

Milldale Fast-Track

29/07/2025 – Auckland Council Response

Annexure 2:

Healthy Waters

Memorandum – Specialist input: Healthy Waters and Flood Resilience

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From: Hillary Johnston – Consultant Specialist

Approved by: Mark Iszard – Manager, Growth and Development

Subject: FTA111 – Milldale Stages 4C and 10 - 13 Fast Track – Auckland Council
Application Reference: BUN60446761

Date: 29 July 2025

1. INTRODUCTION

1.1 This memorandum provides Healthy Waters and Flood Resilience Department (**HWFR**) comments on the stormwater aspects of the Milldale 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 Applicant's proposed stormwater management strategy to service Stage 4C and Stage 10-13 of the master planned community known as "Milldale" (the Site).

1.4 Stage 4C and Stages 10-13 are proposed to include approximately 1,155 detached and terraced dwellings and a supporting commercial neighbourhood centre area. The

location of these stages is shown in red in Figure 1 below.

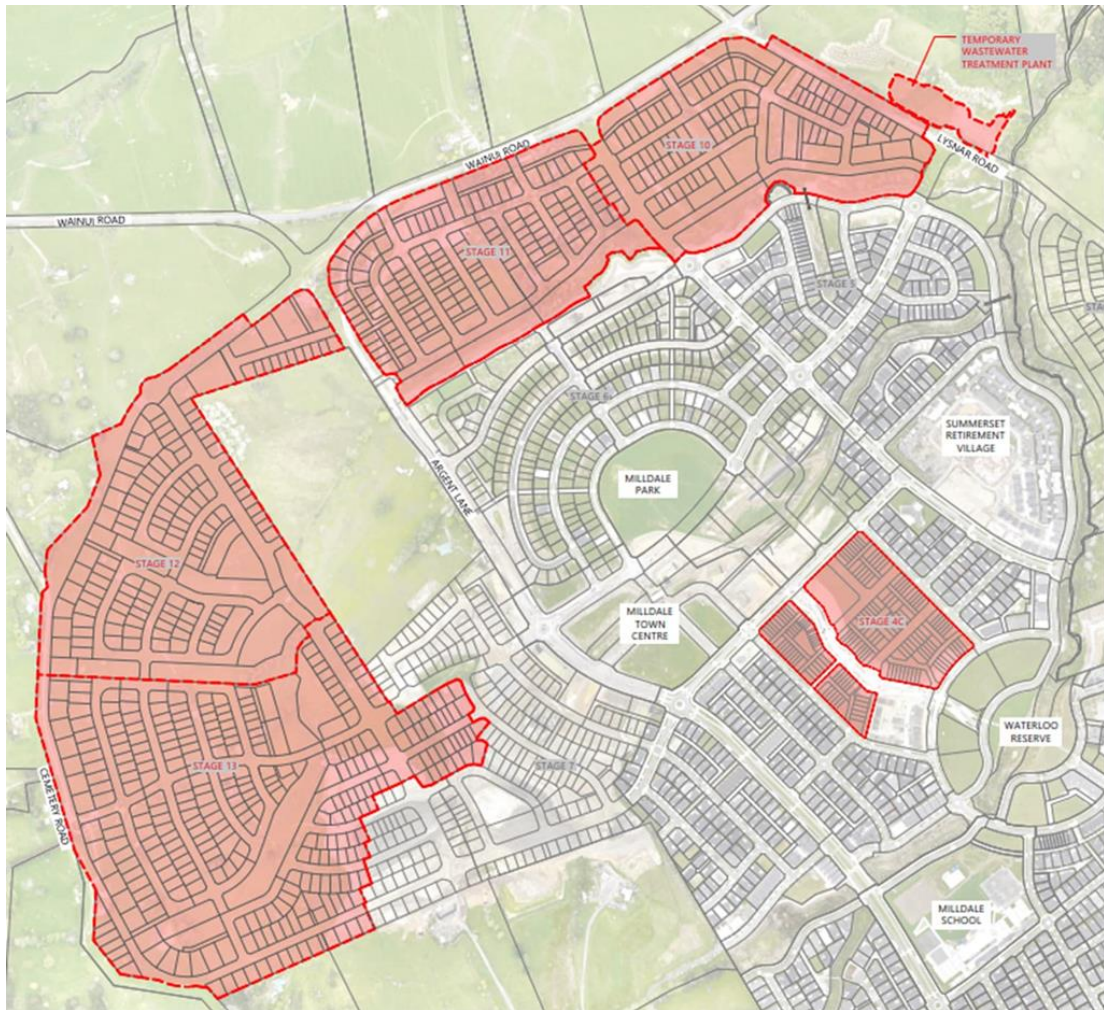


Figure 1. Stages 10-13 and 4c Location Plan

- 1.5 The wider Milldale development area is subject to the Wainui Precinct (I544) under the Auckland Unitary Plan. The 'live' zoning of this land was enabled as a result of a private plan change process. A large extent of the wider Milldale development has already been developed and is authorised by existing resource consents.
- 1.6 The Stormwater Management Plan (**SMP**) for the wider development area is titled '*Stormwater Management Plan Wainui East Future Urban Area*' – Version 4, dated 7 September 2016 prepared by Woods and has been adopted under HWFR Region Wide Network Discharge Consent (**RWND**C). Sufficient information to demonstrate that the stormwater management proposed for Stage 4C and Stages 10-13 complies with the requirements of the Wainui East SMP (V4, September 2016) has not yet been provided.
- 1.7 HWFR assessment and key points of concern with the Application are addressed in detail in **Section 3** below and include:
 - (a) **Public Devices (Operation and Design)**
 - (b) **SMAF 'offset' Approach**

(c) **Management of Overland Flow**

(d) **Vesting of Land**

(e) **Riparian Setbacks**

(f) **Flooding**

- 1.8 The key recommendations arising from the assessment outlined in this memorandum are summarised in **Section 4**. Comments on the Applicant's proposed conditions are provided in **Section 5** and **Appendix A**. Additional recommended conditions are provided in **Appendix B**.

Documents Reviewed

- 1.9 The following documents have been reviewed in preparing this memorandum:

- *'Volume 1: Milldale Evaluation and Overview Report'* – Final Version 1, dated 28 March 2025 and prepared by Woods
- Appendix 2A: Part 1 to Part 8 – *'Proposed Residential Subdivision, Milldale Stages 10 to 13, Wainui East, Geotechnical Investigation Report'* Version 3 dated 24 March 2025 and prepared by CMW Geosciences
- Appendix 2D: *'Milldale P21 Stream Investigations, Milldale Stage 10-13'* Version 1 dated 4 February 2025 and prepared by Woods
- Appendix 2F: *'Infrastructure Report, Milldale Stages 10-13'* (including engineering drawings bound separately as Appendix 2K) – Version 1, dated 28 March 2025 and prepared by Woods
- Appendix 2G: *'Flood Assessment, Milldale Fast Track Application, Milldale Stages 10 - 13'* – Version 0, dated 25 February 2025 and prepared by Woods.
- Appendix 2G: *'Stormwater Management Plan Wainui East Future Urban Area'* – Version 4, dated 7 September 2016 and prepared by Woods.
- *'Volume 3: Milldale Stage 4C'* – Final Version 1, dated 28 March 2025 and prepared by Woods
- Appendix 3C: Part 1A to Part 5B – Civil Drawings Stage 4C prepared by Woods
- Appendix 3F: *'Infrastructure Report, Milldale Stage 4C'* – Version 0, dated 28 March 2025 and prepared by Woods
- Appendix 3G: *'Proposed Residential Subdivision, Milldale Stage 4C, Milldale, Wainui, Geotechnical Assessment Report'* Version 1, dated 20 February 2025 and prepared by CMW Geosciences
- *'Volume 6: Milldale Stages 10 – 13, 4C and WWTP Proposed Conditions of Consent'* – Revision 1, dated 28 March 2025 and prepared by Woods and Barker & Associates Limited

Engagement

- 1.10 A workshop between Council and the Applicant's team was held on 27th May 2025 to discuss preliminary comments and areas of concern. This included Healthy Waters and the Applicant's stormwater engineers. The purpose of the workshop was to ensure that there was understanding on areas of concern and alignment on a pathway to resolution.

