><td>McKenzie & Co</td><td>D</td><td>12/02/2025</td></tr>
<tr><td>Stormwater Report</td><td>McKenzie & Co</td><td>D</td><td>11/02/2025</td></tr>
<tr><td>Earthworks Report and Drawings</td><td>McKenzie & Co</td><td>D</td><td>11/02/2025</td></tr>
<tr><td>Scheme Plans</td><td>McKenzie & Co</td><td>D</td><td>11/02/2025</td></tr>
<tr><td>Roading and Access Report</td><td>McKenzie & Co</td><td>F</td><td>11/02/2025</td></tr>
<tr><td>Noise Assessment</td><td>SLR Consulting New Zealand</td><td>2.0</td><td>11/02/2025</td></tr>
<tr><td>Urban Design Assessment</td><td>Barker & Associates</td><td>N/A</td><td>14/02/2025</td></tr>
<tr><td>Integrated Transportation Assessment</td><td>Commute Transportation Consultants</td><td>N/A</td><td>13/02/2025</td></tr>
<tr><td>Flood Assessment Report</td><td>McKenzie & Co</td><td>B</td><td>11/02/2025</td></tr>
<tr><td>Wastewater Design Report</td><td>Apex Water Limited</td><td>1</td><td>11/02/2025</td></tr>
<tr><td>Air Discharge Assessment</td><td>AirMatters</td><td>4</td><td>11/02/2025</td></tr>
<tr><td>Hazardous Substances Assessment</td><td>Williamson Water and Land Advisory</td><td>N/A</td><td>13/02/2025</td></tr>
<tr><td>Economic Report</td><td>Urban Economics Limited</td><td>N/A</td><td>13/02/2025</td></tr>
</table>
</td><td>Standard condition. Draft wording is agreed with.</td></tr>
</table>

#	APPLICANT'S PROPOSED CONDITIONS	HEALTHY WATERS COMMENT
	. . . Stage 1 Stormwater Drawings | McKenzie & Co | C | 05/02/2025 Stage 2AB Stormwater Drawings | McKenzie & Co | E | 11/02/2025 Stage 2CDE Stormwater Drawings | McKenzie & Co | D | 11/02/2025	
25	Engineering Plan Approvals Prior to the commencement of works (excluding vegetation removal and/or earthworks) the consent holder shall submit complete engineering plans for all roading, footpath, lighting stormwater, wastewater and water infrastructure required to service the development to Auckland Council for engineering plan approval.	It is recommended that this condition is expanded to include/outline that further discussion with the Applicant's Engineers and HW Operations Team is needed as the detailed design progresses to clarify preliminary design queries, optimise the design of the raingardens, as well as ensure sufficient maintenance access is required and must be agreed prior to lodgement of Engineering Plan Approval. In addition detail on the final extent of land, and design of assets proposed to be vested shall be agreed prior to lodgement of Engineering Plan Approval. Recommended revision: **Engineering Plan Approvals** Prior to the commencement of works (excluding vegetation removal and/or earthworks), the consent holder must submit complete engineering plans for all roading, footpath, lighting, stormwater, wastewater, and water infrastructure required to service the development to Auckland Council for engineering plan approval. As part of the engineering plan approval process, the consent holder shall engage in further discussion with Auckland Council's Healthy Waters to: • Clarify any preliminary design queries; • Optimise the design of the raingardens, including ensuring adequate maintenance access; and • Confirm the final extent of land and the design of assets proposed to be vested in Council. These matters shall be resolved and agreed with Council prior to lodgement of the engineering plans for approval.

#	APPLICANT'S PROPOSED CONDITIONS	HEALTHY WATERS COMMENT
69	Reserves to Vest (69) Lots 1601-1609, 1616, 1621-1627 on the scheme plans approved under Condition 1 must be vest in Auckland Council as local purpose (drainage) reserve.	Condition not supported and should be deleted. Detail on the final extent of land, and design of assets proposed to be vested will not be provided by the Applicant until further stages of development (i.e. Engineering Plan Approval). Endorsement of the proposed stormwater management in principle or granting of resource consent does not preclude assessment and/or acceptance or rejection of land proposed to vest to HW at later stages of development. The granting of resource consent does not imply acceptance of the proposed stormwater management system, including stormwater mitigation calculations, or of any land or assets proposed for vesting. These elements will remain subject to detailed assessment and may be accepted or declined by Healthy Waters at later stages. If Healthy Waters does not accept the land or assets for vesting, the consent holder will be responsible for proposing and implementing alternative solutions to meet long-term stormwater management requirements. Land proposed to vest should be as 'land in lieu of reserve – for drainage purposes' not 'local purpose (drainage) reserve'.
73	Stormwater The consent holder must design and construct connections to the public stormwater reticulation network in accordance with the McKenzie and Co Stormwater Report and Drawings approved under Condition 1 and meeting the requirements of the stormwater utility service provider. Certification from the utility provider that works have been satisfactorily undertaken must be provided when applying for a certificate under section 224(c).	Standard condition. Draft wording is agreed with.
74	The consent holder must design and construct a stormwater outfall structure as a disposal point for stormwater runoff for all allotments that do not have a connection to the public stormwater reticulation system, generally in accordance with the McKenzie & Co Stormwater Report approved under Condition 1. Certification that works have been satisfactorily undertaken must be provided when applying for a certificate under section 224(c).	No comment. Private device requirement.
78	Asset(s) to be managed by an Incorporated Society The following conditions apply to all JOALs shown within the scheme plans as Condition 1. (e) The JOALs must each be managed by a Residents' Association (or similar) and that Residents' Association shall be a registered Incorporated Society. Its members shall comprise only the registered proprietors from time to time of	No comment. Private device requirement.

#	APPLICANT'S PROPOSED CONDITIONS	HEALTHY WATERS COMMENT
	each of the Lots listed in the scheme plan by McKenzie & Co approved under Condition 1. (f) The carriageway, lighting and all other infrastructure (e.g., any required stormwater devices) within the JOALs shall be operated, maintained and, when required, renewed by, and all at the cost of, the Residents' Association. Where rubbish collection is to be via "private service" the JOAL responsibilities shall also include the ongoing retention of the private service contact. (g) Pursuant to section 221 of the RMA a consent notice shall be registered on the title to each Lot that gains access via the JOAL which requires the owner to become and remain a fully paid up financial member of the Residents' Association, and to pay all levies and other charges made against that Lot by the Residents' Association, for as long as that person remains the registered owner of the allotment. (h) The consent notice referenced in (c) above shall specify that JOAL operation, maintenance and, when required, renewal, are the responsibility of the Residents' Association.	
Stormwater Discharge Permit (s15)		
92	Minor modifications In the event that any minor modifications to the stormwater management works are required, that will not result in an application under section 127 of the RMA, the following information must be provided: (a) Plans and drawings outlining the details of the modifications; and (b) Supporting information that details how the proposal does not affect the capacity or performance of the stormwater management system. All information must be submitted to Auckland Council, prior to implementation.	Standard condition. Draft wording is agreed with.
93	Post-Construction Conditions As-Built certification and plans of the stormwater management works, which are certified (signed) by a chartered professional engineer as a true record of the stormwater management devices, must be provided to Auckland Council within 20 working days of the completion of the stormwater management works.	Standard condition. Draft wording is agreed with.
94	The As-Built plans must display the entirety of the stormwater management system, and must include: (a) The surveyed location (to the nearest 0.1m) and level (to the nearest 0.01m) of the discharge structure, with co-ordinates expressed in terms of NZTM and LINZ datum; (b) The location, dimensions and levels of any overland flow paths including cross sections and long sections;	Standard condition. Draft wording is agreed with.

#	APPLICANT'S PROPOSED CONDITIONS	HEALTHY WATERS COMMENT
	(c) Plans and cross sections of all stormwater management devices, including confirmation of the water quality volume, storage volumes and levels of any outflow control structure; and (d) documentation of any discrepancies between the design plans and the As-Built plans if modified in accordance with Condition 92.	