- 1.11 A meeting was held on 30th May 2025 between the Applicant's stormwater engineers, Healthy Waters, and Auckland Transport to discuss the proposed hydrology mitigation approach for the development. The lodged application documents indicated a relatively large portion of the public road network was proposed to discharge directly to the stream without hydrology mitigation. The use of Structural Tree Pits was discussed for catchments where connection to a basin was not practicable. This approach was confirmed to the applicant via email on 10th June 2025.
- 1.12 A follow up meeting was held on 23rd June 2025 between the Applicant's stormwater engineers, Healthy Waters, and Auckland Transport to discuss hydrology mitigation and management of overland flow paths. The Applicant confirmed that the proposed stormwater management approach was under review, and instead of implementing Structural Tree Pits, all public road catchments would be able to drain to a detention basin. The requirements for managing overland flow paths in accordance with the relevant Auckland Transport and Healthy Waters design safety criteria was also discussed.
- 1.13 A further meeting was held on 15th July 2025 between Healthy Waters and the Applicant's stormwater engineers to discuss further information and assessment sought on stream geomorphology. The discussion focused on clarifying what is expected to be provided through the geomorphology assessments and how the outcomes would inform stream stability and erosion risk considerations. At the time of writing a Geomorphic Risk Assessment has not yet been provided.

Site Visit

- 1.14 Dali Suljic visited the site on 21st November 2024 as part of the consent pre-application Workshop organised by the Applicant. Additional HWFR specialists who have reviewed this application are familiar with the Milldale development having been involved in a number of consents for the previous stages.

2. REASONS FOR CONSENT

- 2.1 The Planning Report correctly asserts that the Wainui East SMP (V4, September 2016) has been adopted under the RWNDC¹. Sufficient information to demonstrate that the stormwater management proposed for Stage 4C and Stages 10-13 complies with the requirements of the Wainui East SMP (V4, September 2016) has not yet been provided. Therefore, it is uncertain whether the diversion and discharge of stormwater from development proposed within Stage 4C and Stages 10-13 under this Fast Track application can be authorised under Healthy Water's RWNDC.
- 2.2 The proposed Wastewater Treatment Plant (**WWTP**) is located within the Future Urban Zone (**FUZ**). The RWNDC is only applicable to urban zoned land and such, the diversion and discharge of stormwater runoff from the WWTP and associated impervious areas cannot be authorised by the RWNDC. The Applicant's Agent has acknowledged this in within the *Volume 4: Milldale Wastewater Treatment Plant* report² and has sought private authorisation for these areas. Stormwater management for the WWTP will be assessed by Council's regulatory stormwater specialist and has not been considered as part of this assessment.

¹ Section 6.3.1.3, page 25

² Section 4.3.6.4, page 24

3. ASSESSMENT OF STORMWATER ASPECTS OF APPLICATION

Wainui East SMP (V4, September 2016)

- 3.1. The Wainui East SMP (V4, September 2016) divides the wider catchment into five stormwater management zones as shown in Figure 2. The stormwater management approaches for each zone are outlined within the SMP and account for factors such as location and the discharge receiving environment³.

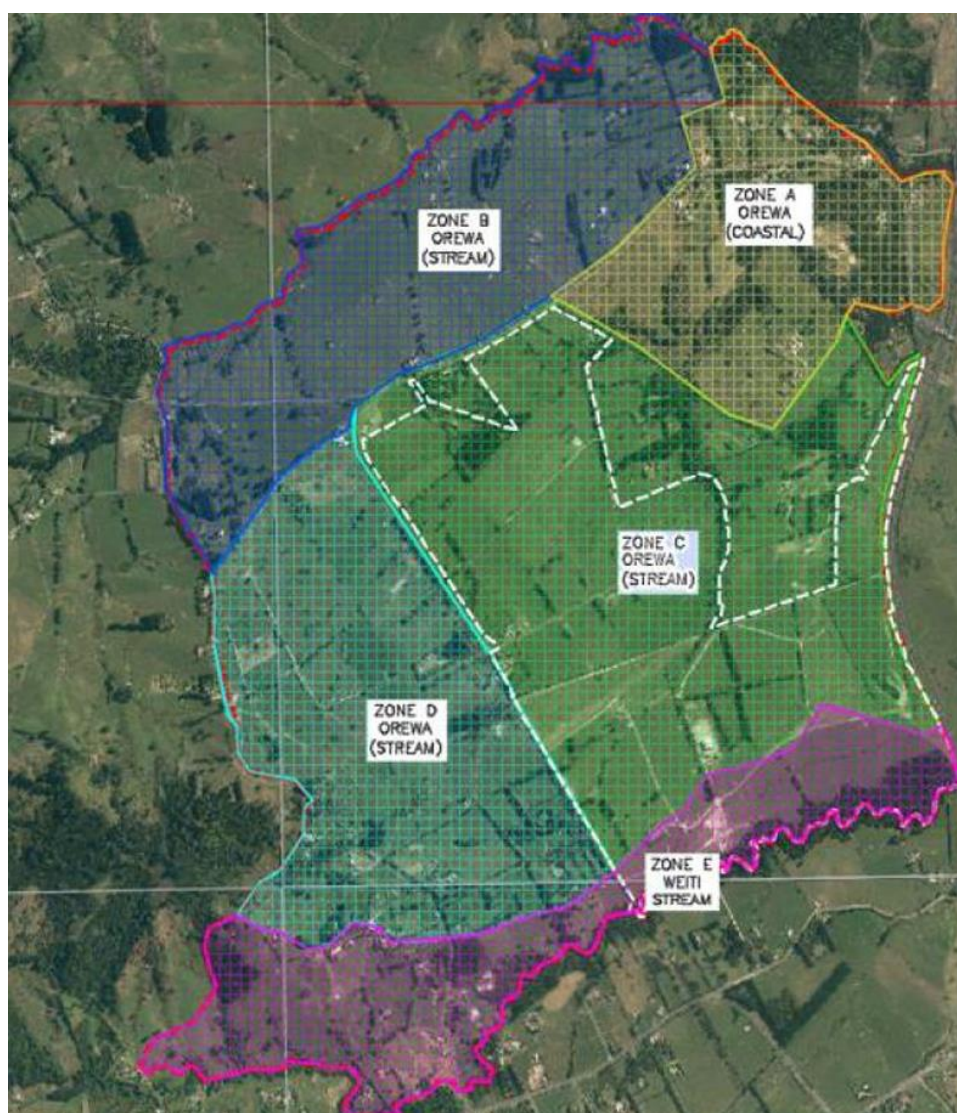


Figure 2. Stormwater Management Zones (Figure 1. Stormwater Management Zones extracted from Wainui East SMP – Version 4, dated 7 September 2016, prepared by Woods)

- 3.2. Stage 4C and Stages 10-11 are located in Zone C. The stormwater management requirements for this zone include at source hydrology mitigation in accordance with SMAF requirements (retention, detention) and to allow flows from larger storm events to be passed forward (no attenuation)⁴. The SMP outlines for this zone flood attenuation 'remains an option due to development increasing the existing effects on

³ Section 7.1, page 35

⁴ Section 7.1, page 37

*Wainui Road Bridge crossing above Waterloo Creek*⁵. This means that the effects of increasing development must be assessed and determined not result in further effects on Wainui Road Bridge crossing above Waterloo Creek for a 'pass forward' approach to be supported.

- 3.3. Stages 12-13 are located in Zone D. The stormwater management requirements for this zone also include at source hydrology mitigation in accordance with SMAF requirements (retention, detention). Allowing flows from larger storm events to be passed forward is also outlined as the preferred stormwater flood management option for this zone (no attenuation)⁶ subject to assessment and verification of downstream effects on Wainui Road Bridge above Waterloo Creek.
- 3.4. In addition to the requirements for Zones C and D above, Stage 4C and Stages 10-13 must also avoid the use of high contaminant generating roofing and cladding materials, and ensure water quality treatment is provided for high use carparks and roads⁷.

Stormwater Management Proposed

- 3.5. Stormwater mitigation in earlier stages of Milldale has primarily been achieved through kerbside raingardens and dry basins for road carriageways, and stormwater tanks on individual lots and private accessways, which achieve detention only. For earlier stages of development the required retention volume has been substituted as additional detention for all impervious surfaces excluding buildings, where retention volume has been accommodated via non-potable rainwater reuse.
- 3.6. Sufficient information which demonstrates that the proposed development meets the requirements of the adopted SMP (V2, September 2016) has not yet been provided, particularly in respect of the proposed 'pass forward' approach, at source hydrology mitigation of private individual lots and hydrology mitigation for a portion of public roads.
- 3.7. Within Stage 4C hydrology mitigation of runoff from public roads and footpaths will be achieved using kerbside raingardens. Stages 4C-2B, 4C-3I, 4C-3B, and 4C-4A are not proposed to include stormwater management tanks to provide hydrology mitigation of runoff from JOAL areas. Instead, these stages are proposed to incorporate individual onsite detention systems as part of the Phase 2 comprehensive development of the respective super lots. Phase 2 is understood to incorporate the construction of buildings and associated private hardstand areas.
- 3.8. Ten new dry basins are proposed to provide hydrology mitigation of runoff from public road areas in Stages 10-13. An 'offset' approach has been proposed, meaning runoff from road areas in some catchments will bypass the basins and discharge directly to the streams. To 'offset' this the basins are proposed to be oversized to theoretically accommodate the equivalent hydrology mitigation volume discharging directly to the streams. This approach is not supported by HWFR and has been discussed with the Applicant's engineers (as outlined in Section 1.11 and 1.12 above). It is understood that refinements are in progress however updated information has not yet been provided at the time of writing.

⁵ Section 7.1, page 37

⁶ Section 7.1, page 37

⁷ Section 7.2, Page 42

- 3.9. The SMP only requires water quality treatment for high-use roads or high contaminant generating carparks. As neither are included as part of this Fast Track application, no water quality treatment has been proposed.
- 3.10. For both Stage 4C and Stages 10-13 flood modelling and management has been undertaken on the basis of a pass forward approach, being conveyance of full unattenuated flows from developed upstream sub-catchments in a range of storm events. The Applicant's engineers have undertaken modelling of potential effects of the proposed pass forward approach. HWFR have not yet been provided with a copy of the model for these stages of development and therefore cannot verify the outcomes of the modelling presented by Applicant's engineers. The flood modelling will need to be provided and interrogated before HWFR can confirm support for the proposed pass forward approach.

Public Devices (Operation and Design)

- 3.11. The Application proposes a range of public stormwater management devices, including communal raingardens and dry basins, intended for vesting to Auckland Council. While the use of dry basins to achieve SMAF hydrology mitigation is generally supported, HWFR has identified several areas where additional information and refinement of the design is required.
- 3.12. Insufficient information has been provided to demonstrate that the proposed public devices have been designed with sufficient space available to enable operation and maintenance activities to be carried out in accordance with Council standards, guidelines, and requirements. In addition, it is unclear whether the proposed number of devices has been consolidated to minimise future maintenance burden. HWFR recommends that these matters be resolved through further engagement prior to lodgement of Engineering Plan Approval.
- 3.13. A number of dry basins are proposed, , granting of the fast track consent should not preclude the option to design some of the proposed basins as wetlands at EPA stage, particularly those servicing larger catchments (e.g. Basins H and I). It is encouraged that the fast track consent allow flexibility for refinement of the stormwater management approach based on further site investigations and discussions.
- 3.14. The Applicant has indicated, through discussions with Auckland Transport and Auckland Council Parks, that a public stormwater pipe bridge is proposed at the 'Bridge 4' location. No further design information or supporting justification has been provided as part of this application. The Applicant has advised that further detail will be supplied at EPA stage. In the absence of further information on the proposed stormwater pipe bridge, Healthy Waters cannot confirm whether the proposed pipe bridge is suitable for public ownership or whether it can be accepted as a public asset at EPA stage.
- 3.15. Several proposed new public stormwater lines are shown to be located within the rear yards of private lots, often at the base of earth-reinforced slopes. HWFR has significant concerns about the long-term maintenance and access implications of the proposed network layout in these instances. These network components are unlikely to be accepted for vesting at the EPA stage unless relocated to public land.
- 3.16. HWFR encourages further discussion with the Applicant's stormwater engineers to address these matters, optimise the number and type of devices, ensure alignment with Council requirements, and confirm operational feasibility for long-term asset management.

SMAF 'offset' Approach

- 3.17. The Application proposes the use of an 'offset' approach to manage hydrology mitigation across relatively large catchment areas, including some that discharge directly to the stream environment. This approach is not supported by Healthy Waters. While offset mitigation may be considered a Best Practicable Option in isolated cases (such as small, constrained catchments where onsite treatment would require impractically small and unmaintainable roadside devices) justification of this approach has not been provided. Given the scale of the catchments proposed to rely on this approach and the absence of a supporting BPO assessment, there is a risk that the proposed design does not align with the requirements of the overarching SMP.

Management of Overland Flow

- 3.18. Several Overland Flow Paths (**OLFP**) are proposed to be conveyed within the proposed public road corridors. Although this approach is generally supported, there are several locations (with reference to the provided OLFP cross-section information) that show the acceptable design safety criteria being considerably exceeded. This is considered to present high flood hazards and risks to people, property and infrastructure and the design should be amended to rectify this.

Vesting of Land

- 3.19. The Application proposes to vest land containing stormwater management devices as *Local Purpose Reserve (Drainage)*. However, the supporting documents do not sufficiently demonstrate whether the extent of the proposed land to vest is appropriate and will deliver additional public benefit that cannot otherwise be achieved through private ownership and maintenance.
- 3.20. While the proposal identifies areas of open space associated with the stormwater network, it is unclear how some of these areas function beyond a stormwater purpose. Vesting of land for stormwater management to Council must be limited to only what is essential for ongoing network performance, maintenance, and resilience. In general, Healthy Waters does not support vesting of wider floodplain or overland flowpath land where that land does not contribute meaningfully to stormwater function or deliver additional recreational, ecological, or amenity value.
- 3.21. In the absence of clear justification, including an assessment of how the land supports stormwater outcomes *and* broader public benefit, Healthy Waters cannot support the extent of land proposed for vesting. Clarification is required to ensure that the areas to be vested are functionally necessary and represent an efficient and appropriate use of public land ownership.
- 3.22. In addition, the land proposed for vesting is referred to on Application Plans as '*Local Purpose Reserve (Drainage)*', which is not an accepted mechanism for vesting. Where vesting of land is proposed, it must be offered as '*Land in Lieu of Reserve – for Drainage Purposes*' to align with Healthy Waters acquisition processes.

Riparian Setbacks

- 3.23. 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.

- 3.24. Due to steep slopes and in-situ soils, which are considered susceptible to erosion, the recommended riparian setbacks may need to exceed those currently proposed.
- 3.25. 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.