APPENDIX D: ADDITIONAL RECOMMENDED CONDITIONS REGISTER

#	ADDITIONALLY RECOMMENDED CONDITIONS	HEALTHY WATERS COMMENT
1	A condition outlining the design intent of the proposed raingardens ensuring that the raingardens will be designed in accordance with GD01 requirements and will provide water quality mitigation, retention, and detention is recommended.	**Raingarden Design Requirements** The detailed design of all proposed raingardens shall be carried out in accordance with Auckland Council's GD01 – *Guidance Document for Stormwater Management Devices in the Auckland Region* and Auckland Council's Stormwater Code of Practice (Version 4) The raingardens shall be designed to: (a) Provide water quality treatment in accordance with the requirements of GD01; (b) Achieve stormwater retention and detention volumes as required to meet the hydrology mitigation requirements for the development; and (c) Maintain the design intent as presented in the application, including integration into the streetscape or landscape design where relevant. Evidence demonstrating compliance with these requirements shall be submitted to and approved by Auckland Council prior to lodgement of Engineering Plan Approval.
2	Additional condition require to ensure new and modified buildings use materials that prevent contaminants from zinc, copper, or treated timber entering the stormwater system.	**Stormwater Quality** New buildings, and additions to buildings, must be constructed using cladding, roofing and spouting building materials that avoid the use of contaminant generating building products which have: (a) exposed surface(s) or surface coating of metallic zinc or any alloy containing greater than 10% zinc; or (b) exposed surface(s) or surface coating of metallic copper or any alloy containing greater than 10% copper; or (c) exposed treated timber surface(s) or any roof material with a copper containing or zinc-containing algaecide.
3	A condition requiring a pre-construction meeting for any devices intended to be vested as public stormwater management devices should be included.	**Pre-Construction Meeting – Public Stormwater Assets** A pre-construction meeting must be held by the consent holder, prior to commencement of the construction of any stormwater devices intended to be vested as public, that: (a) Is arranged five working days prior to initiation of the construction of any intended public stormwater devices on the site; (b) Is located on the subject area; (c) Includes representation from the Council, including but not limited to Healthy Waters Operations Team; and

#	ADDITIONALLY RECOMMENDED CONDITIONS	HEALTHY WATERS COMMENT
		(d) Includes representation from the site stormwater engineer (or) contractors who will undertake the works and any other relevant parties. The following information must be made available before or at the meeting: (e) Timeframes for key stages of the works authorised under this consent; (f) Contact details of the site contractor and site stormwater engineer; and (g) Construction plans approved (signed/stamped) by the Council. Advice Note: To arrange the pre-construction meeting required by this consent, please contact the Council on email at monitoring@aucklandcouncil.govt.nz.
4	A condition is recommended specifying raingarden media compliance and verification requirements. These requirements will ensure that the media of any communal raingardens meets council standards and that its infiltration performance is verified before final planting and ongoing use.	**Raingarden Media Specification** The media of the proposed communal raingardens must comply with the following: (a) The consent holder must provide raingarden media specification along with lab test results conforming the media to be compliant with the GD01 requirements. The media specification must be provided at least 5 (five) working days prior to placing the material within the constructed raingarden, to obtain Healthy Waters confirmation on the media material. (b) Upon completion of the bio-filtration media placement, the consent holder must organise for infiltration testing of the bio-filtration media at developers costs to conform minimum required infiltration rate is achievable. The infiltration testing must be undertaken by a third-party engineer and in accordance with '*Adoption Guidelines for Stormwater Biofiltration Systems Appendix I – Measurement of hydraulic conductivity – Using in situ and ex-situ (laboratory) sampling methods, produced by CRC for Water Sensitive Cities, Belinda Hatt, Sebastien Le Coustumer June 2009 (updated April 2015)*' or similar testing guidelines document, as agreed by Healthy Waters. The infiltration testing must be performed in presence of a Healthy Waters specialist or as agreed by Healthy Waters at time of the Pre-Construction Meeting. (c) The consent holder must provide mulch layer and raingarden planting after obtaining clearance from Healthy Waters on acceptance of the infiltration testing results. The mulch material and planting must conform to GD01 or as specified by the Council landscape specialists Advice Note: All infiltration tests results must be reported in 'mm/hr' and certified by a Chartered Professional Engineer.