Flood Management and Modelling

- 3.26. The Applicant's Engineer has proposed to pass forward flows from the development, meaning attenuation of events up to and including the 1% AEP event is not proposed. As noted in Section 3.2 and 3.3 above, the SMP outlines that where a pass forward approach is proposed the SMP requires this is assessed to determine it will not result in further effects on the Wainui Road Bridge crossing above Waterloo Creek and will not result in effects on 147 Argent Lane.
- 3.27. To enable verification and support of the proposed pass forward approach, the HWFR Catchment Management Team has requested a full copy of the Applicant's stormwater model, including all pre- and post-development scenarios. This is necessary to confirm the modelling assumptions, assess downstream effects, and verify that the stormwater management approach is appropriate. At the time of writing, this information has not yet been provided by the Applicant's engineer for review and verification.
- 3.28. Areas of concern include the Wainui Road bridge itself, the properties downstream between the bridge and Lysnar Road, and the private property at 147 Argent Lane located between Stages 11 and 12.

4. RECOMMENDATIONS

- 4.1. Key recommendations outlined in the above assessment are summarised as follows. A staged approach to resolving stormwater matters is supported in this instance, provided that key concerns are addressed at the appropriate stage of development.

Resource Consent Matters

- 4.2. The following matters are fundamental to confirming the Applications compliance with the adopted SMP and Auckland Council standards. They are considered to be fundamentally tied to development layout, and therefore should be addressed before a decision is made on a resource consent.

Management of Overland Flow

- The design of overland flow paths (OLFPs) within public road corridors must be updated to demonstrate compliance with Auckland Council's safety criteria for depth, velocity, and hazard rating.

Vesting of Land

- The Applicant should provide justification for the extent and location of land proposed for vesting, including evidence that the land delivers essential stormwater function *as well as* wider public benefit. Areas proposed for vesting must be offered

as 'Land in Lieu of Reserve – for Drainage Purposes' and will remain subject to Auckland Council's standard asset acceptance and acquisition processes.

Riparian Setbacks

- To aid in establishing effective riparian set-backs a Geomorphic Risk Assessment should be undertaken to evaluate the current condition, sensitivity, and likely adjustment of the proposed and existing stream networks in response to urbanisation. This must include assessment of soil strength and resistance characteristics, flow energy, and long-term geomorphic evolution.

Flood Management and Modelling

- The Applicant must provide the full stormwater model to Healthy Waters, including both pre- and post-development scenarios, to enable verification of modelling assumptions and assessment of downstream effects. This should include the Wainui Road bridge, properties downstream between the bridge and Lysnar Road, and 147 Argent Lane.

Engineering Plan Approval Matters

- 4.3. In this instance, the following matters have been determined as acceptable to be deferred to EPA stage of development. Amendments to the proposed conditions, and additional conditions of consent have been recommended within **Appendix A** and **Appendix B** to ensure that these items are sufficiently addressed at a later stage of development.

Public Devices (Operation and Design)

- A number of matters relating to the design and layout of public stormwater devices remain unresolved. These should be addressed through further engagement with Healthy Waters prior to lodgement of Engineering Plan Approval. Amendments to conditions proposed and additional conditions of consent are recommended within **Appendix A** and **Appendix B** respectively to ensure outstanding concerns are resolved.
- It is recommended that the consent retain flexibility to allow refinement of the proposed stormwater basins at detailed design stage, including the potential for wetland design (e.g. for Basins H and I), where appropriate and in consultation with Healthy Waters. Amendments to conditions proposed and additional conditions of consent are recommended within **Appendix A** and **Appendix B** respectively to ensure outstanding concerns are resolved.
- Public stormwater infrastructure located within private lots, particularly at the base of reinforced slopes, should be reconsidered and where possible relocated to public land to ensure long-term accessibility. Amendments to conditions proposed and additional condition of consent are recommended within **Appendix A** and **Appendix B** respectively to ensure outstanding concerns are resolved.

SMAF 'offset' approach

- The Applicant should be required to re-evaluate the stormwater management strategy for large catchments currently relying on 'offset' mitigation, with a focus on

redirecting flows to treatment and hydrology mitigation basins where practicable. Where redirection is not feasible, a robust BPO assessment must be provided to justify the ‘offset’ approach, including consideration of alternative design solutions and site-specific constraints. This is necessary to ensure alignment with the overarching SMP. An additional condition of consent is recommended within **Appendix B** to ensure outstanding concerns are resolved.

Vesting of Land

- 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. An additional condition of consent is recommended within **Appendix B** to ensure outstanding concerns are resolved.

5. PROPOSED CONDITIONS

- 5.1 Initial comments on the Applicant’s proposed stormwater related conditions,⁸ as well as on additional conditions sought, if the Panel is minded to grant approval, are provided as **Appendix A** and **Appendix B** respectively.
- 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.

⁸ Attachment 2 to the AEE.

APPENDIX A: PROPOSED CONDITIONS COMMENTS REGISTER

#	PROPOSED CONDITIONS	HEALTHY WATERS COMMENT: 29.07.2025
Stages 10-13 General Conditions of Consent BUN 200		
1	<p>Activity in accordance with application</p> <p>The proposal must be carried out in general accordance with the plans and all information submitted with the application, as detailed below and referenced by the Council under consent numbers [BUN 200]:</p> <ul style="list-style-type: none"> a) Application Form and Assessment of Environmental Effects prepared by Woods and B&A, dated 28 February 2025; and b) Reports and Drawings as listed in Section 2.6. 	No objection, standard condition.
Stages 10-13 Subdivision Conditions of Consent SUB 201		
80	<p>Land to Vest in Council</p> <p>Lots 6000-6022 on the approved resource consent subdivision plans referenced in Condition 1 must vest in the Council as a Local Purpose (Drainage) Reserve. The Consent Holder must meet all costs associated with the vesting of the Local Purpose (Drainage) Reserves.</p>	<p>Areas proposed for vesting must be offered as '<i>Land in Lieu of Reserve – for Drainage Purposes</i>'. Amendments are proposed as follows.</p> <p>Land to Vest in Council</p> <p>Lots 6000-6022 on the approved resource consent subdivision plans referenced in Condition 1 must vest in the Council as a <u>Local Purpose (Drainage) Reserve Land in Lieu of Reserve – for Drainage Purposes</u>. The Consent Holder must meet all costs associated with the vesting of the <u>Local Purpose (Drainage) Reserves Land in Lieu of Reserve</u>.</p> <p><u><i>Advice note:</i></u> <u><i>Detail on the final extent of land proposed to be vested must be agreed by Council prior to lodgement of Engineering Plan Approval</i></u></p>
84	<p>Operation and Maintenance of Stormwater Management Devices within JOALS</p> <p>The Consent Holder must provide a copy of the draft land covenant document to the Council, Legal Team. The draft covenant document shall include provision for the following items:</p> <ul style="list-style-type: none"> a) specifies ownership, operation, and maintenance of the private stormwater systems for JOALs in each respective stage; b) specifies responsibilities together with an acceptable method of management of the stormwater systems, and for the raising of funds from shareholders or members from time to time to 	An additional condition regarding the operation and maintenance of stormwater management devices within JOALs has been recommended within Appendix B for <i>Stages 10-13 Subdivision Conditions of Consent SUB 201</i> as Condition 84A.

#	PROPOSED CONDITIONS	HEALTHY WATERS COMMENT: 29.07.2025
	<p>adequately finance future maintenance and renewal obligations of the stormwater system; and</p> <p>c) in relation to the private stormwater device(s), specifies the operation and maintenance of the private stormwater system to be in general accordance with relevant sections of the OMM supplied to Council and any other relevant consents (as detailed in Condition 93).</p> <p>d) Supply a solicitor's undertaking that the land covenants above as approved by Council will be registered with LINZ.</p>	
92	<p>Connection to the Public Network</p> <p>The Consent Holder must design and construct connections to the public stormwater reticulation network to serve all Lots in general accordance with the requirements of the stormwater utility service provider and in general accordance with the approved plans referenced in Condition 1. Confirmation from the utility provider that works have been satisfactorily undertaken must be provided when applying for a certificate under section 224(c) of the RMA.</p> <p>Advice Note:</p> <ul style="list-style-type: none"> • <i>Acceptable forms of evidence include Engineering Approval (EA) Completion Certificates.</i> • <i>Stormwater utility provider is the Auckland Council Healthy Waters Department.</i> • <i>Public connections are to be constructed in general accordance with the Stormwater Code of Practice.</i> • <i>Alterations to the public stormwater reticulation network require Engineering Approval.</i> • <i>Plans approved under Resource Consent do not constitute an Engineering Approval and should not be used for the purposes of constructing public reticulation works in the absence of that approval.</i> 	No objection, standard condition.
93	<p>Public Stormwater Outfalls</p> <p>The Consent Holder must design and construct stormwater outfall structures in general accordance with the requirements of the utility service provider and in general accordance with the approved plans referenced in Condition 1. Confirmation from the utility provider that works have been satisfactorily undertaken must be provided when applying for a certificate under section 224(c) of the RMA.</p>	No objection, standard condition.

#	PROPOSED CONDITIONS	HEALTHY WATERS COMMENT: 29.07.2025
	<p>Advice Note:</p> <ul style="list-style-type: none"> • <i>Stormwater outfalls shall be designed in general accordance with "Auckland Council publication Technical Report 2013/018".</i> • <i>Acceptable forms of evidence include Engineering Approval Completion Certificates. • Utility service provider is the Auckland Council Healthy Waters Department</i> • <i>Construction of public outfall structures require Engineering Approval.</i> • <i>Engineering Plans approved under Resource Consent do not constitute an Engineering Approval and should not be used for the purposes of constructing public reticulation works in the absence of that approval.</i> • <i>Please be aware of any other conditions and requirements pertaining to outfalls, including regional consenting conditions and requirements.</i> 	
94	<p>Stormwater Devices</p> <p>All public stormwater treatment and/or attenuation devices (dry basins and rain gardens) and the private stormwater detention tanks within JOALs must be designed and constructed in general accordance with the "Infrastructure Report Milldale Stages 10-13 ref P24-128, rev 1, prepared by Woods, dated 28/03/2025" and "Stormwater Management Devices in the Auckland Region, December 2017, Guideline Document 2017/001" referenced in Condition 1, and in general accordance with the approved plans referenced in Condition 1.</p> <p>Advice Note: <i>Safety in design documents will need to be reviewed by Healthy Waters and the residual risks will need to be agreed prior to issuing approvals.</i></p>	<p>Amendments proposed.</p> <p>Stormwater Devices</p> <p>All public stormwater treatment and/or attenuation devices (<u>including</u> dry basins, rain gardens, <u>and any proposed alternatives</u>) and the private stormwater detention tanks within JOALs must be designed and constructed in general accordance with the "Infrastructure Report Milldale Stages 10–13," ref P24-128, rev 1, prepared by Woods, dated 28/03/2025 and "Stormwater Management Devices in the Auckland Region," December 2017, Guideline Document 2017/001, referenced in Condition 1 and in general accordance with the approved plans referenced in Condition 1.</p> <p><u>Where there is any inconsistency between the Infrastructure Report and the adopted Wainui East Stormwater Management Plan (Version 4, dated 7 September 2016), the SMP shall take precedence unless otherwise agreed in writing by Auckland Council Healthy Waters.</u></p> <p>Advice Notes:</p> <ul style="list-style-type: none"> • <u>Refinements to stormwater devices, including changes to type, layout, and function, such as the potential conversion of dry basins to wetlands (e.g. Basins H and I, may be undertaken during the detailed design phase, where appropriate and in consultation with Auckland Council Healthy Waters.</u> • <u>Any proposed changes from the consented design must remain consistent with the overarching stormwater management strategy set out in the Wainui</u>

#	PROPOSED CONDITIONS	HEALTHY WATERS COMMENT: 29.07.2025
		<p><u>East SMP (V4, September 2016) and be approved by Auckland Council Healthy Waters prior to Engineering Plan Approval.</u></p> <ul style="list-style-type: none"> • <u>Opportunities to optimise the design for long-term operation, maintenance, and asset management should be explored as part of the detailed design process in consultation with Auckland Council Healthy Waters. This includes ensuring adequate access, minimisation of maintenance burden, and consolidation of devices where practicable.</u> • <u>Safety in Design documentation must be submitted to Auckland Council Healthy Waters for review, and any residual risks must be agreed upon prior to the issue of Engineering Plan Approval.</u>
99	<p>Operation and Maintenance Manual for Public and Private Stormwater Devices</p> <p>An Operation and Maintenance Plan (OMM) must be provided to Council to address all public and private stormwater management systems. The OMM must set out how the stormwater management system is to be operated and maintained to ensure that adverse environmental effects are minimised. The OMM must include:</p> <ol style="list-style-type: none"> details of who will hold responsibility for long-term maintenance of the stormwater management system and the organisational structure which will support this process; a programme for regular maintenance and inspection of the stormwater management system; a programme for the collection and disposal of debris and sediment collected by the stormwater management devices or practices; a programme for post storm inspection and maintenance; a programme for inspection and maintenance of the outfall; general inspection checklists for all aspects of the stormwater management system, including visual checks; and a programme for inspection and maintenance of any vegetation associated with the stormwater management devices. 	<p>An additional condition regarding operation and maintenance manual requirements for public stormwater devices has been recommended within Appendix B for Stages 10-13 Subdivision Conditions of Consent SUB 201 as Condition 99A.</p>
115	<p>Site-Wide Stormwater Management</p> <p>All stormwater from buildings and paved areas on all residential lots within the development must be collected and disposed of in general accordance with the requirements of the 'Wainui Stormwater Management Plan, Ref: Job No.31720, dated 07-09-2016' and 'Auckland Council GD01'. The collection and disposal system must be installed in conjunction with the erection of any buildings and must be maintained to the specified capacity and standard.</p>	<p>Amendments proposed.</p> <p>Hydrology mitigation of runoff from buildings and paved areas on all residential lots within the development must be achieved <u>at-source within the individual lots</u>, and in accordance with the requirements of the 'Wainui Stormwater Management Plan, Ref: Job No.31720, dated 07-09-2016' as well as 'Auckland Council GD01'. The stormwater management system must be installed in conjunction with the erection of any buildings and must be maintained to the specified capacity and standard.</p>