#	ADDITIONALLY RECOMMENDED CONDITIONS	HEALTHY WATERS COMMENT
5	A condition requiring an Operation and Maintenance Plan be provided for approval of HW Operations Team at the time of lodgement of EPA us recommended.	**Operation and Maintenance Plan – Public Stormwater Assets** An Operation and Maintenance Plan (OMP) for all stormwater management devices proposed to be vested in Council shall be submitted to Auckland Council Healthy Waters Operations Team for approval at the time of Engineering Plan Approval. The OMP must comply with Healthy Waters Operation and Maintenance Plan Template.
6	The following recommended condition will ensure any communal stormwater devices are properly maintained during development and handed over to Council in a functional and compliant state.	**Maintenance of Communal Stormwater Management Devices** The consent holder must maintain the communal stormwater management devices serving the subdivision in accordance with the following requirements: (a) The consent holder must maintain the communal devices until the earlier of: (i.) 80% of the building sites discharging to the devices have been developed, or (ii.) A period of five (5) years has passed from the date of issue of the final section 224(c) certificate under the Resource Management Act 1991 for the subdivision, (b) The consent holder must remove any sediment from the communal device that has resulted from development activities within the subdivision, if required by the Council, prior to acceptance of the device(s) by Council for ongoing maintenance. (c) At the time of transfer of any stormwater management devices to Council for ongoing maintenance, all planted areas associated with the stormwater management devices must achieve a minimum plant survival rate of 95%. (d) Updated Operation and Maintenance Manuals for all communal stormwater management devices must be provided to the Council at the time of transfer of any stormwater management devices to Council for ongoing maintenance. (e) A bond must be provided at the time of application for the section 224(c) certificate to ensure the ongoing maintenance of the communal stormwater management devices until transfer of any stormwater management devices to Council for ongoing maintenance.
7	A condition requiring establishment of a bond will secure proper maintenance and completion of any communal raingarden devices, protecting the Council from costs if the consent holder fails to meet their obligations.	**Requirement for Bond** Prior to the issue of the section 224(c) certificate under the RMA, the consent holder must provide a bond to the Council in accordance with Section 222 of the RMA to ensure the performance of the raingardens. The bond must: (a) Be calculated at a rate of communal raingarden area;

#	ADDITIONALLY RECOMMENDED CONDITIONS	HEALTHY WATERS COMMENT
		(b) Be provided in the form of a cash deposit, a bank bond guaranteed by a New Zealand-registered bank, or another form of security (e.g., an encumbrance) as agreed with the Council. (c) Be documented and executed by the Council's solicitor. All legal and administrative costs associated with preparation, execution, variation, administration, or release of the bond must be met by the consent holder. (d) Be released once the relevant condition(s) have been satisfied and all associated Council costs have been paid. *Advice Notes:* *The Council may use the bond to restore the communal stormwater device(s) to comply with Auckland Council's GD01 standards if the consent holder fails to meet the condition requirements.* *The final bond amount will be confirmed and agreed by Council prior to Engineering Plan Approval. It will be calculated based on a per-square-metre rate of communal raingarden area, with the rate to be determined at that time. The bond value will be adjusted for inflation using the Reserve Bank inflation calculator or another method agreed with Council*.
8	A condition clarifying ownership of retaining walls is important to ensure that long-term ownership and maintenance responsibilities are clearly defined. Retaining structures are not stormwater assets and are not maintained by Healthy Waters due to their structural complexity, ongoing maintenance requirements, and associated liability.	**Exclusion of Retaining Walls from Vesting** No retaining walls shall be vested in Auckland Council's Healthy Waters department. All retaining structures shall remain in private ownership and maintenance responsibility unless otherwise agreed in writing by Auckland Council (Healthy Waters).
9	This condition will ensure that the development does not exacerbate flooding on neighbouring properties, maintain existing levels of flood risk, and protect both public and private assets from adverse effects during a range of storm events.	**Flood Risk and Nuisance** The consent holder must ensure that the development does not result in any increase in flood risk or flood nuisance to upstream or downstream properties, measured against the existing rainfall and land use conditions for the 50% AEP, 10% AEP, and 1% AEP storm events.
10	This condition will ensure that any stormwater management devices intended for public ownership and maintenance are assessed and accepted by Auckland Council's Healthy Waters team before progressing to detailed engineering design or legal subdivision.	**Stormwater Asset Acceptance** Prior to the submission of any Engineering Plan Approval and prior to Auckland Council approving a survey plan pursuant to s223 of RMA for any stage, the consent

#	ADDITIONALLY RECOMMENDED CONDITIONS	HEALTHY WATERS COMMENT
		holder must confirm and agree with Auckland Council Healthy Waters, acceptance in respect of all stormwater devices proposed to vest to Healthy Waters. Should any stormwater devices not been accepted by Healthy Waters for vesting, the relevant plan must be updated, and it must show was a separate allotment on the survey plan and must be owned by a common entity as outlined in the conditions.
11	This condition is important to ensure that all permanent structures within the development are designed and located in a way that avoids long-term erosion risk, protecting both public safety and infrastructure integrity.	**Erosion Risk Assessment** The consent holder must demonstrate, to the satisfaction of the Healthy Water's, Waterway's Planning Team Leader, that all permanent structures associated with the development including buildings, stormwater outfalls, retaining walls, and other infrastructure are not at risk of being undermined by erosion over their intended design life (50 to 100 years). This must be confirmed through a geotechnical and/or hydraulic assessment prepared by a suitably qualified and experienced professional, taking into account site-specific erosion potential, hydrological conditions, and the effects of climate change.