#	PROPOSED CONDITIONS	HEALTHY WATERS COMMENT: 29.07.2025
Phase 1: Civil Works Land Use - Conditions of Consent LUC 301		
1	<p>The proposal must be carried out in general accordance with the plans and all information submitted with the application, as detailed below and referenced by the Council under consent numbers [BUN 300]:</p> <ul style="list-style-type: none"> a) Application Form and Assessment of Environmental Effects prepared by Woods and B&A, dated 28 March 2025. b) Reports and Drawings as listed in Section 3.3. 	No objection, standard condition.
Phase 1: Civil Works Subdivision - Conditions of Consent SUB 301		
30	<p>The proposal must be carried out in general accordance with the plans and all information submitted with the application, as detailed below and referenced by the Council under consent numbers [BUN 301]:</p> <ul style="list-style-type: none"> a) Application Form and Assessment of Environmental Effects prepared by Woods and B&A, dated March 2025; and b) Reports and Drawings as listed in Section 3.3. 	No objection, standard condition.
38	<p>Operation and Maintenance of Stormwater Management Devices within JOALs</p> <p>The Consent Holder must provide a copy of the draft land covenant document to the Council, Legal team. The draft covenant document shall include provision for the following items:</p> <ul style="list-style-type: none"> a) specifies ownership, operation, and maintenance of the private stormwater systems for JOALs in each respective stage; b) specifies responsibilities together with an acceptable method of management of the stormwater systems, and for the raising of funds from shareholders or members from time to time to adequately finance future maintenance and renewal obligations of the stormwater system; and c) in relation to the private stormwater device(s), specifies the operation and maintenance of the private stormwater system to be in general accordance with relevant sections of the OMM supplied to Council and any other relevant consents (as detailed in Condition 49); and d) Supply a solicitor's undertaking that the land covenants above as approved by Council will be registered with LINZ. 	<p>An additional condition regarding the operation and maintenance of stormwater management devices within JOALs has been recommended within Appendix B for <i>Phase 1: Civil Works Subdivision - Conditions of Consent SUB 301</i> as Condition 38A.</p>
40	<p>Overland Flow Path Protection</p> <p>Lot 4007 is subject to a land covenant for the 1-in-100-year overland flow path. No obstructions, including buildings, structures, or hard landscaping other than permeable fencing, shall be placed within the designated overland flow path. Compliance must be maintained in accordance with the</p>	<p>Minor changes are proposed to this condition to ensure that the adopted SMP has precedence over the Infrastructure Report.</p> <p>Overland Flow Path Protection</p>

#	PROPOSED CONDITIONS	HEALTHY WATERS COMMENT: 29.07.2025
	<p>recommendations of “Infrastructure Report Milldale Stage 4C, ref P240128, rev 0, prepared by Woods, dated 28/03/2025” and any subsequent reports.</p> <p>This covenant must be registered on the record of title to be issued for Lot 4007 to ensure that it is complied with on a continuing basis.</p>	<p>Lot 4007 is subject to a land covenant for the 1-in-100-year overland flow path. No obstructions, including buildings, structures, or hard landscaping other than permeable fencing, shall be placed within the designated overland flow path. Compliance must be maintained in accordance with the recommendations of “Infrastructure Report Milldale Stage 4C, ref P240128, rev 0, prepared by Woods, dated 28/03/2025” and any subsequent reports.</p> <p><u>Where there is any inconsistency between the Infrastructure Report and the adopted Wainui East Stormwater Management Plan (Version 4, dated 7 September 2016), the SMP shall take precedence unless otherwise agreed in writing by Auckland Council Healthy Waters.</u></p> <p>This covenant must be registered on the record of title to be issued for Lot 4007 to ensure that it is complied with on a continuing basis</p>
46	<p>Connection to Public Network</p> <p>The Consent Holder must design and construct connections to the public stormwater reticulation network to serve all Lots in general accordance with the requirements of the stormwater utility service provider and in general accordance with the approved plans referenced in Condition 1. Confirmation from the utility provider that works have been satisfactorily undertaken must be provided when applying for a certificate under section 224(c) of the RMA.</p> <p>Advice Note:</p> <ul style="list-style-type: none"> • <i>Acceptable forms of evidence include Engineering Approval Completion Certificates.</i> • <i>Stormwater utility provider is the Auckland Council Healthy Waters Department.</i> • <i>Public connections are to be constructed in general accordance with the Stormwater</i> • <i>Code of Practice.</i> • <i>Alterations to the public stormwater reticulation network require Engineering Approval.</i> • <i>Plans approved under Resource Consent do not constitute an Engineering Approval and should not be used for the purposes of constructing public reticulation works in the absence of that approval.</i> 	<p>No objection, standard condition.</p>
47	<p>Stormwater Devices</p>	<p>Amendments proposed as follows.</p>

#	PROPOSED CONDITIONS	HEALTHY WATERS COMMENT: 29.07.2025
	<p><u>All public stormwater treatment and/or attenuation devices (rain gardens) and the private stormwater detention tanks within JOALs must be designed and constructed in general accordance with the “Infrastructure Report Milldale Stage 4C, ref P24-128, rev 0, prepared by Woods, dated 28/03/2025” referenced in Condition 1, and any subsequent reports, and “Stormwater Management Devices in the Auckland Region, December 2017, Guideline Document 2017/001” and in general accordance with the approved plans referenced in Condition 1.</u></p>	<p>Stormwater Devices</p> <p>All public stormwater treatment and/or attenuation devices (rain gardens) and the private stormwater detention tanks within JOALs must be designed and constructed in general accordance with the “Infrastructure Report Milldale Stage 4C, ref P24-128, rev 0, prepared by Woods, dated 28/03/2025” referenced in Condition 1, and any subsequent reports, and “Stormwater Management Devices in the Auckland Region, December 2017, Guideline Document 2017/001” and in general accordance with the approved plans referenced in Condition 1.</p> <p><u>Where there is any inconsistency between the Infrastructure Report and the adopted Wainui East Stormwater Management Plan (Version 4, dated 7 September 2016), the SMP shall take precedence unless otherwise agreed in writing by Auckland Council Healthy Waters.</u></p> <p>Advice Notes:</p> <ul style="list-style-type: none"> • <u>Refinements to stormwater devices, including changes to type, layout, and function, such as the potential conversion of dry basins to wetlands (e.g. Basins H and I, may be undertaken during the detailed design phase, where appropriate and in consultation with Auckland Council Healthy Waters.</u> • <u>Any proposed changes from the consented design must remain consistent with the overarching stormwater management strategy set out in the Wainui East SMP (V6, September 2016) and be approved by Auckland Council Healthy Waters prior to Engineering Plan Approval.</u> • <u>Opportunities to optimise the design for long-term operation, maintenance, and asset management should be explored as part of the detailed design process in consultation with Auckland Council Healthy Waters. This includes ensuring adequate access, minimisation of maintenance burden, and consolidation of devices where practicable.</u> • <u>Safety in Design documentation must be submitted to Auckland Council Healthy Waters for review, and any residual risks must be agreed upon prior to the issue of Engineering Plan Approval.</u>
52	<p>Operation and Maintenance Manual for Public and Private Stormwater Devices</p> <p>An Operation and Maintenance Plan (OMM) must be provided to Council to address all public and private stormwater management systems. The OMM must set out how the stormwater management system is to be operated and maintained to ensure that adverse environmental effects are minimised. The OMM must include:</p>	<p>An additional condition regarding operation and maintenance manual requirements for public stormwater devices has been recommended within Appendix B for <i>Phase 1: Civil Works Subdivision - Conditions of Consent SUB 301</i> as Condition 52A.</p>

#	PROPOSED CONDITIONS	HEALTHY WATERS COMMENT: 29.07.2025
	<ul style="list-style-type: none"> a) details of who will hold responsibility for long-term maintenance of the stormwater management system and the organisational structure which will support this process; b) a programme for regular maintenance and inspection of the stormwater management system; c) a programme for the collection and disposal of debris and sediment collected by the stormwater management devices or practices; d) a programme for post storm inspection and maintenance; e) a programme for inspection and maintenance of the outfall; f) general inspection checklists for all aspects of the stormwater management system, including visual checks; and g) a programme for inspection and maintenance of any vegetation associated with the stormwater management devices 	
Phase 2: Comprehensive Residential Development Subdivision - Conditions of Consent SUB 302		
1	<p>The proposal must be carried out in general accordance with the plans and all information submitted with the application, as detailed below and referenced by the Council under consent numbers [BUN 300]:</p> <ul style="list-style-type: none"> a) Application Form and Assessment of Environmental Effects prepared by Woods and B&A, dated 28 March 2025; and b) Reports and Drawings as listed in Section 3.6. 	No objection, standard condition.
34	<p>Operation and Maintenance Manual (OMM) for Private Stormwater Management Device within JOAL 4150</p> <p>The Consent Holder must provide a copy of the draft land covenant document to the Council, Legal team. The draft covenant document shall include provision for the following items:</p> <ul style="list-style-type: none"> a) specifies ownership, operation, and maintenance of the private stormwater system for JOAL 4150; b) specifies responsibilities together with an acceptable method of management of the stormwater systems, and for the raising of funds from shareholders or members from time to time to adequately finance future maintenance and renewal obligations of the stormwater system; and c) in relation to the private stormwater device(s), specifies the operation and maintenance of the private stormwater system to be in general accordance with relevant sections of the OMM supplied to Council and any other relevant consents (as detailed in Condition 40). 	<p>Minor amendments to the heading of this condition are suggested for consistency with other stages.</p> <p>Operation and Maintenance Manual (OMM) for of Private Stormwater Management Device within JOAL 4150</p> <p>An additional condition regarding the operation and maintenance of stormwater management devices within JOALs has been recommended within Appendix B for <i>Phase 2: Comprehensive Residential Development Subdivision - Conditions of Consent SUB 302</i> as Condition 34A.</p>

#	PROPOSED CONDITIONS	HEALTHY WATERS COMMENT: 29.07.2025
	d) Supply a solicitor's undertaking that the land covenants above as approved by Council will be registered with LINZ.	
41	<p>Connection to Public Network</p> <p>The Consent Holder must design and construct connections to the public stormwater reticulation network to serve all Lots in general accordance with the requirements of the stormwater utility service provider and in general accordance with the approved plans referenced in Condition 1. Confirmation from the utility provider that works have been satisfactorily undertaken must be provided when applying for a certificate under section 224(c) of the RMA.</p> <p>Advice Note:</p> <ul style="list-style-type: none"> • <i>Acceptable forms of evidence include Engineering Approval Completion Certificates.</i> • <i>Stormwater utility provider is the Auckland Council Healthy Waters Department.</i> • <i>Public connections are to be constructed in general accordance with the Stormwater Code of Practice.</i> • <i>Alterations to the public stormwater reticulation network require Engineering Approval.</i> • <i>Plans approved under Resource Consent do not constitute an Engineering Approval and should not be used for the purposes of constructing public reticulation works in the absence of that approval.</i> 	No objection, standard condition.
42	<p>Operation and Maintenance Manual for the Private Stormwater Device in JOAL 4150</p> <p>An Operation and Maintenance Plan (OMM) must be provided to Council to address the private stormwater management system in JOAL 4150. The OMM must set out how the stormwater management system is to be operated and maintained to ensure that adverse environmental effects are minimised. The OMM must include:</p> <ul style="list-style-type: none"> a) details of who will hold responsibility for long-term maintenance of the stormwater management system and the organisational structure which will support this process; b) a programme for regular maintenance and inspection of the stormwater management system; 	Unlike with other Stages and Phases, the Operation and Maintenance Manual proposed under this condition is not intended to be applicable to any private devices. Therefore, no objection.

#	PROPOSED CONDITIONS	HEALTHY WATERS COMMENT: 29.07.2025
	<ul style="list-style-type: none"> c) a programme for the collection and disposal of debris and sediment collected by the stormwater management devices or practices; d) a programme for post storm inspection and maintenance; e) a programme for inspection and maintenance of the outfall; f) general inspection checklists for all aspects of the stormwater management system, including visual checks; and g) a programme for inspection and maintenance of any vegetation associated with the stormwater management devices. 	

APPENDIX B: ADDITIONAL RECOMMENDED CONDITIONS REGISTER

#	ADDITIONALLY RECOMMENDED CONDITIONS	HEALTHY WATERS COMMENT
SPECIFIC		
Stages 10-13 Subdivision Conditions of Consent SUB 201		
84A	<p>Consent Notice – Private Stormwater Compliance</p> <p>A consent notice must be registered on the record of title for each lot that contains or is served by a private stormwater management device within a JOAL. The consent notice must require that:</p> <ul style="list-style-type: none"> a) The stormwater device be maintained in accordance with the approved Operation and Maintenance Manual required by Condition 99, and b) The device must continue to meet the hydrology mitigation requirements (retention and/or detention) set out in the Wainui East SMP (Version 4, dated 7 September 2016) in perpetuity; and c) Evidence of maintenance (e.g. inspection reports, service logs) must be made available to Auckland Council on request. 	<p>This condition will ensure that private stormwater management devices within JOALs for Stages 10-13 continue to function as intended and remain compliant with the hydrology mitigation requirements of the SMP. As these devices will not be publicly maintained, it is essential that legal mechanisms such as land covenants and consent notices clearly define long-term maintenance responsibilities and performance expectations. This provides assurance that stormwater runoff from JOALs will be managed appropriately over the life of the development and will ensure ongoing compliance with the SMP.</p>
99A	<p>Operation and Maintenance Manual for Public Stormwater Devices</p> <p>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 prior to the lodgement of Engineering Plan Approval. The OMP must be prepared to the satisfaction of Auckland Council Healthy Waters Operations Team and comply with Healthy Waters Operation and Maintenance Plan Template.</p>	<p>The additional condition will ensure that all stormwater management devices proposed for vesting in Auckland Council are supported by an OMP that aligns with Healthy Waters current operational standards.</p> <p>Requiring the OMP to be submitted prior to the time of Engineering Plan Approval allows the Healthy Waters Operations Team to confirm that the design put forward for EPA supports safe, efficient, and cost-effective long-term maintenance.</p>
Phase 1: Civil Works Subdivision - Conditions of Consent SUB 301		
38A	<p>Consent Notice – Private Stormwater Compliance</p> <p>A consent notice must be registered on the record of title for each lot that contains or is served by a private stormwater management device within a JOAL. The consent notice must require that:</p> <ul style="list-style-type: none"> a) The stormwater device be maintained in accordance with the approved Operation and Maintenance Manual required by Condition 52, and 	<p>This condition will ensure that private stormwater management devices within JOALs for Stage 4C continue to function as intended and remain compliant with the hydrology mitigation requirements of the SMP. As these devices will not be publicly maintained, it is essential that legal mechanisms such as land covenants and consent notices clearly define long-term maintenance responsibilities and performance expectations. This provides assurance that stormwater runoff from JOALs will be managed appropriately over the life of the development and will ensure ongoing compliance with the SMP.</p>

#	ADDITIONALLY RECOMMENDED CONDITIONS	HEALTHY WATERS COMMENT
	<ul style="list-style-type: none"> b) The device must continue to meet the hydrology mitigation requirements (retention and/or detention) set out in the Wainui East SMP (Version 4, dated 7 September 2016) in perpetuity; and c) Evidence of maintenance (e.g. inspection reports, service logs) must be made available to Auckland Council on request. 	
52A	<p>Operation and Maintenance Manual for Public Stormwater Devices</p> <p>Operation and Maintenance Manual for Public Stormwater Devices 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 prior to the lodgement of Engineering Plan Approval. The OMP must be prepared to the satisfaction of Auckland Council Healthy Waters Operations Team and comply with Healthy Waters Operation and Maintenance Plan Template.</p>	<p>The additional condition will ensure that all stormwater management devices proposed for vesting in Auckland Council are supported by an OMP that aligns with Healthy Waters current operational standards.</p> <p>Requiring the OMP to be submitted prior to the time of Engineering Plan Approval allows the Healthy Waters Operations Team to confirm that the design put forward for EPA supports safe, efficient, and cost-effective long-term maintenance.</p>
65	<p>Site Wide Stormwater Management</p> <p>Hydrology mitigation of runoff from buildings and paved areas on all residential lots within the development must be achieved <u>at-source within the individual lots</u>, and in accordance with the requirements of the 'Wainui Stormwater Management Plan, Ref: Job No.31720, dated 07-09-2016' as well as 'Auckland Council GD01'. The stormwater management system must be installed in conjunction with the erection of any buildings and must be maintained to the specified capacity and standard.</p>	<p>This condition is recommended to ensure that stormwater runoff from individual residential lots is managed in a way that aligns with the hydrology mitigation requirements of the Wainui East SMP, which requires at-source management.</p>
Phase 2: Comprehensive Residential Development Subdivision - Conditions of Consent SUB 302		
34A	<p>Consent Notice – Private Stormwater Compliance</p> <p>A consent notice must be registered on the record of title for each lot that contains or is served by a private stormwater management device within a JOAL. The consent notice must require that:</p> <ul style="list-style-type: none"> a) The stormwater device be maintained in accordance with the approved Operation and Maintenance Manual required by Condition 52, and b) The device must continue to meet the hydrology mitigation requirements (retention and/or detention) set out in the Wainui East SMP (Version 4, dated 7 September 2016) in perpetuity; and c) Evidence of maintenance (e.g. inspection reports, service logs) must be made available to Auckland Council on request. 	<p>This condition will ensure that private stormwater management devices within JOALs for Stage 4C continue to function as intended and remain compliant with the hydrology mitigation requirements of the SMP. As these devices will not be publicly maintained, it is essential that legal mechanisms such as land covenants and consent notices clearly define long-term maintenance responsibilities and performance expectations. This provides assurance that stormwater runoff from JOALs will be managed appropriately over the life of the development and will ensure ongoing compliance with the SMP.</p>

#	ADDITIONALLY RECOMMENDED CONDITIONS	HEALTHY WATERS COMMENT
GENERAL		
1	<p>Raingarden Media Specification</p> <p>The media of the proposed communal raingardens must comply with the following:</p> <ul style="list-style-type: none"> 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 '<i>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)</i>' 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 <p>Advice Note: All infiltration tests results must be reported in 'mm/hr' and certified by a Chartered Professional Engineer.</p>	<p>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.</p>

#	ADDITIONALLY RECOMMENDED CONDITIONS	HEALTHY WATERS COMMENT
2	<p>Maintenance of Communal Stormwater Management Devices</p> <p>The consent holder must maintain the communal stormwater management devices serving the subdivision in accordance with the following requirements:</p> <ul style="list-style-type: none"> a) The consent holder must maintain the communal devices until the earlier of: <ul style="list-style-type: none"> (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. 	<p>The recommended condition will ensure any communal stormwater devices are properly maintained during development and handed over to Council in a functional and compliant state.</p>
3	<p>Requirement for Bond</p> <p>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 proposed stormwater management devices.</p> <p>The bond must:</p> <ul style="list-style-type: none"> a) Be calculated at a rate of communal device area; 	<p>A condition requiring establishment of a bond will secure proper maintenance and completion of any communal stormwater management devices, protecting the Council from costs if the consent holder fails to meet their obligations.</p>

#	ADDITIONALLY RECOMMENDED CONDITIONS	HEALTHY WATERS COMMENT
	<p>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.</p> <p>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.</p> <p>d) Be released once the relevant condition(s) have been satisfied and all associated Council costs have been paid.</p> <p>Advice Notes: <i>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.</i></p> <p><i>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.</i></p>	
4	<p>Exclusion of Retaining Walls from Vesting</p> <p>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 .</p>	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.
5	<p>Flood Risk and Nuisance</p> <p>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.</p>	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.
6	<p>Stormwater Asset Acceptance</p> <p>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 holder must confirm and agree with Auckland Council</p>	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.

#	ADDITIONALLY RECOMMENDED CONDITIONS	HEALTHY WATERS COMMENT
	<p>Healthy Waters, acceptance in respect of all stormwater devices, and the extent of any associated land, proposed to vest to Healthy Waters.</p> <p>Should any stormwater devices, or associated land, not be 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.</p>	
7	<p>Best Practicable Option Assessment</p> <p>Prior to Engineering Plan Approval, the Consent Holder must submit a final stormwater management strategy, supported by a Best Practicable Option (BPO) assessment, to Auckland Council Healthy Waters for review and approval.</p> <p>The BPO assessment shall demonstrate that:</p> <ul style="list-style-type: none"> a) Flows from public roads are directed to a stormwater basin, or to an alternative stormwater device, designed and sized for the contributing catchment area; or b) The use of offset mitigation is consistent with the principles and requirements of the Wainui East Stormwater Management Plan (Version 4, dated 7 September 2016) <p>The BPO assessment must be approved by Auckland Council Healthy Waters prior to Engineering Plan Approval.</p> <p><i>Advice Note: Structural tree pit is considered to be an appropriate alternative stormwater device subject to Engineering Plan Approval.</i></p>	<p>This condition is proposed to ensure that the stormwater management strategy aligns with the intent of the Wainui East Stormwater Management Plan (SMP), which prioritises hydrology mitigation at source. The current reliance on offset mitigation for some catchments poses a risk of underperformance and non-compliance with SMP objectives.</p> <p>Requiring a re-evaluation of the strategy, supported by a robust Best Practicable Option (BPO) assessment where direct mitigation is not feasible will ensure compliance with the SMP.</p>
8	<p>Geomorphic Risk Assessment</p> <p>Prior to lodgement of Engineering Plan Approval, the Consent Holder must provide a Geomorphic Risk Assessment to Auckland Council Healthy Waters for review and approval. The assessment must evaluate the condition, sensitivity, and likely adjustment of the proposed and existing stream networks in response to urbanisation and increased stormwater runoff.</p> <p>The Geomorphic Risk Assessment must include, but not be limited to:</p> <ul style="list-style-type: none"> a) An assessment of soil strength and resistance to erosion; b) Analysis of flow energy, stream power, and sediment transport potential; and 	<p>This condition is recommended to ensure that riparian setbacks and stream protection measures are based on a clear understanding of how the stream network is likely to respond to the proposed urban development.</p> <p>Without this assessment, there is a risk of long-term erosion, channel instability, and infrastructure damage. A Geomorphic Risk Assessment will determine whether the design of setbacks and mitigation measures are fit-for-purpose.</p>

#	ADDITIONALLY RECOMMENDED CONDITIONS	HEALTHY WATERS COMMENT
	<p>c) Identification of areas at risk of stream widening, incision, or lateral migration over the design life of the development.</p> <p>The outcomes of the assessment must inform the design of riparian setbacks, planting, and any stream protection measures to ensure long-term stability and resilience of the stream corridors.</p>	
9	<p>Stormwater Model</p> <p>The Consent Holder must provide a copy of the full stormwater model to Auckland Council Healthy Waters for review, verification, and endorsement prior to application for Engineering Plan Approval. The model must include both pre- and post-development scenarios, with all relevant parameters, assumptions, and input data clearly documented.</p> <p>The model must enable assessment of downstream effects and include, at a minimum, the following areas:</p> <ul style="list-style-type: none"> a) The Wainui Road bridge crossing above Waterloo Creek; b) Properties located downstream between the Wainui Road bridge and Lysnar Road; and c) 147 Argent Lane and its immediate receiving environment. <p>The model must demonstrate that the proposed stormwater management approach does not increase flood risk or result in adverse effects on downstream properties or infrastructure in accordance with the Wainui East Stormwater Management Plan (V4, September 2016).</p>	<p>Providing the full stormwater model is needed to enable Healthy Waters to verify that the proposed design aligns with the Wainui East Stormwater Management Plan (Version 4, 2016) and does not result in increased flood risk or adverse downstream effects.</p>